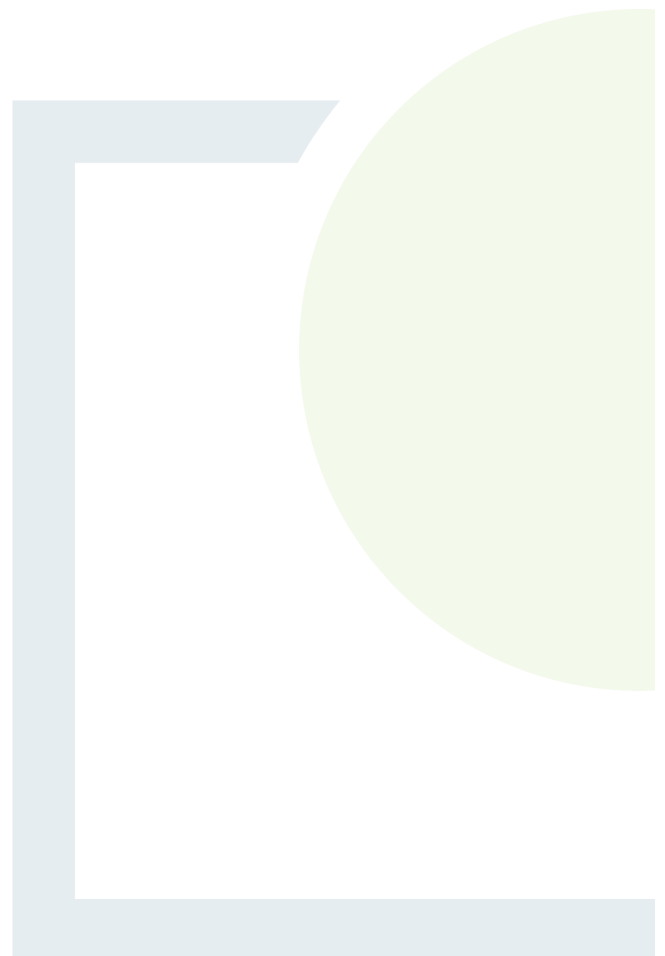




DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

APPENDIX 1.1

Contributors to the EIAR





Jim Hughes

Director of Energy & Planning



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Jim Hughes is the Director responsible for the Energy and Planning Department. Jim has a BA in Public Administration (Development) from the University of Limerick, a Masters in Town Planning from Queens University Belfast and a Diploma in EIA/SEA Management from University College Dublin. Jim is also a member of the Irish Planning Institute.

Jim is a Qualified Town and Environmental Planner with over 19 years post qualification planning experience in both the private and public sector. He has extensive experience in providing strategic level advice to clients and negotiating with and presenting to local authorities. Jim has experience in the management and coordination and the preparation of planning applications, masterplans and Environmental Impact Statements for large scale infrastructure projects throughout Ireland. He has specific experience in the renewable energy sector. Jim has represented clients on planning enforcement matters and as expert witness at oral hearings. He is also experienced in peer review and preparation of independent planning assessments and appraisals on behalf of clients.

Key Skills

Jim's experience includes:

- Project Director for multiple renewable energy projects throughout Ireland
- Lead planning consultant for major road infrastructure projects and waste projects.
- Highly qualified and experience in Irish and European planning and environmental law.
- Over 19 years as an IPI accredited Town Planner
- Acted as expert witness at ABP Oral Hearings and in Judicial Review Hearings and High Court Cases.
- Extensive experience in Offshore Renewable Energy delivery.

Previous Experience Essentials for This Project

2023

- Project Director on the Shelmalare Offshore Wind Farm delivering the Environmental and Planning Consultancy aspects of the project.
- Project Director on EIA Scoping and Foreshore license applications for multiple offshore renewable energy projects
- Project Director on the SEA and AA of the Eirgrid Grid Implementation Plan 2023.
- Project Director on multiple onshore Solar Farms
- Project Director on multiple onshore Wind Farms
- Project Director on onshore Battery Storage Energy Systems

2022

- Project Director Annagh Wind Farm, Co. Cork
- Project Director Ballinagree Wind Farm, Co. Cork
- Project Director Barnadivane Wind Farm, Co. Cork
- Project Director Fahy Beg Wind Farm, Co. Clare
- Project Director Multiple Solar farm planning projects
- Project Director for a portfolio of 4 no. Synchronous Compensator units.

Key Information

Qualifications

BA in Public Administration
(Development), University of Limerick
(2002)

MSc. Town Planning, Queens
University Belfast (2004)

Diploma in EIA/SEA Management,
University College Dublin (2008)

Professional Memberships

Member of the Irish Planning
Institute

Employment History

2020 – Present

Fehily Timoney & Company
Director

2017 – 2020

Fehily Timoney & Company
Associate Director

2015- 2017

Fehily Timoney & Company
Senior Planner

2007 – 2015

Cunnane Stratton Reynolds (SCR)
Senior Planner

2004 – 2007

Cork County Council
Area Planner



Jim Hughes

Director of Energy & Planning



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

2020

- Project Director for Croaghaun Wind Farm, Co. Carlow
- Project Director for Coom Green Energy Park, Co. Cork
- Project Director for multiple solar farm planning applications
- Project Director for Dernacart Wind Farm, Co. Laois

2019

- Project Director on the Kipaddogue Peaking Plant ancillary grid infrastructure development, Co. Kerry. Planning Strategy and Environmental Report
- Project Director on a 12 wind turbine development in Co. Kildare, Drehid Wind Farm.
- Project Director on the carrying out of masterplan and feasibility assessment on brownfield industrial sites in Nenagh and Roscrea on behalf of Zinc Properties
- Project Director on up to 10 Solar Farms
- Portfolio management of Shannon Commercial Properties portfolio of properties in mid-west region, including planning appraisals, zoning submissions and masterplan.

2018

- Planning Lead on the South Kerry Greenway EIAR
- Project Director for Derrysallagh Wind Farm Grid Route rEIAR
- Project Director for Raragh Wind Farm Grid Route EIAR.
- Project Director on Kilbarry Residential Development, consisting of 800-unit residential scheme
- Project Director on 19 no. unit residential development, Cork South Docklands
- Project Director 100-unit Roxborough Residential Scheme, Co. Wexford
- Project Director 100-unit Bettystown Residential Scheme, Co. Meath.
- Project Director 300-unit Enniscorthy Residential Scheme, Co. Wexford
- Project Director for Derrysallagh Wind Farm EIA.

2017

- Review of Strategic Environmental Assessment and Appropriate Assessment for the nationwide Catchment Flood Risk Assessment and Management Plans
- SEA Screening for the Bandon Transportation and Public Realm Enhancement Plan
- Provision of planning advice on substitute consent applications for wind farm, Derrysallagh Wind Farm
- Provision of planning advice on the successful Maighne Wind Farm Judicial Review
- Provision of planning advice on the preparation of an EIA for the Raragh Wind Farm cable route planning application
- Project manager for Moanvane Wind Farm proposal, Co. Offaly.

2016

- Preparation of and SEA and AA in conjunction with CAAS Ltd. of the Wind Energy Strategy for Co. Tipperary 2016
- Project Management of Castletownmoore Wind Farm SID application Co. Meath
- Project Director on the preparation of approximately 20 no. solar farm planning applications nationwide
- Preparation and coordination of planning application for 50 no. dwelling units in Croom Co. Cork
- Planning Advice and negotiation for a 49,000 tonne Metal Recycling Facility, Limerick
- Planning advice on the Derragh Wind Farm Judicial Review
- Preparation of an integrated tourism masterplan for tourism site on the banks of the River Shannon Co. Clare
- Preparation and submission of planning application for a recreation facility at the old Burlington Plan, Co. Clare
- Development Plan submissions and retained Planning Consultant for Shannon commercial Properties, provide planning advice and strategy for the management of portfolio of property in the mid-west region.

2015

- Management and coordination of a design team for An Bord Pleanála Oral Hearing in Cork for a mixed-use Retail Development, Ballyvolane, Co. Cork
- EIS, RIA and planning application for a mixed-use District Centre Development, Cork
- Project Manager Ardglass Wind Farm, Co. Cork.



Jim Hughes

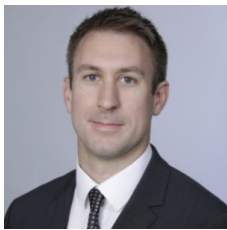
Director of Energy & Planning



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

2008 – 2014

- SID Pre-Planning consultation with An Bord Pleanála for a Local Authority Marina development in Cork
- Strategic Review of Dursey Island and Cable Car. In conjunction with AECOM and TDI, an overall economic and tourism development strategy was developed for Dursey Island
- Development Plan Monitoring and submissions on behalf of a large international Financial Institution
- EIS, RIA and planning application for a mixed-use retail development, Clonmel
- Feasibility Assessment for Waste to Energy facility, Co. Clare
- Co-ordinating a multi-disciplined team; contributed to EIS and planning submission for the regeneration of the south-western docklands area of Waterford City. The scheme consisted of 11 no. development blocks ranging in height from one floor to thirty floors over basement level
- Coordinated a multi-disciplined team of 5 Architects and preparation of EIS and planning submission for the regeneration of the south docklands area of Cork City. The proposed development was the largest planning application ever to be lodged with Cork City Council. 2007
- Coordinated the lodging of a planning application, contributed to EIA and response to Third Party appeal for a mixed-use development consisting of retail, commercial, residential, tourism, leisure development, Waterford City
- Contribute to EIA for Road and Bridge Infrastructure for Cork City Council including preparation of a scoping document and public consultations.



Trevor Byrne

Associate Director and Project Manager



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Trevor works as an Associate Director for Fehily Timoney and Company. Trevor holds a master's degree in Sustainable Energy Systems from the University of Edinburgh and an honours degree in Civil Engineering following his studies at Edinburgh Napier University and Cork Institute of Technology. Trevor is a senior project manager within the Planning and Energy division at FT and is a chartered engineer with Engineers Ireland. His primary area of expertise is in the design and construction of renewable energy projects and urban developments.

Trevor gained much of his experience working in the UK renewable energy industry and has delivered a wide variety of projects employing different technologies including onshore wind, hydroelectric and solar PV. He also has significant experience working in the Irish construction industry and in the United States on a variety of environmental projects focusing on renewable energy, solar PV, water treatment and surface water and wastewater treatment projects using green infrastructure.

Trevor has considerable environmental engineering and environmental impact assessment experience and is a proven project manager with a track record in successfully guiding large scale projects through the consenting process as well as construction stage. He also has significant on-site experience relating to managing the construction of renewable energy developments and environmental coordination roles. Trevor has experience in the following:

- Project Management
- Renewable Energy Development Design and Construction
- Environmental Impact Assessment and Appropriate Assessment
- Engineering Design
- Transportation Impact Assessment and Traffic Management Plans
- Environmental Coordination
- Technical and Public Consultation
- Oral Hearing
- Site Supervision
- Detailed Design
- Strategic Infrastructure Developments

Meeting the Minimum Requirements of the Role

- BSc. (Hons) in Civil Engineering with first class honours (2008); BEng. In Civil Engineering (2005); MSc in Sustainable Energy Systems (2009);
- Chartered Engineer (Engineers Ireland) 2017;
- Over 15 years of industry experience;
- Over 10 years of project management experience in the renewable energy industry.

Previous Experience Essentials for this Project

• Fahy Beg Wind Farm, 2023

Fahy Beg is an 8 no. turbine wind farm in County Clare. FT prepared a planning application and EIAR for the project on behalf of RWE Renewables Ireland. Trevor project managed all aspects of the environmental impact assessment and planning application for the project.

Key Information

Qualifications

MSc. Sustainable Energy Systems
University of Edinburgh
2008-2009

BSc. (Hons), Civil Engineering
Edinburgh Napier University
2006-2008

BEng in Civil Engineering
Cork Institute of Technology
2002-2005

Professional Memberships

Chartered Engineer, 2017

Member of Engineers Ireland, 2010

Employment History

2016 - Present

Fehily Timoney and Company
Associate Director

2012 – 2016

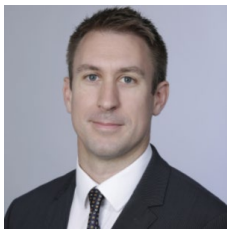
Greenspan, Edinburgh, UK
Project Manager

2010 – 2012

Cardinal Resources LLC,
Pittsburgh, PA, USA
Project Engineer

2005 – 2007

O'Shea Leader Consulting Engineers,
Cork
Graduate Engineer



Trevor Byrne

Associate Director and Project Manager



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

As well as this Trevor also lead the environmental coordination and engineering design of all onsite and offsite infrastructure for the proposed development including all infrastructure associated with the wind farm, grid connection and turbine delivery route, working closely with the client's electrical consultant. The application was successfully submitted to the local authority in early 2023.

- **Ballinagree Wind Farm, 2022**

Ballinagree is a 20 no. turbine wind farm development in County Cork with an installed capacity of up to 132 MW. FT prepared a planning application and EIAR for the project on behalf of Orsted and Future Energy Ireland. Trevor project managed all aspects of the environmental impact assessment and planning application for the project. As well as this Trevor also lead the environmental coordination and engineering design of all onsite and offsite infrastructure for the proposed development including all infrastructure associated with the wind farm, grid connection and turbine delivery route. The application was successfully submitted to an Bord Pleanála in early 2022 through the strategic infrastructure developments (SID) consents process.

- **Croaghaun Wind Farm, 2021**

Croaghaun is a large-scale onshore wind development in Co. Carlow comprising up to 7 wind turbines with a total installed capacity of up to 40MW. FT prepared a planning application and EIAR for the project on behalf of Future Energy Ireland. Trevor project managed all aspects of the environmental impact assessment and planning application for the project. As well as this Trevor also lead the environmental coordination and engineering design of all onsite and offsite infrastructure for the proposed development including all infrastructure associated with the wind farm, grid connection and turbine delivery route. The application was successfully submitted to the local authority in early 2021.

- **Coom Green Energy Park, 2020**

Coom Green Energy Park is a large-scale onshore wind and battery storage development in Co. Cork comprising up to 21 wind turbines with a total installed capacity of up to 120MW. FT prepared a planning application and EIAR for the project on behalf of Coillte and Brookfield Renewables Ireland. Trevor project managed all aspects of the environmental impact assessment and planning application for the project and acted as environmental coordinator for the EIA. As well as this Trevor also lead the engineering design of all onsite and offsite infrastructure for the proposed development including all infrastructure associated with the wind farm, grid connection and turbine delivery route. The application was successfully submitted to an Bord Pleanála in early 2020 through the strategic infrastructure developments (SID) consents process.

- **South Kerry Greenway (Kerry County Council) 2019**

South Kerry Greenway (SKG) is a 32km long proposed recreational trail in Co. Kerry. Trevor produced the construction and environmental management plan for the greenway as part of the environmental impact assessment for the project as well as preparing the traffic impact assessment for the project on behalf of Kerry County Council.

- **Teevurcher Windfarm, 2018**

Teevurcher is a development in Co. Meath. FT are acting as designer to the Design and Build contractor, Roadbridge, for the construction of all onsite infrastructure associated with the development. Trevor successfully project managed all aspects of the detailed design for the project, liaising with the main contractor's management and coordinating the design team including the development's environmental design commitments.

- **Moanvane Windfarm, 2017**

Moanvane is a development in Co. Offaly. FT acted as the planning consultant for the client and project supervisor for the design stage of the project. Trevor produced the outline construction and environmental management plan for the site as part of the environmental impact assessment for the project as well as producing the traffic and transportation section of the environmental impact assessment including a traffic impact assessment.

- **Knockacummer Windfarm Grid Connection, 2017**

Knockacummer is a 20km long 110kV grid connection project in Co. Cork for which FT acted as Employer's Engineer for the client. Trevor managed the coordination and supervision of full-time site staff throughout the construction stage to ensure that the project was delivered in accordance the engineer's designs and specifications, the client's health and safety framework as well as statutory obligations, and the project's environmental management plan.

- **Gortfinbar Wind Farm, 2016**

Gortfinbar is a 5 no. wind turbine development in Co. Tyrone. FT are acting as designer to the Design and Build contractor, DMKL, for the construction of onsite roads, hardstandings, substation and all other infrastructure associated with the wind farm development. Trevor successfully project managed all aspects of the detailed design for the project, liaising with the main contractor's management and coordinating the design team.



Trevor Byrne

Associate Director and Project Manager



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

- **Sliabh Bawn Wind Farm, 2016**

Sliabh Bawn is a 20 turbine project in Co. Roscommon. FT acted as designer to the Design and Build contractor, Alexander for the construction of a series of walking trails, riding tracks and recreational areas throughout the wind farm.

Trevor is managing the design contract on behalf of FT for this project and ensured the project design was delivered in accordance the engineer's the client's health and safety framework as well as statutory obligations, and the project's environmental management plan.

- **Moanvane, 2017**

Moanvane is a development in Co. Offaly. FT acted as the planning consultant for the client and project supervisor for the design stage of the project.

Trevor produced the outline construction environmental plan for the site as part of the environmental impact assessment for the project as well as producing the traffic and transportation section of the environmental impact assessment including a traffic impact assessment.

- **Rosspile Solar PV, 2019**

Rosspile is a ca. 75MWp ground mounted solar PV scheme on a site of approximately 153 hectares in County Wexford. The project consists of solar photovoltaic panels on ground mounted steel frames, an electrical control building and associated compound, inverter/transformer stations, underground power and communication cables, boundary fencing, internal access tracks and associated drainage infrastructure, CCTV cameras and all associated site services and works. The project also incorporates significant battery storage on site as part of its design. A Natura Impact Statement accompanied the planning application.

Trevor acted as project manager for this project which successfully achieved planning permission in 2019 and is one of the largest consented projects of its type in Ireland to date. Duties included coordination of all environmental assessments for the project. The comprehensive environmental report included assessments of potential impacts on hydrology, water quality, biodiversity, traffic and transportation, population and human health, cultural heritage, landscape and visual, and glint and glare.

- **Barnahely Battery Energy Storage, 2018**

Barnahely is a battery energy storage system (BESS) project in County Cork. Trevor carried out the outline civil engineering and drainage designs for the site. Trevor also prepared the outline construction and environmental plan for the project along with carrying out the traffic impact assessment.

- **Millvale Solar PV, 2017**

Millvale is a 15MWp solar photovoltaic generation scheme near Rathnew in Co. Wicklow for which FT were appointed by the client, BNRG, to gain planning permission. Trevor project managed the planning application and associated Environmental Report for the proposed Wicklow Solar Farm, including a 38 kV substation and associated ancillary works. Lead contributor to the Environmental Report, and responsible for coordination of overall project team members, including landscape and visual, ecological and archaeological sub-consultants. Responsible for extensive consultation during the planning process, including attendance at meetings with key stakeholders. Millvale was one of the first large scale solar farms commissioned in Ireland under RESS.

- **Ralphtown Solar Farm, Co. Wexford – Planning Application, 2016**

Project Engineer responsible for site layout design for the proposed 16 MW Ralphtown Solar Farm comprising approximately 61,500 photovoltaic (PV) panels on ground mounted steel frames within a site area of approximately 32 hectares. Key contributor to the Environmental Report, and responsible for preparation of the Construction and Environmental Management Plan (CEMP).

- **Brookhill Solar Farm, Co. Wexford – Planning Application, 2016**

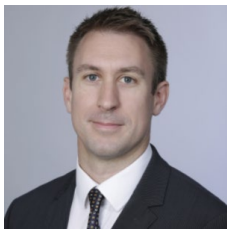
Project Engineer responsible for site layout design for the proposed 40 MW Brookhill Solar Farm comprising approximately 154,000 photovoltaic (PV) panels on ground mounted steel frames within a site area of approximately 90 hectares. Key contributor to the Environmental Report, and responsible for preparation of the Construction and Environmental Management Plan (CEMP).

- **Dennistown Solar Farm, Co. Wexford – Planning Application, 2016**

Project Engineer responsible for site layout design for the proposed 20 MW Dennistown Solar Farm comprising approximately 77,000 photovoltaic (PV) panels on ground mounted steel frames within a site area of approximately 40 hectares. Key contributor to the Environmental Report, and responsible for preparation of the Construction and Environmental Management Plan (CEMP).

- **Cairnmore Hybrid Wind and Solar Park, Scotland, 2015**

Cairnmore is a 4MW solar PV park in North Aberdeenshire. The site is located on a farm with a pre-existing wind farm with which the SPV scheme shares a grid connection.



Trevor Byrne

Associate Director and Project Manager



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Trevor acted as project manager and coordinated the design, construction and procurement of the project on behalf of the client. The scheme was commissioned in early 2016 and is now generating successfully in tandem with the existing wind farm. This was the largest combined technology scale project of its type in Scotland at the time of commissioning.

- **Cashlie, Hydro, 2015**

Cashlie is an estate near the upper end of Glen Lyon in the Perthshire Highlands in Scotland. Trevor successfully project managed the construction of 2no. run of river hydroelectric generation schemes concurrently and the schemes were successfully commissioned in December 2015.

Trevor managed all aspects of the development detailed design and construction stage on behalf of the client as well as compliance with the project's environmental plan and various planning conditions. Challenges included working in remote location in extreme conditions and the use of helicopters for the lifting of construction materials to the intakes.

- **Dow Corning Corporate Campus Storm Water System, USA, 2012**

The project involved the Design and construction of a wastewater system with pumping station for a Fortune 100 client at their corporate headquarters in Michigan. The challenges associate with this project involved the flat topography of the site and phasing the project to facilitate the day to day workings of a busy campus. Trevor acted as a design engineer for the environmental consultant on this project.

- **Dow Corning Silicon Plant, Brazil, 2011**

The project involved the design and construction of a storm water system for a large silicon smelting plant in southern Brazil incorporating green infrastructure engineering for sustainable storm water management.

Trevor acted as a design engineer for the project and made visits to the site for the purposes of project evaluation and inspection of constructed infrastructure.

- **Lefever Landfill, Pennsylvania, USA, 2010-2012**

This project involved civil engineering and design support for a large residual waste disposal landfill for a coal fired power plant. Trevor was the main engineering contact for the site contractor and provided design drawings and specifications for the continuous operational development of the landfill.

- **Red Bird Solar Powered Water Treatment System, USA, 2010-2012**

Worked as a design engineer in the development of a patented solar powered potable water treatment system designed to provide drinking water to remote communities, disaster zones and underdeveloped regions.

Worked closely with a large international manufacturer (Pierce Oshkosh) to construct units which would go on to act as demonstrators in West Africa. Included spending a number of weeks in the factory supervising the construction and testing of two prototype systems. Design input included pressure pipe system, filtration tanks, disinfecting dosing tanks, solar PV and battery power system, bespoke solar PV mounting system design, control system design and testing.



Brian Cronin

Senior Project Environmental Scientist



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Brian is a Senior Project Environmental Scientist with Fehily Timoney and Company. He has eight years of post-graduate experience in technical positions with five years specifically in environmental roles.

Key Skills

- Client Relations: Maintaining trusting relationships with clients through strong communication and professional attitude
- Report writing: Planning and Environmental Reports, EIA chapters (geology, hydrology, hydrogeology and wind micro-climate), contaminated land risk assessment reports, waste classification reports, environmental audits, IPC compliance reports, letter reports
- Fieldwork: Supervising drilling/digging operations, design of monitoring wells, soil logging and sampling, low-flow sampling, aquifer testing, gas monitoring and more
- Training and managing: Training and managing graduates, sub-contractors, students
- Software: Excel, Arc GIS, MS Project, Diver Office, Win Situ, SPSS, Minitab, MS Office suite

Previous Experience Essentials for this Project

- **Drehid Wind Farm SID application, €310,000, 2023**
Project Manager: Seeking consent for the development of a Wind Farm and associated 110 kV substation from An Bord Pleanála (ABP) as Strategic Infrastructure Development (SID). Pre-application consultation with ABP, writing chapters of the Environmental Impact Assessment Report (EIAR) and coordinating the programme of works to get the SID application processed.
- **Clondardis 110kV Substation SID application, €75,000, 2023**
Project Manager: Seeking consent for the development of a 110 kV substation from ABP as SID. Pre-application consultation with ABP, writing chapters of the Planning and Environmental Report and coordinating the programme of works to get the SID application processed.
- **Mainstream Southeast Offshore Wind Farm: EIA Scoping Report, €40,000, 2023**
Project Manager: Coordinated a team of authors to write the scoping chapters for the onshore component (cable and grid connection) of an offshore wind farm.
- **Kilteel Pole Yard Quantitative Risk Assessment, €170,000, 2021**
Project Manager: Assessing risks to human health and the environment from creosote contamination on a large rural site. Delineated extent of contamination as well as identifying hydrogeological pathways from contaminated groundwater to hydraulically connected surface waters. Proposed remediation strategy to reduce risks.
- **DIT Kevin Street Waste Classification and Soil Management Plan, €150,000, 2020**
Project Manager: Classified soil and stone wastes across a large urban site with a 17m basement excavation. Identified alternative options to landfill disposal of the materials, including Soil Recovery Facilities and re-use of materials as a by product under Article 27 of the Waste Directive.

Key Information

Qualifications

MSc in Environmental Engineering,
Trinity College Dublin, 2017

Honours BSc in Environmental
Science, University College Cork, 2013

Employment History

2022 – Present

Fehily Timoney & Company
Senior Project Environmental
Scientist

2021 – 2022

RSK Ireland Ltd
Senior Environmental Consultant

2020 – 2021

RSK Ireland Ltd.
Environmental Consultant

2019 – 2020

RSK Ireland Ltd.
Graduate Environmental Consultant

2018

Fugro GeoServices Ltd.
Geo-environmental Engineer

2017 - 2018

Initial Project Ltd.
Contaminated Land Lead Technician

2014 - 2017

Forest Research Group, Waterford IT
Research Assistant



Aaron T. Clarke

Chartered Principal Geologist



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Aaron is a Chartered Principal Engineering Geologist with Fehily Timoney's Infrastructure Team, providing specialist geotechnical and geological advice for multi-disciplinary projects across Ireland and the UK. He has over 19 years' experience working as a geologist; of which, ten years' have been spent within ground engineering.

He holds contractor experience working within the Ground Investigation sector as well as a background in the supervision of large earthwork operations on highways schemes such as the M11 Extension, M7 Upgrade, Sallins Bypass and Dunkettle Interchange as Designers Site Representative, and on the Lower Thames Crossing Phase 3 Ground Investigation as Deliverables Manager for geotechnical works.

Aaron holds experience in the geotechnical appraisal of infrastructure projects to include N63 Liss to Abbey Realignment Scheme, Kinnegar to Donaghadee Greenway and the A38 Splatford to Wobbly Wheel Scheme.

He also holds experience in the geotechnical assessment of landfill and contaminated land sites, working on projects such as Whitestown Remediation, Dublin Array (Ballyogan Landfill) and Tynagh Power Station.

Aaron holds experience in dealing with karst on projects within Ireland and the UK. Most recently he was Geotechnical lead for a ground investigation at Cwm Taf Water Treatment Works (part of the Cwm Taf Water Supply Strategy, Wales), where karst was identified during the Desk Study and subsequent geophysical and intrusive investigation stage. His knowledge of karst processes allowed for appropriate targeting of exploratory holes to delineate and bracket on site karst features.

More recently, Aaron has worked closely with wind farm developments, where he has progressed the EIAR Soils, Geology and Hydrogeology Chapter. Projects include Fahy Beg Wind Farm, Coumnagappul Wind Farm and Barnadivane Wind Farm. To inform the EIAR, he has undertaken site walkovers to determine potential geotechnical constraints; scoped, procured and managed preliminary ground investigations; and completed Peat Stability Assessments Reports, Geotechnical Assessment Reports, and Peat and Soil Management Plans.

Aaron holds experience working on blanket bog rehabilitation projects in relation to geotechnical risk and peat stability. Projects include Derryclare Peatland Rehabilitation Project, which required a thorough desk based assessment, and a detailed site reconnaissance to include a peat depth survey.

Key Skills

- Project Management
- Strong written and verbal communication
- Stakeholder management
- Geotechnical assessment and design
- Earthwork design and supervision (to incl. large infrastructure schemes)
- Ground Model development
- Desk studies & site surveys
- Scoping & management of ground investigations

Key Information

Qualifications

MSc. Applied Geotechnics
Camborne School of Mines, UK (2012)

BSc. (Hons) Earth Sciences,
NUI Galway (2004)

Professional Memberships

PGeo – Institute of Geologists of
Ireland

EurGeol – European Federation
of Geologists

Member of the Geothermal
Association of Ireland

Employment History

2022 – Present

Fehily Timoney & Company
Principal Geologist

Jan 2018 – Jan 2022

AECOM Ireland
Senior Engineering Geologist

2016 - 2018

ARUP Ireland
Assistant to the Designers' Site
Representative

2015 – 2016

Geo Consulting Engineering Ltd.
Senior Engineering Geologist

2012 – 2015

EM Highway Services Ltd.
Engineering Geologist

2008 – 2011

Teck Resources
Lead Geologist

2007 – 2008

GHD Group Pty Ltd
Site Engineer

2004 – 2007

Geological Survey Ireland
Consultant Geologist



Aaron T. Clarke

Chartered Principal Geologist

- EIARs – Soils, Geology and Hydrogeology
- Geological and geomorphological mapping
- Peat and slope stability assessments

Publications

- Clarke A, Parkes M, Gatley S, (2007) The Geological Heritage of Fingal, Geological Survey of Ireland Publications
- Clarke A, Parkes M, Gatley S, (2007) The Geological Heritage of Meath, Geological Survey of Ireland Publications
- Clarke A, Parkes M, Gatley S, (2007) The Geological Heritage of Kilkenny, Geological Survey of Ireland Publications
- Parkes M, Clarke A, (2005) The Geological Heritage of Kildare, Geological Survey of Ireland Publications

Previous Experience

- **Coumnaagappul Wind Farm, Co. Waterford, Ongoing.**
Principal Geologist. Fehily Timoney and Company (FT) were engaged by EmPower to undertake an EIAR for the proposed Windfarm at Coumnaagappul. As part of the submission, Aaron was responsible for undertaking a Geotechnical Assessment Report, Spoil Management Plan and completion of the Soils, Geology and Hydrogeology Chapter of the EIAR. As part of the works, Aaron undertook a desk study and site walkover to identify salient features to include relict failures, rock exposures, wet ground, general soil/rock types and geomorphology: and scoped, procured and managed a preliminary ground investigation to identify potential geotechnical constraints likely to affect the development.
- **Keerglen Wind Farm, Co. Mayo, Ongoing.**
Principal Geologist. Fehily Timoney and Company (FT) were engaged by ABO Wind to undertake a Peat Stability Assessment and Spoil Management Plan (to include an assessment on borrow pit viability and sizing). As part of the assessment Aaron undertook a desk study and site walkover to identify salient features to include relict failures, rock exposures, wet ground, general soil/rock types and geomorphology. Work on this project is ongoing and will involve a preliminary ground investigation to inform the planning application.
- **Dublin Array Support at Ballyogan Landfill, Co. Dublin, RWE Generation UK (RWE), Capital Value <€30K, Ongoing.**
Project Lead/Principal Scientist. Fehily Timoney were commissioned by RWE to produce a scoping document outlining the proposed approach to prepare an Independent Closure Audit (ICA) for Ballyogan Landfill and Recycle Park. Dun Laoghaire Rathdown County Council (DLRCC) intend to undertake the ICA to surrender a parcel of land required by RWE to develop a substation and cable routes, part of the onshore development of the Dublin Array Offshore Windfarm Project. As Project Lead Aaron was responsible for the overall management of the project and liaising with stakeholders. In addition to the ICA, Aaron was responsible for the scoping, procurement and management of a geophysical survey intended to identify and delineate the landfill boundary adjacent to the proposed development.
- **Derryclare Peatland Rehabilitation Project, Co. Galway, 2023.**
Lead Principal Geologist. Fehily Timoney and Company (FT) were engaged by McCarthy Keville O'Sullivan (MKO) to undertake a geotechnical assessment of the proposed peatland rehabilitation site at Derryclare with respect to peat stability. As part of the geotechnical assessment of the proposed development, Aaron completed a series of walkover surveys, to identify salient features with respect to geotechnics such as geomorphological features, relict failures, rock exposures, wet ground, general soil/rock types and extent of any peat present. Based on the walkover findings, Aaron produced a Geotechnical & Peat Stability Report including recommendations on layout and mitigation measures in respect of peat storage and safe construction practices on site.
- **Whitestown Remediation Project, Wicklow County Council, Capital Value €630K, Ongoing.**
Principal Geologist. Fehily Timoney were engaged by Wicklow County Council (WCC) to design and supervise a ground investigation at the Whitestown site. The purpose of the investigation was to delineate the extent of waste material adjacent to an ESB 110kV wooden pylon and to provide geotechnical parameters for the underlying superficial deposits. The investigation findings were used to inform the ground model and resulting slope stability analyses, which were included within a Geotechnical Assessment Report (GAR). As Principal Geologist, Aaron was responsible for scoping, procurement and management of the ground investigation, interpretation of the investigation results (including review of historic exploratory hole and geophysical data) and preparation of the GAR. He was also responsible for liaising between the project team, sub-



Aaron T. Clarke

Chartered Principal Geologist



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consultants and the ESB to ensure all works were undertaken in accordance with relevant statutory and ESB safety guidance documents.

- **Dunkettle Interchange, Capital Value €215M, Ongoing.**

Designers Site Representative for the reconfiguration of the Dunkettle Interchange to a free flowing 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; one grade separated junction arrangement at the existing N25 to the east of the existing Dunkettle Interchange; four roundabouts – 2 at the grade separated junction and 2 at tie ins with the existing road network; 51 no. major structures of various forms; several culverts where the scheme crosses watercourses or intertidal area; pedestrian and cyclist facilities; and modification of the existing Silversprings junction on the N8 Lower Glanmire Road. Aaron was responsible for inspection and approval of all elements of the earthworks to include material assessment and inspections of pavement subgrade and the formation to structures. Aaron's experience with large earthworks operations was invaluable in the day-to-day operations of this project. It enabled him to advise the Contractor (SISK) as to material acceptability and placement requirements. His efforts during inspections ensured that the highest quality of work was completed and also reduced liabilities associated with poor construction practices.

- **Tynagh Power Station, EP UK Investments, Tynagh, Co Galway, 2022.**

Lead Engineering Geologist. AECOM were commissioned to prepare an Environmental Impact Assessment Report (EIAR) in relation to a planning application for a new Open Cycle Gas Turbine (OCGT) plant and associated infrastructure. As part of the works a ground investigation was completed to inform the EIAR and OCGT design. As lead engineering geologist Aaron was responsible for scoping, procurement and management the ground investigation. He was also responsible for input into the Land and Soils chapter as well as other chapters and appendices within the EIAR. The proposed development is located within the former Tynagh Mine site, which posed significant challenges with respect to geotechnical and environmental constraints. Aaron's background within the mineral extraction industry allowed him to appropriately assess available mining data and to convey this information to the different specialties within AECOM's working group.

- **SCPX Erosion Report, South Caucasus Pipeline Company, Azerbaijan, Capital Value <€10K, 2021.**

Lead Engineering Geologist/Technical Lead. Following construction of the South Caucasus Pipeline in Azerbaijan, an annual programme of erosion control monitoring surveys was completed. AECOM were commissioned to report the findings of these surveys, which were undertaken by a third party appointed by the Client. The objective of the reports was to summarise the findings of the erosion control monitoring survey and to analyse the findings in the context of the local ground conditions and recommend remedial actions to rectify significant erosion observed and/or to prevent deterioration of erosion control measures that are in place. Aaron was responsible for reporting on the second round of erosion control monitoring. This required a detailed understanding of soil erosion processes and appropriate control measures. Aaron recognised the limitations associated with reviewing and analysing third party data and made a number of key recommendations to improve the data transfer process thereby reducing overall risk to both the Client and AECOM.

- **Derraghadoan Slate Quarry - Environmental Monitoring Plan, Lafarge Ireland Ltd, Dungannon, Co. Tyrone, 2021.**

Lead Engineering Geologist. AECOM on behalf of their Client (Lafarge Ireland Ltd) was commissioned to develop a suitable Environmental Management Plan (EMP) which was required as part of the Client's planning application to extend Derraghadoan Quarry by four hectares. Aaron was responsible for the production of the EMP, which outlined the monitoring programmes for relevant environmental media to include monitoring of dust, groundwater levels, abstracted water discharge volumes and water quality. Development of the environmental monitoring plan consisted of a review of requirements in relation to relevant legislation, guidance and good monitoring practice for the extractive industry in Northern Ireland.

- **Lower Thames Crossing Phase 3 Ground Investigation, Highways England, London, UK, Capital Value €65M, 2021.**

Senior Engineering Geologist/Deputy Deliverables Manager. AECOM was acting as Principal Contractor to deliver one of the largest Ground Investigation schemes in the UK, with multiple delivery packages and sub-contractor partners. The scheme will: provide a new road linking Kent, Thurrock and Essex; connect the existing A2/M2, A13 and M25; and will include construction of the largest road tunnel in the UK. Aaron was responsible for managing the Deliverables Team to ensure all ground investigation deliverables were checked under AECOM's quality management systems before issue to the client. His experience with large scale site investigations and highways projects improved the productivity of his team and allowed for: greater understanding of the project as a whole; succinct communication between site teams and the deliverables team; and a faster flow of high-quality deliverables to the client.

- **Carrick-a-Rede Rock Face Inspection, National Trust, Co. Antrim, UK, Capital Value <€10K, 2020.**

Lead Engineering Geologist / Project Lead. In response to a rock fall and subsequent closure of Carrick-a-Rede rope bridge in January 2020, AECOM was asked to complete an assessment of the rock faces immediately below and adjacent to the rope bridge supports. Aaron was lead engineering geologist on this project, responsible for the site assessment and subsequent



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Chartered Principal Geologist



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reporting. Aaron's involvement allowed for a quick, yet accurate, assessment of the affected bridge abutments, allowing reopening of the bridge, which is an important revenue source to the National Trust.

- **Bus Connects, National Transport Authority (NTA), Dublin, Ireland, 2020.**

Senior Engineering Geologist. In June 2018, the NTA published the Core Bus Corridors Project Report. The report outlined proposals for the delivery of a core bus corridor network across Dublin, providing 230km of dedicated bus lanes and 200km of cycle lanes/tracks on sixteen key bus corridors. AECOM and Mott MacDonald were awarded Package A, comprising four bus corridor routes: Clongriffin to City Centre; Lucan to City Centre; Clondalkin to Drimnagh; and Greenhills to City Centre. Aaron was responsible for producing a Preliminary Source Study Report (PSSR) for the Clongriffin route and assisting with the production of PSSRs for the remaining routes. He also assisted the geotechnical lead with scoping the ground investigation for Package A.

- **N4 Mullingar to Longford (Roosky), Westmeath County Council & TII, Longford/Westmeath, Ireland, 2020.**

Senior Engineering Geologist. ROD-AECOM on behalf of Westmeath County council was commissioned to provide Options Selection and Preliminary Design for the proposed N4 realignment route between Mullingar and Roosky. The scheme will deliver approximately 50km of new and upgraded carriageway along with several new bridge structures. As part of the works, AECOM's Ground Engineering Team produced a Preliminary Source Study Report (PSSR). Aaron's input as an engineering geologist has given considerable added value to this project. He contributed significantly to several sections of the PSSR as well as undertaking a site walkover survey. His understanding of the site's geology, geomorphology as well as his local knowledge of land use was invaluable to this study and ensured that associated geohazards/geotechnical liabilities (including karst) were adequately captured and assessed.

- **N63 Liss to Abbey Realignment Scheme, Galway County Council, County Galway, Ireland, Capital Value €350K, 2020.**

Lead Engineering Geologist. Site investigation to inform the Preliminary Design for the N63 Route Alignment Scheme, comprising realignment of approximately 2.3km of the N63 from Liss to the eastern edge of Abbeyknockmoy village. Aaron was lead engineer responsible for: producing a Desk Study Report; undertaking a site walkover survey to identify potential geotechnical liabilities in advance of site works; and scoping and tendering the ground investigation works, to include both invasive and non-invasive methods. Due to the sites' underlying geology, there was potential for karst, Aaron's choice of investigation methods and location of exploratory holes used to target and identify potential karst features likely to affect the design and construction of this scheme was a significant contribution. His extensive experience working as a geologist on Irish highway schemes, to include projects such as the M7 Upgrade and Sallins Bypass, M11 Extension and N4 Mullingar to Roosky provided great benefit to the project in understanding of ground conditions and associated constraints.

- **Blackhorse Inn Redevelopment, New Line Homes, Dublin, Ireland, 2019.**

Senior Engineering Geologist. Geotechnical assessment of an existing embankment adjacent to the former Blackhorse Inn located in Inchicore, Dublin. The site was being proposed for the development of a multi-storey apartment complex, including an underground parking facility. The purpose of the assessment was to evaluate the stability of the slope during the construction phase and following completion of the development. Aaron assisted the lead geotechnical engineer on this project and was responsible for: carrying out an inspection of the site and adjacent slope to identify any significant geotechnical liabilities likely to influence the proposed development; producing a site walkover report; and creating a conceptual ground model based on existing ground investigation data and findings from the site walkover survey. Aaron's strong site observational skills and ability to quickly produce a meaningful ground model allowed for an accurate analysis of the slope, thereby allowing the Client to proceed with their planning application.

- **Kinnegar to Donaghadee Greenway, Ards and North Down, Co. Down, N. Ireland, 2019.**

Senior Engineering Geologist. AECOM were commissioned to investigate the proposed site of a steel pedestrian/cycle bridge along an approximate 133m long coastal section at St. Helen's Bay, County Down. To better understand the challenges associated with the site's geology and in particular the outcrops, which will form the foundation to the proposed bridge, a site walkover and preliminary desk top study was completed by Aaron. Recommendations based on his assessment directly resulted in the initial bridge design to be revisited due to the inherent instability in the observed rock mass. The involvement of Aaron in this project removed the requirement for using external geotechnical specialists saving time and reducing overall costs to the client.

- **M7 Upgrade/R407 Sallins Bypass Scheme, Kildare County Council & TII, Co. Kildare, Ireland, Capital Value €100M, 2019.**

Designers Site Representative Online upgrade of 16km of the M7 between J8 and J11, and construction of the Sallins Bypass (R407) and Sallins Link Road. Works also included extensive earthworks, five new bridges and new/updated drainage networks. Aaron was responsible for inspection and approval of all elements of the earthworks to include material assessment and inspections of pavement subgrade and the formation to structures. Aaron's experience with large earthworks operations was invaluable in the day-to-day operations of this project. It enabled him to advise the Contractor (SIAC/Colas JV) as to material



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acceptability and placement requirements. His efforts during inspections ensured that the highest quality of work was completed and also reduced liabilities associated with poor construction practices. His in-depth knowledge of the site's geology allowed for quick and decisive assessment of ground conditions; this was particularly evident during piling operations where over drilling was kept to a minimum thereby reducing overall piling costs.

- **M11 Extension Scheme, Wexford Co. Co. & TII, Co. Wexford, Ireland, Capital Value €350M, 2018.**

Designers Site Representative. The project involved construction of 27km of new motorway (M11), 11km of new single carriageway (N30) and 4km of new dual carriageway (N80). Works also included mass earthworks (cut/fill) operations, construction of multiple structures (including the River Slaney Underbridge) and an extensive new drainage network. Aaron was responsible for inspection and approval of all elements of the earthworks to include material assessment and subgrade inspections to structures. Aaron's experience with large earthworks operations was invaluable in the day-to-day operations of this project. It enabled him to advise the Contractor (BAM/Dragados JV) as to material acceptability and placement requirements. His efforts during inspections always ensured that the highest quality of work was completed and also reduced liabilities associated with poor construction practices. Aaron's background in rock mechanics and knowledge of the site's sometimes complex geology perfectly positioned him to undertake rock mass inspections at proposed structure locations and to supervise piling operations at the locations of two of the largest underbridges on site. This removed the requirement to bring in external technical personnel saving time and reducing overall budget costs.

- **Ground Investigation for Wolborough Barton Residential Development, PCL Transport Planning Ltd, Newton Abbot, UK, Capital Value €300K, 2016.**

Geotechnical/Geo-environmental Lead. Phase 1 Desk Study and Phase 2 preliminary intrusive investigation of an 89Ha. parcel of land at Wolborough Barton, Newton Abbot, Devon. The land was being developed for 1,200 residential properties and associated amenities and infrastructure. The phased investigation resulted in the development of a detailed conceptual site model and a preliminary assessment of the geotechnical/geo-environmental liabilities likely to affect the site. Aaron's extensive experience as a geologist allowed him to critically assess and accurately interpret the site's varied and complex geology; and to develop an accurate conceptual site model showing the interaction between the proposed development, the sites superficial and solid geology and associated groundwater regime. The resulting report allowed the client to successfully advance their planning application.

- **Ballinalack Exploration Drilling Programme, Teck Resources Ltd., Co. Westmeath, Capital Value: €4.6M, 2011.**

Project Geologist. Large-scale multi-disciplined mineral exploration programme targeting economic base metal deposits over an area of 300km². Works comprised deep borehole operations, multiple soil sampling surveys and geochemical analyses, land based geophysical surveys and airborne geophysical surveys. As Project Geologist, Aaron was responsible for managing this project and overseeing all staff and activities. He was also tasked with facilitating several technical presentations to Teck staff and their JV partners Nonfemet. His accrued knowledge of the area's regional geology and his ability to lead a multidisciplinary team of geoscientists, resulted in the successful development of a comprehensive geological ground model used to further develop drill targets within and adjacent to the existing Ballinalack deposit.

- **Wonthaggi Desalination Plant Scheme, Victoria Dept. of Sustainability & Environment, Wonthaggi, Victoria, Australia, Capital Value: \$3.1 Billion, 2008.**

Graduate Geologist. Ground investigation and monitoring programme for the proposed desalination plant near Wonthaggi. Aaron was responsible for the supervision of all site personnel involved in ground investigation activities as well as logging soil and rock samples to relevant Australian engineering standards.



Conor Auld

Senior Planner



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Profile

Conor holds a MSc in Urban and Rural Design and BSc in Environmental Planning, both from Queen's University Belfast.

He is a Town Planning Consultant with 7 years of professional experience in private and public sector roles in Ireland and the United Kingdom; in excess of 6 years having been spent working in private sector planning in Ireland. Conor graduated from Queen's University Belfast in 2013 with a MSc in Urban Design (Commendation) and in 2012 a BSc (Hons) in Environmental Planning (2.1) and is currently a Senior Planner with Fehily Timoney.

Key Skills

Conor has experience in projects including:

- Competent in Microsoft Office – Word, Excel, PowerPoint
- Project management
- Planning Application Report Writing
- Environmental Impact Assessment co-ordination
- Planning due diligence
- Fee proposal requests

Previous Experience Essentials for this Project

- **Cherrywood SDZ Planning Scheme Planning Applications, 2023**
Assisted in the preparation of a Planning Appraisal of Project Eden Portfolio for our private client comprising approximately 2,500 dwellings, two major parks and a Village Centre. Currently involved in master planning of a client's landholding within the Cherrywood SDZ lands including preparation of Pre-Planning submissions and attendance at Pre-Planning meetings through to lodgement of planning applications for residential developments, ensuring compliance with the SDZ Planning Scheme as well as post grant of planning compliance submission preparation.
- **Capital Dock, 2020**
Capital Dock is one of Ireland's most prestigious mixed-use developments and includes the tallest building in Dublin. Working in a direct client facing role, Conor was involved with the preparation of planning application documents and coordination as part of revision planning applications to the overall permitted scheme and management of planning compliance involving coordination and negotiation between project managers, design team members and Planning Authority staff.
- **Parnell Square Cultural Quarter, 2018**
The intent of the Parnell Square Cultural Quarter is to provide a new City Library for Dublin. Conor worked in a Coordination role as part of preparation of Section 175 application to An Bord Pleanála for joint applicants Dublin City Council and PSQ Developments Limited. Formed the important link between Design Team and EIAR Team as part of EIAR coordination role and preparation of chapters such as Population & Human Health and overall formatting of the EIAR document into an accessible format.

Key Information

Qualifications

MSc Urban and Rural Design –
Commendation, Queen's University
Belfast, 2013

BSc (Hons) Environmental Planning,
Queen's University Belfast, 2012

Professional Memberships

Corporate Member – Irish Planning
Institute (IPI)

Licentiate member of the Royal Town
Planning Institute (RTPI) working
towards becoming a
Chartered Member

Employment History

2023 – Present

Fehily Timoney & Company
Senior Planner

2017 – 2023

Stephen Little & Associates
Executive Planner

2016 – 2017

Orkney Islands Council
Graduate Planner

2016

Southend on Sea Borough Council
Graduate Planner



Conor Auld

Senior Planner



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- **Adamstown SDZ Planning Scheme Planning Applications, 2023**

Involved through preplanning stage to lodgement and compliance submissions of various planning applications throughout the SDZ Planning Scheme area for a range of clients. These range from residential schemes, to community assets such as Community Centre, pitches and parks.



Rita Mansfield

Associate Director



CONSULTANTS IN ENGINEERING,
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Profile

Rita is a Principal Ecologist and Project Manager at Fehily Timoney with nineteen years previous experience as a technical lead within the environmental and planning services sector. She specialises in statutory consent and environmental assessment for large scale public infrastructure projects in the energy, water (including flood relief schemes) and transport sectors.

She is a qualified ecologist in environmental impact assessment, planning applications (conventional and strategic infrastructure development), climate adaptation, Appropriate Assessment, foreshore licensing, Water Framework Directive, integrated catchment management, and stakeholder engagement.

In the energy sector particular specialist experience in securing statutory consent for combined and open-cycle gas turbines, solar and wind projects, peat fired power stations, utility scale batteries and transmission (110 kV, 220 kV and 400 kV overhead line and underground cable) infrastructure.

In the transport sector, specialist experience in securing statutory consent (including CPO, EIA and AA), environmental detailed design and environmental contract administration in Light Rail and Highways.

In the water sector, specialist experience in securing statutory consent (including planning, CPO, EIA and AA) for sewerage schemes, municipal wastewater treatment, potable water treatment and distribution and flood relief schemes.

Key Skills

- Environmental Impact Assessment (EIAR)
- Appropriate Assessment (AA): Habitats Directive
- Ecological Impact Assessment (EclA)
- IED licence
- Foreshore Licence
- Construction Environmental Management Plan (CEMP)
- Ecological Clerk of Works (ECoW)
- Water Framework Directive
- Environmental design and mitigation
- ArcGIS Desktop /Collector/Online

Previous Experience Essentials for this Project

Energy Services

- **Dennistown 110kV Grid and Substation / Harmony Solar**
Strategic Infrastructure Development application to An Bord Pleanála for 110 kV infrastructure to support a solar development in Wexford.
- **Wind Energy Development County Waterford / EMP**
Strategic Infrastructure Development application to An Bord Pleanála (including EIAR and NIS) for a 10-turbine array. Particular challenges include site topography and peat.

Key Information

Qualifications

H. Dip Environmental Protection and
Pollution Control
Sligo Institute of Technology, 2008

BSc. (Hons) Applied Ecology,
University College Cork, 2003

Employment History

2020 – Present

Fehily Timoney & Company
Senior Environmental Specialist

2004 – 2020

Mott MacDonald Ireland Limited
Senior Environmental Specialist



Rita Mansfield

Associate Director



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- **Peat Extraction All-Ireland /Bord na Mona**
Project Lead for Appropriate Assessment (NIS) of peat extraction activities across ca. 75,000 hectares.
- **Celtic Interconnector PCI Project / EirGrid**
Principal Ecologist for the statutory consents which include foreshore application and Strategic Infrastructure Development application comprising ca. 575 km of submarine cable, underground HVDC / HVAC cable and converter station.
- **Rye Water Valley - Kellystown Project /Confidential Client**
Environmental assessment of options for the upgrade to the power supply to a manufacturing plant in Leixlip comprising new substation and underground cables connecting to an existing line. The site is within the Rye Water Valley SAC. Planning application to the Board under S.182A of the Planning and Development Act 2000 supported by Natura Impact Statement, EIA Screening report and Environmental Report.
- **Converter Station EcOW Services / Siemens**
Project Manager for the delivery of EcOW services for the Celtic Interconnector Converter Station project at Ballyadam, Cork.
- **Wind Energy Development County Galway / RWE**
Strategic Infrastructure Development application to An Bord Pleanála (including EIAR and NIS) for a 13-turbine array. Particular challenges include flood risk and karst geology.
- **Moneypoint – Oldstreet 400 kV Line Refurbishment /EirGrid**
Planning application for refurbishment works to the power line. The Moneypoint - Oldstreet overhead power line is approximately 102.5km in length and runs in a north-east direction from the Moneypoint substation in Kilrush, County Clare to the Oldstreet substation in Portumna, Co. Galway. An extensive Natura Impact Statement was required for this project.
- **Greenlink PCI – Peer Review EIAR & NIS**
Technical Peer Review services for the Greenlink Project of Common Interest. Greenlink is a subsea and underground electricity interconnector cable (with associated converter stations) linking the existing electricity grids in Ireland and Great Britain.
- **ESB Poolbeg Development – Bess and FlexGen**
EIAR and NIS to support four separate planning applications for the development of two flexible thermal generating systems and two battery energy storage systems within the Poolbeg Peninsula.
- **Huntstown Battery Energy Storage System /Viridian**
Senior Ecologist for the preliminary design, statutory planning approval and environmental assessments of BESS development within the Huntstown Power Station site.
- **Open-Cycle Gas Turbines and Utility Scale Battery Developments, 100MW at Kilkenny, Athlone and Cahir /Bord Gáis Energy/Centrica**
Senior Ecologist for the preliminary design, statutory planning approval and environmental assessments of various 100 MWe energy generation technologies (OCGT, gas engines and battery) at three sites across Ireland.
- **West Offaly and Lough Ree Power Plants /Bord na Móna**
Ecological Assessment of the harvesting and supply of peat fuel to West Offaly and Lough Ree Power Plants.
- **Wind Energy Development County Offaly / Bord na Móna**
Strategic Infrastructure Development application to An Bord Pleanála (including EIAR and NIS) for a 10-turbine array. Particular challenges include sensitive ornithology.
- **Open Cycle Gas Turbine Power Plant County Kilkenny / Greener Ideas Limited (GIL)**
Lead ecologist for the Environmental Impact Assessment (EIA), Appropriate Assessment, and planning application for the development of a 100MW OCGT power plant in County Kilkenny. This application was submitted to Kilkenny County Council on behalf of Greener Ideas Limited (GIL), a joint venture company comprising Bord Gáis Energy and Mountside Properties.
- **Cross Shannon Cable /EirGrid**
Senior Scientist for the planning and foreshore applications for this 400 kV submarine cable connecting Moneypoint and Tarbert substations.
- **Upgrade of Woodland 400kV Substation / EirGrid**
Principal Ecologist (planning and environment) for Section 5 declaration application (planning) for proposed new bay at 400 kV substation.
- **Edenderry Power Plant, County Offaly / Bord na Móna**
Planning permission was sought for the continued use and operation of Edenderry Power Plant up to 2030. Assessment of the in-combination impacts of peat harvesting comprised a significant element of this project.



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Associate Director



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- **Renewable Exports Source (RES) Scheme – Strategic Environmental Overview:**

The Renewable Exports Source (RES) refers to the strategy for the delivery of large amounts of renewable (wind) generation from Ireland to the United Kingdom via sub-sea interconnector cables under the Irish Sea. SEO Objectives:

- Evaluate the potential impacts of developing wind energy transmission systems interconnecting to the UK on environmental resources and communities;
- Identify sensitive receptors;
- Identify areas of good potential for future development;
- Inform the future network designs and configuration.

Water Services

- **Gort Lowlands Flood Relief Scheme / Galway County Council**

Assessment and development of a flood relief scheme to manage the existing flood risk in Gort Lowlands, and also the potential for significant increases in this risk due to climate change, ongoing development and other pressures that may arise in the future. Project Manager for the environmental services for the feasibility stage of the scheme, which investigates the diversion of overland flood flows in to Kinvarra Bay in Galway. Project deliverables include Appropriate Assessment, Public Consultation, EIAR, Marine modelling, Public Exhibition.

- **Local Network Reinforcement Project / Irish Water**

Environmental lead responsible for environmental and planning reports for wastewater network infrastructure projects throughout Leinster, including site and route selection reports, technical notes, Natura Impact Statements, planning strategy reports and planning applications.

- **Enniscorthy Flood Defence Scheme /OPW**

The development of flood defence scheme to alleviate flooding in Enniscorthy Town. The scheme includes the removal of the Seamus Rafter Bridge, underpinning of the main Wexford to Dublin railway bridge over the River Slaney and the construction of a new road bridge which transverse the River Slaney SAC and approach road ties in to the key strategic routes in the south east on the N30 and N11.

- **Clonakilty Flood Relief Scheme, Ongoing.**

The scheme will protect to the town of Clonakilty from both river and tidal flooding, and includes the construction of a dam, modification to several bridges, 2km of riverbank improvement works, and four pumping stations. Environmental Manager involved in the preliminary design, planning process, detailed design, tender process, and contract administration. Currently overseeing Ecological Clerk of Works role on the construction stage.

- **South Western River Basin District Catchment Flood Risk Assessment and Management (CFRAM) Study / OPW.**

The objective of this study was to accurately map flood risk and to develop management strategies and measures to mitigate flood risk in the South Western RBD. Environmental Manager responsible for the assessment of flood risk in the South West of Ireland as it pertains to environmental impact, the assessment of flood risk management options through multi-criteria analysis (MCA), stakeholder consultation, Appropriate Assessment and Strategic Environmental Assessment.

- **Caraholly Flood study / Mayo County Council**

Preliminary design of a €1million flood relief scheme in Co. Mayo. Senior ecologist responsible for the Natura Impact Statement and environmental considerations report for the planning package to Mayo County Council. S

- **Inniscarra WTP Sludge Treatment / Irish Water**

Senior ecologist for the planning application for sludge treatment facilities.

- **River Basin Management Plan - South Western River Basin District.**

A four-year catchment management study leading to the publication of the River Basin Management Plan and the development of measures to achieve good water quality status in order to comply with the implementation of the Water Framework Directive (2000/60/EC). The purpose of this Directive is to establish a framework for the protection of all waters in order to prevent and reduce pollution, protect the aquatic environment, improve the status of aquatic ecosystems, and promote sustainable water use. Environmental Scientist responsible for the delivery of several national studies and the development of the River basin Management Plans. The project involved detailed data management which was supported through the use of geographic information systems (GIS).

- **Millstreet WWTP Upgrade/ Irish Water**

Senior ecologist for the Appropriate Assessment (NIS) and Planning Application for the proposed upgrade works to the Millstreet WWTP. The WWTP discharges in to the Munster Blackwater SAC



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- **South Westmeath and Lanesborough/Central Longford Water Supply Scheme / Irish Water**

Environmental Lead for the design and procurement of a new waste water treatment plant (WTP) and intake works, upgrade/expansion works to two WTPs, decommissioning of five WTPs and the provision of an extensive network of pipelines and linkages across a large area from Athlone to Mullingar and northwest to Lough Forbes. The upgrade works were being provided to a secure and adequate supply of drinking water in compliance with EU (Drinking Water) Regulations, 2014.

- **Waste Water Discharge Licencing Project, Irish Water**

Project Lead for work programme involving the preparation of reports assessing the impacts of the waste water discharge points from residential agglomerations on protected shellfish waters along the Irish coast.

- **Rossaveel Fishery Harbour / Department of the Marine**

Senior Ecologist for the Environmental Impact Assessment and planning application for the development of a 200m deep water quay in Rossaveel. The EIA assessed both marine and terrestrial environmental impacts across a range of sensitive parameters, i.e. biodiversity, archaeology, traffic, noise and vibration etc. This project is critical to ensuring that continued viable operation of one of Ireland's Fishery Harbour Centres. Planning was granted in 2018.

- **Greystones Harbour Development / Wicklow County Council**

Scientist for the environmental impact assessment. This development included coastal protection works and the development of a 400 berth marina in addition to a significant commercial and residential provision. Key concerns included populations of sand martin, sea kale and public amenity.

- **Waterford City Infiltration Remediation / Waterford City Council**

The infiltration study involved the assessment of the existing combined sewer collection system in Waterford City centre, and recommendations on its upgrade to reduce infiltration to acceptable levels. Employers Representative responsible for scoping, procurement and management of CCTV survey to identify defective sewer in the Waterpark Catchment. Prepared recommendation report for remediation measures, including a cost-benefit analysis to ensure value for money. Prepared contract documents using the Works Designed by the Contractor (CWMF) form of contract for the rehabilitation of the sewers which includes the procurement of specialists. Responsible for preliminary H&S Plan which encompassed significant traffic management issues as well as confined space entry requirements.

- **Effluent Characterisation Study /Environmental Protection Agency**

Project co-ordinator and lead scientist for this year-long study into the characteristics of wastewater discharges from municipal waste water treatment plants across Ireland. The output of the study was an estimation tool to assist WWTP operators in estimating the mass emissions released from their treatment plant. This information is required to be reported to the EPA under law (Pollution Release and Transfer Regulations).

Transport Services

- **Dunkettle Interchange Upgrade Scheme / John Sisk & Son Holdings Ltd**

Environmental Lead for the Detailed Design on the Design & Build contract for the reconfiguration of the Dunkettle Interchange to a free flowing 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 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 Southern Distributor Link Road / Cork City Council**

Gene is the Project Manager for the Southern Distributor Link Road, a proposed new road link between the N27 and Sarsfield Road with the potential to also link to the N71 and Cork Airport. Gene is responsible for delivery of the route selection process as per Phases 1-2 of the NTA's Guidelines for the Management of Public Transport Investment and Cost Management Guidelines and Phases 0-1 of DPER's Public Spending Code 2019.

- **Wexford Town to Rosslare Strand Greenway / Wexford County**

Environmental Coordinator for the development of a proposed greenway extending between Wexford Town and Rosslare Strand Train Station. The appointment covers PSDP, Route Selection, Preliminary Design, Environmental Assessment, including preparation of an EIAR and Statutory Consent Processes.

- **N11/N25 Oilgate to Rosslare Harbour / Wexford County Council**

This project involves the development of the N11/N25 national primary road between Oilgate and Rosslare Harbour Co. Wexford. The scheme is approximately 30km of motorway/dual carriageway with a major crossing of the River Slaney. Technical Lead responsible for the delivery of environmental services necessary to deliver Phases 1 to 4 of Transport Infrastructure Ireland's Project Management Guidelines (PE-PMG-02041) and Phases 1 to 4 of the National Roads Authority's Project Management Guidelines 2010 (NRA PMG 2010). The project is currently at Phase 1.



Rita Mansfield

Associate Director



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

- **Western Rail Corridor Redevelopment, Ireland / Iarnród Éireann**

Feasibility study and business case assessment for reopening of the disused railway line between Athenry and Claremorris in the west of Ireland. Senior Ecologist, responsible for the qualitative assessment of the effects on biodiversity and the environment from the proposed reopening of the railway between Athenry and Claremorris. Assessment was carried out using GIS data and through consultation with national environmental protection agencies.

- **N25 New Ross Bypass PPP Scheme / TII**

Construction of approximately 14.8km of National Route, 13.6km of Dual Carriageway and 1.2km of Single Carriageway and associated works. It includes an Extrados bridge structure which consists of two 230m spans with an overall length in region of 900m. It also includes over 40 other structures comprising of 1 Railway Bridge, Underbridges, Overbridges, Underpasses, Culverts, Retaining Walls, Environmental Barriers, Sign Gantries, and VMS. Environmental Specialist, responsible for the certification of design and construction insofar as it pertains to environmental matters.

- **N71 Footpath / Cycleway: Glengarriff village to NPWS Nature Reserve /Cork County Council**

Feasibility assessment and assessment of design alternatives for the development of pedestrian and bicycle access between Glengarriff village and the nature reserve. The alignment passes through the Glengarriff Woods SAC and as such the assessment of alternatives in Appropriate Assessment is required.

- **Cork Bridge Rehabilitation, Cork, Ireland / Cork County Council.**

Repair of approximately 50 road bridges located around the Cork region. The list of structures included predominately masonry structures dating from the 13th to 19th centuries, including a number of protected structures. Environmental Team Leader, responsible for the preliminary ecological appraisal (PEA), screening for Appropriate Assessment, Natura Impact Statements, and Ecological Impact Assessment (EclA) including invasive species survey for proposed repair works to the bridges in County Cork. Devised and implemented mitigation (under licence from NPWS) for the exclusion, protection, and enhancement of several bat roosts at various bridges.

- **N18 Gort to Crusheen Dual Carriageway, Galway County Council**

Scientist for the environmental impact assessment for 22km road scheme in County Clare and Galway.

- **N22 Baile Bhuirne to Macroom Road Development (Ph 5-7) / Cork County Council**

The scheme is an approximately 22 km Type 2 Dual Carriageway, to be constructed offline. It will require construction through challenging terrain which varies through the scheme from hilly, remote land with rock outcrops at the western end, to low lying pasture lands to the east of Macroom. Significant ecological constraints on the scheme include Kerry Slug, Freshwater Pearl Mussel, and Lesser Horseshoe Bat. Responsibilities at this stage (Tender Assessment) in the scheme development include co-ordination of the ecology team, preparation of contract documents, provision of technical environmental advice, consultation with key stakeholders (e.g., NPWS), assessment of Tenders.

- **Limerick Depot Metropolitan Area / Limerick City & County Council.**

Design and development of a consolidated operations depot for the Metropolitan Area operations including Cleansing & Parks, Housing Maintenance, Road Maintenance, Burial Grounds, Water, Drainage, Surface Water Maintenance, Storage of Emergency Equipment and Salt Barns. The Depot will occupy a space between 4 – 6 acres. Senior Ecologist responsible for the management of environmental impact assessment of the proposed development.

- **Bergen Bybanen Light Rail System Phase 3 & Depot, Norway / Hordaland Fylkeskommune, 2016.**

Detailed design and construction of the Bergen light rail transport system in Norway. The project comprised 7.1km of double track from Rådal to Flesland airport, including 2.8km of tunnels and over 1km of structures and the development of a tramwash and workshop at a site in Flesland (approximately 20540m²). Environmental Specialist responsible for the construction management environmental specification, applications for discharges to waters for construction and operation of the scheme, constraints study for the workshop site and light rail line and environmental sustainability recommendations for the workshop.

- **N11 Arklow- Rathnew PPP Contract / BAM, 2013.**

Provision of 16.5km of high-quality dual carriageway between Arklow and Rathnew in Co. Wicklow, a motorway service station, and a grade-separation of the N7 Newlands Cross Junction in Dublin. Senior Ecologist, responsible for pre-construction environmental surveys and environmental and ecological design for:

1. Section A – dual carriageway approximately of 16.3km in length between the north end of the existing Arklow Bypass and the southern end of the existing Newtownmountkennedy to Ballynabarny road scheme.
2. Section C – new motorway services area on the existing M11 near Gorey, Co. Wexford.
3. Section D – upgrade to the Newlands Cross junction (N7 Nass Road junction with the Belgard / Fonthill Road [R113]) to a grade separated junction.



Rita Mansfield

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- **East Coast Railway Line between MP19½ and MP22½, County Wicklow / Iarnród Éireann, 2014.**

Appropriate assessment for emergency railway safety fencing works on the main railway line between Dublin City and Rosslare Harbour. This project required an assessment to identify and control ecological impacts on an area of land protected under the habitats directive candidate special area of conservation (cSAC) and the bird's directive special protection area (SPA). Of particular relevance to the project is the habitat 'perennial vegetation of stony banks. The railway line sits on top of a shingle beach which is known to support this vegetation type.

In addition, the shingle beach is an important nesting area for Little Tern (*Sternula Albifrons*). Significance of impact was assessed, and mitigation measures were prescribed.

- **National Roads Authority Development of and Consolidation of (D&B) and (PPP) Works Requirements, 2010.**

Technical advice and support in preparing consolidated works requirements for use on contracts tendered using both the PPP and the D&B mechanisms. Responsible for the development of clauses to ensure protection of the environment at design and construction stages of road scheme development. This included run-off and sediment control, mitigation for specific protected species e.g., otter and bat, mitigation for water crossings, management of extracted material, measures to control noise and lighting impacts, landscaping measures, control of invasive species, control of noxious weeds, pre-construction, and post-construction survey requirements.

Other Services

- **Grid Implementation Plan 2023-2028 / EirGrid**

Project Manager for the Strategic Environmental Assessment and Appropriate Assessment of the Grid Implementation Plan 2023-2028 for the Electricity Transmission System in Ireland.

- **Local Authority Environmental Management System, Environmental Protection Agency**

Project Scientist for the development of a web-based environmental management system for local authorities in the tracking and managing of the implementation of their statutory environmental protection functions. This project involved extensive training of personnel from all local authorities in Ireland in environmental legislation and environmental enforcement prioritisation for compliance with the European Commission Recommendation on Minimum Criteria for Environmental Inspections.

- **Mid-Western Area Strategic Plan**

MWASP was a strategic land use and transportation plan for the Mid-West region with the objectives of ensuring sustainable and balanced growth in the region for the period 2010 – 2030. The requirement to undertake an Appropriate Assessment (also referred to as Habitats Directive Assessment) derives from Article 6 (3) and 6 (4) of the Habitats Directive (92/43/EEC). All Natura 2000 sites located within 15km of the MWASP boundary, including those within the boundary itself, were identified. The potential impacts of the plan policies and strategies were assessed, and mitigation prescribed, as necessary.

- **Irish Offshore Oil and Gas Strategic Environmental Assessment (IOSEA6)**

Technical Peer Reviewer for the SEA Scoping for the Department of the Environment, Climate and Communications (DECC) Plan for Issue of Petroleum Exploration and Production Authorisations in Irish Offshore Waters for the period to 2030 (currently in Draft). The SEA assess any potential impacts associated with activities conducted under petroleum exploration and production authorisations within Irish offshore waters.

- **AER / WWDL Technical Assistance (ongoing) Client / Irish Water**

Project manager responsible for the co-ordination and management of annual environmental returns (AER) returns from Local Authorities in the Southern Region of Ireland between 2014 to present. Prepared reports to satisfy licence conditions including shellfish water assessments, storm water overflow risk assessments and priority substances reports.

- **Guidance the Licensing of Discharges to Surface Waters and to Sewer / Water Services Training Group**

Manager for the development of guidance for local authorities on their functions and responsibilities under water pollution legislation. Developed supporting technical training and delivered training to in excess of 500 local authority staff through the Water Services Training Group's five regional training centres.



Ben O'Dwyer

Senior Project Ecologist



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Ben O'Dwyer is a Senior Project Ecologist working as part of the Energy and Environment Team at Fehily Timoney and Company. He holds a first class honours Bachelor of Science (BSc) in Wildlife Biology from Institute of Technology Tralee, obtained in 2016. His degree focused on conservation of habitats, flora and fauna, with strong emphases on European and international legislation, and practical field skills.

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). He is also experienced in project management through involvement in a diverse portfolio of ecology-focused work packages and procurement/management of sub-consultants.

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.

Key Skills

- Plant identification
- Habitat mapping
- Invasive species survey
- Ornithological surveying
- Mammal identification (field signs, live sightings & trail camera survey)
- Bat identification using bat detectors, behavioral characteristics & software-based analysis of recorded calls
- Bat roost survey
- Habitat assessments
- Report writing and impact assessment (Ecological Impact Assessment, AA Screening & Stage 2 Natura Impact Statement)
- Derogation license applications
- Ecological supervision, collaboration with other disciplines at both planning and construction stages.

Project Experience

Wind Energy Projects

- Confidential wind farm Co. Clare – Biodiversity Chapter for EIAR, NIS, first-party appeal, habitat survey, mammal survey, ecological walkover, marsh fritillary survey, grid connection and TDR survey
- Curragh Mountain Wind Farm – Vegetation monitoring, assessment and reporting (ecological monitoring of operational wind farm)
- 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
- Croaghnaun wind farm Co. Carlow – NIS, FI Response

Key Information

Qualifications

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

Employment History

2016- Present

Fehily Timoney & Company
Ecologist

2015

Malachy Walsh & Partners, Tralee
Work Placement



Ben O'Dwyer
Senior Project Ecologist

- Bilboa wind farm Co. Carlow (rotor modification) – Biodiversity Chapter for EIAR; detailed Biodiversity & AA RFI responses
- Coom wind farm, Co. Cork – Turbine delivery route nodes survey, passive bat detector survey, replant lands survey, AA screening reports for TDR route & replant lands
- Confidential wind farm Co. Laois – Summer & winter VP surveys; bird survey data collation; bat surveys (activity, emergence & passive detector surveys); habitat survey; mammal survey
- Dernacart Windfarm Co. Laois – Biodiversity Chapter for EIAR
- Drehid wind farm Co. Kildare – Summer & Winter VP surveys; Dawn/Dusk Winter VP Survey
- Barranafaddock Windfarm – AA screening report updates, post-construction collision monitoring survey & scavenger Trial
- Moanvane Windfarm – Preconstruction ecology surveys, construction-stage badger mitigation measures, bat Survey; bird survey data collation; habitat surveys; Mammal Survey; Replant Lands Habitat Survey
- Meenwaun Windfarm - Pre-Construction Badger, Otter & Bat Surveys; Badger Sett Hard-blocking & Monitoring
- Moanincha Windfarm – Post-Construction Collision Monitoring Survey; Bat Survey; Post-Construction VP Surveys
- Confidential Windfarm Co. Cork – Habitat surveys including Annex I survey, marsh fritillary survey, summer & winter VP surveys; breeding bird surveys; breeding moorland bird surveys; merlin survey; hinterland survey
- Confidential Windfarm Co. Cork (2) – Summer & winter VP surveys; breeding bird surveys; hinterland survey
- Raragh Windfarm – Habitat Survey and Bat Survey (Cable Route)
- 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
- Garryhinch Wind farm – Hen harrier roost watches

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.
- Middleton House Solar Farm - Habitat Survey, Site Walkover, Cable Route Survey, Mammal Survey, Ecological Appraisal
- Middleton House Solar Farm (additional lands)- Habitat Survey, Site Walkover, Cable Route Survey, Mammal Survey, Ecological Appraisal. Report for AA Screening

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)



Ben O'Dwyer
Senior Project Ecologist



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-
- 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
 - Kilbarry Residential & Solar Development EIAR - Habitat & General Ecology Surveys, Ecological Appraisal.
 - Waterford Airport Runway Extension - Habitat & General Ecology Surveys
 - Monaghan Historic Landfills- AA Screenings for Tier 3 Assessments
 - Great Southern Trail Greenway - General Ecology Survey (Barnagh Tunnel Section)
 - IDA National Technology Park, Limerick - NIS for flood defence berm
 - Ballaghveny Landfill- Baseline Biodiversity Survey & Report
 - Cúl Na Móna Gas to Grid Plant – Vantage point surveys, Breeding Bird Surveys.
 - Corduff FlexGen Gas Pipeline & AGI – AA Screening for Section 5 Application
 - Rogerstown Park (former Baleally Landfill) – AA Screening for maintenance shed
 - Thorpes & Oldcourt Historical Landfill Monitoring - AA Screening
 - Stewarts Hospital Front Terrace Restoration – Mammal Survey, Bat Roost Survey



John Cullen

Senior Project Acoustic Engineer



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

John is a Senior Project Acoustic Engineer with Fehily Timoney & Company. He holds a BAgSc in Agri-Environmental Science from University College Dublin, a P.Grad.Dip in Environmental Engineering from Trinity College Dublin and a Diploma in Acoustics and Noise Control from the Institute of Acoustics, receiving the award for "Best Performing Irish Student" from the Institute of Acoustics. He is a member of the Institute of Acoustics and the Institute of Engineers Ireland.

John has gained experience in the delivery of Environmental Impact Assessment Report Noise & Vibration Chapters for a wide range of developments, including proposed waste facilities, wind farms and solar farms, anaerobic digestion plants, proposed road projects and residential & industrial developments.

He has extensive experience in carrying out environmental noise surveys and assessments on behalf of a wide range of clients. He has completed noise monitoring programmes, computational noise models and noise impact assessments for a wide range of projects on behalf of public and private sector clients. He has carried out in-situ acoustic measurements of road noise barriers to determine acoustic performance throughout Ireland, including sound reflection (EN 1793-5) and airborne sound insulation (EN 1793-6).

John has carried out occupational noise and hand-arm/whole body vibration risk assessments in accordance with the requirements of the Irish & UK workplace noise & vibration regulations. He has also acted as Lead Acoustic Consultant carrying out sound insulation tests and building acoustics assessments for a range of commercial and residential developments in Ireland, the UK and Europe.

Previous Experience Essentials For This Project

- **Fehily Timoney and Company, 2022 – Ongoing**
John is a Senior Project Acoustic Engineer with experience working as part of the Waste and Environmental Team delivering Environmental Impact Assessment Reports (EIARs), environmental management plans and licence applications/compliance.
John has experience in the delivery of Environmental Impact Assessment Reports for a wide range of developments, completing computational noise models and noise impact assessments for proposed developments, and carrying out in-situ acoustic measurements of motorway noise barriers throughout Ireland.
- **Self Employed – Environmental & Acoustic Consultant, April 2021 – 2022**
Carrying out subcontract acoustic & environmental consultancy services including environmental noise monitoring & assessments, noise impact assessments, occupational noise & vibration assessments, sound insulation testing and building acoustics assessments. Environmental consultancy services including air quality assessments, bund integrity assessments, and verification audits for the Bord Bia 'Origin Green' sustainability programme.
- **Environmental Efficiency Consultants, Bray, January 2016 – April 2021**
John was an Environmental & Acoustic Consultant providing environmental consultancy services to clients across a wide range of sectors, including industrial, pharmaceutical, construction/quarrying and agri-food/drink.

Key Information

Qualifications

Diploma in Acoustics and Noise Control, Institute of Acoustics via Trinity College Dublin
2019 – 2020

Post Graduate Diploma in Environmental Engineering (NFQ Level 9) (P.Grad.Dip), Trinity College Dublin
2014 – 2015

Agri-Environmental Science (NFQ Level 8) (BAgSc)
University College Dublin
2009 – 2013

Professional Memberships

Institute of Engineers Ireland (MIEI)
Institute of Acoustics (AMIOA)
Institute of Environmental Sciences (MIEnvSc)

Employment History

2022- Present

Fehily Timoney & Company
Senior Project Acoustic Engineer

2021- 2022

Self-employed Environmental & Acoustic Consultant

2016- 2021

Environmental Efficiency Consultants
Environmental & Acoustic Consultant

2015 - 2016

Philip Farrelly & Co.
Agri-Environmental Consultant

2014 - 2015

Verde Environmental Group
Environmental Operative



John Cullen

Senior Project Acoustic Engineer



CONSULTANTS IN ENGINEERING,
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He was working as part of a multi-disciplinary team delivering environmental reports, management plans, impact assessments, licence/permit applications and environmental compliance consultancy. Working across various areas of environmental consultancy, specialising in noise & acoustics. His role involved developing project proposals & quotations, project management, research, carrying out and coordinating environmental monitoring & field surveys (Air quality, biodiversity, bunds, noise, vibration & water), liaising with sub-contractors and regulatory bodies, interpreting monitoring results & data, and technical report writing. Other duties included completing verification audits for the Bord Bia 'Origin Green' sustainability programme, carrying out occupational air, noise & vibration risk assessments, and indoor air quality assessments.

- **Philip Farrelly & Co., Balbriggan, March 2015 – January 2016**

John was an Agri-Environmental Consultant providing technical agri-environmental advisory services to clients. He was also responsible for soil sampling & analysis, nitrates & nutrient management planning, ecological field surveys, and agri-environmental scheme consultancy.

- **Verdé Environmental Group, Kilcoole, January 2014 – March 2015**

John was an Environmental Operative responsible for contaminated site investigation, drilling works, environmental monitoring (soil, water & air), site remediation and groundworks, and installing/maintaining on-site remediation systems.



Tom Clayton

Associate Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Tom is a Chartered Engineer with a total of 15 years of experience within the geotechnical sector having developed excellent skills in analytical design (including finite element analysis), project and team management.

Tom has significant and broad experience in the geotechnical sector, having developed key expertise in transport geotechnics (for road, rail, underground rail schemes, active travel and greenway schemes), deep excavations and shafts (primarily in the Middle East and London) and Energy Geotechnics (both for solar and wind farms).

Tom also specialises in earthwork stabilisation and has worked in asset management and design consultancy roles for both highways and rail projects.

Tom has 10 years' experience as geotechnical lead on a variety of projects with over 5 years of this experience as the lead geotechnical engineer in Fehily Timoney.

H&S

Tom has been responsible for the management of Design Health and Safety at all stages of projects from conception to construction completion both in the UK and Ireland. Tom has overseen Design Stage Health and Safety across different sectors, including ground engineering, roads and rail projects. Tom has undertaken the role of PSDP on a number of projects.

Key Skills

Tom's experience includes:

- Geotechnical Engineering
- Geotechnical Design
- Site Inspections
- Deep Excavations & Underground Structures
- Geotechnical Asset Management & Slope stabilisation
- Site Investigation

Previous Experience Essentials for This Project

Deep Excavations

- **Thames Tideway Tunnel Tender (West & Central Station) – Ferrovial Laing O'Rourke, 2014**

Geotechnical Designer producing geotechnical interpretative and tender design notes for Thames Tideway Tunnel West & Central section tender (total value approximately £300M – 500M for each section). Interpretation of ground investigation, production of characteristic design values, designer's risk assessment, preliminary design and input into the contractor's risk analysis. Leading a team of two engineers.

- **STEP Tunnel, Abu Dhabi – Samsung, 2011**

Design of circular shafts using Plaxis2D including uplift calculations and consideration of internal water pressure and structures. Mentoring a trainee engineer.

Key Information

Qualifications

MEng. (Distinction) Civil Engineering,
University of Surrey, 2008

BREEAM Infrastructure Assessor

Professional Memberships

Institution of Civil Engineers
(Member) 2015

Chartered Engineer (CEng), 2015

Employment History

2016- Present

Fehily Timoney & Company
Principal Geotechnical Engineer

2008 – 2016

Arcadis UK (Formerly Hyder
Consulting)

2004 – 2008

Hyder Consulting (Undergraduate)



Tom Clayton

Associate Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
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- **Whitechapel Station (Crossrail) – Crossrail, 2011**

Undertook geotechnical design on structures at Whitechapel Station. Work included finite element modelling and pseudo finite element modelling of deep box structures constructed using diaphragm walls with incoming and adjacent tunnels, pile design, 2D PFE modelling and design of multi-propped contiguous pile walls and preparation of geotechnical baseline reports.

- **Botanica Tower, Dubai & Al Quds Tower - Doha Select Group, 2010**

Completed a piled raft foundation design for a 40 storey structure in Dubai with 3 basement levels and a 100 storey tower with 5 basement levels and associated podium structures. Tom produced a finite element models (in MidasGTS) of the tower foundations in order to calculate settlement and pile forces and verified the results using several other computer packages.

- **Khatt Hotel, Ras Al Khaimah - Khatt Hotel, 2007**

On site as the supervising engineer at the Khatt Hotel, a ground and structural stabilisation project in the United Arab Emirates. Tom's responsibilities included daily supervision of micro-piling and retaining wall construction, monitoring of structural cracks and slope movements and general liaison with the Contractor's engineers on site to ensure compliance with specification.

- **Borough Green to Trosley Pipeline Directional Drilling, 2010**

Specification and supervision of ground investigation, preparation of a design report including settlement calculations for a directionally drilled pipeline below the M20 motorway in Kent. Liaison with the Highways Agency to ensure approval. Supervision of directional drilling works to ensure specified settlement criteria were met.

Dynamic Compaction

- **Al Falah Ground Improvement Scheme, Abu Dhabi - Fluor, 2009**

Settlement calculations based on the interpretation of CPT and Pressuremeter data and comparison against calculated trigger values to ensure adequate improvement of ground stiffness by dynamic compaction methods. This scheme was, at the time, thought to be the largest ground improvement scheme in the world.

Roads

- **N19 Shannon Airport Access Road, Ongoing**

Associate Geotechnical Director geotechnical assessments as part of Phase 1-4 of the EIAR process. Scope, procure and manage the detailed ground investigation for the scheme, involving scheduling of laboratory testing on soil and rock samples, including soft ground. Provision of a GIR and GDR for the scheme.

- **Dunkettle Interchange, Ongoing**

Principal Engineer for the reconfiguration of the Dunkettle Interchange to a free flowing 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 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 watercourses or intertidal area
- Pedestrian and cyclist facilities; and
- Modification of the existing Silversprings junction on the N8 Lower Glanmire Road

Geotechnical lead for structures foundations and approximately a third of the earthworks. Responsible for the scoping of the ground investigation, preparation of specification and bill of quantities, managing a team of supervisors on site, laboratory testing scheduling and interpretation of two phases of extensive ground investigation for this significant infrastructure project.

- **A737 Dalry Bypass - Farrans-Roadbridge, Ongoing**

Tom has been responsible for project management of the design of the Dalry Bypass during the latter design phase and through construction to date. He has acted as a geotechnical auditor and internal checker for earthworks packages delivered. Tom also undertook design of a pipeline protection slab related to SGN infrastructure crossing the proposed alignment.

- **Manchester Smart Motorway - Highways England, 2014**

Completion of a Preliminary Sources Study and detailed design for gantries and retaining structures for a £208M "Smart motorway" scheme on the M60/M62. Leading a team of two graduate engineers and up to three engineers based in India. The role involved the development of characteristic design values, pile group analysis for all gantries and design of retaining structures on sloping ground. Preparation of Design Risk Assessments for all designs.



Tom Clayton

Associate Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

- **Geotechnical Asset Management Plan – Highways England, 2013**

Tom completed a full review of the asset inventory in Mac Area 3, prioritised earthwork repairs based on the Value Management Plan, risk profiling and available economic and physical resources and produced a five-year plan for earthwork remedial works across the area.

- **Area 3 Value Management Plan – Highways England, 2013**

Tom undertook detailed design a sheet pile based widening scheme to facilitate a new slip road at Milton Interchange which was in turn related to a new housing development adjacent to the site. This included the use of retaining wall design software, specification, Designer's risk assessments (in accordance with CDM regulations) and all other documentation for a "For Construction" set of documents.

- **Area 3 Principal Earthwork Inspections– Highways England, 2013**

Tom managed a team of 3 Geotechnical Engineers to undertake Principal Inspections (and undertook inspections himself) across the Area 3 network across two annual inspection cycles, totalling some 500 miles of highway geotechnical asset. Tom used a PDA on site to enter information into the Highways England HAGDMS database and then carried out quality control assessments on the data. Tom also trained other staff in the undertaking of geotechnical earthwork inspections. Tom produced a safety system for inspectors which complied with the Highways England methodologies for working on the highway which included a buddy and daily reporting system.

- **EM47609 – M4 J10 Granular Repair – Highways England**

Project Manager and design lead for a granular repair adjacent to a highway bridge at M4 J10. Tom undertook scoping and management of site investigation, supervision of site clearance and site investigation, undertook the role of Contractor on site from a health and safety perspective. Carried out detailed design and liaised with the site team to ensure compliance with the design.

- **M25 Rapid Widening – Highways England, 2006**

Undertook design of retaining walls, re-graded slopes, reinforced soil and soil nails using computer analysis programs to BS8002 and BS8004 for the Rapid Widening of a section of the M25 Orbital Motorway, London, UK.

- **A34 Milton Interchange Slip Road – Highways England, 2013**

Tom undertook detailed design a sheet pile based widening scheme to facilitate a new slip road at Milton Interchange which was in turn related to a new housing development adjacent to the site. This included the use of retaining wall design software, specification, Designer's risk assessments (in accordance with CDM regulations) and all other documentation for a "For Construction" set of documents.

Chieveley Pond Flood Alleviation Scheme – Highways England, 2013

Project Manager for the undertaking of ground investigation at Chieveley Ponds, which involved the completion of boreholes and the installation of water level data loggers to assess the viability of an alleviation scheme for road surface flooding at the junction. Tom completed the ground investigation tender and completed CDM documentation for same.

- **M27 Romsey Bridge– Highways England, 2013**

Project Manager for the replacement of an existing bridge structure. This project included the consideration of the re-use of bridge abutment piles and an assessment of load takedown for a new structure. Tom also undertook scoping and specification of ground investigation at the site as well as preparation of CDM documentation for same.

Rail (Summary)

- **Wessex CP5 Design Manager Role – Network Rail, 2015**

Project Manager of 10+ schemes totalling £1M+ of design fee. Tom coordinated a multi-disciplinary design team and liaised closely with a co-located team from the client (the contractor) and NR. Tom administered the contract (early warning notices, change controls etc.), compiled fee proposals, created and maintained a programme and managed client expectations. Tom was also responsible for ensuring that all design team risk assessments were completed and collated in accordance with CDM regulations.

Wessex CP5 Technical Lead Role – Network Rail, 2017

Design lead of a team of up to 5 geotechnical engineers and CAD staff producing designs for multiple earthwork stabilisation projects in the NR Wessex region of total values ranging from £200k to £2M. Tom produced Option and Feasibility Reports and ground investigation specifications. Tom adhered to the NR design process (Form 001, 002 and 003) to produce detailed designs for earthwork schemes including soil nailing, sheet piling, gabions and king post walls. Tom also produced Designer's Risk Assessments for each scheme.



Tom Clayton

Associate Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
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Rail (Expanded)

- **Allington – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager for this railway embankment stabilization project in Hampshire, UK. The design utilized sheet piles and retaining walls to provide cess retention and stabilize a slope which had been subject to significant rotational failures and track misalignment. This project was completed through Network Rail's GRIP process from conception to final detailed design.

- **BKE Line – Osborne (Network Rail Framework), 2016**

Tom used his extensive experience in earthwork slope stability in the London area to develop a set of key indicators for slope instability (including geology, slope geometry, ballast depths, train rough ride reports etc.) and then, using the extensive data available in the Network Rail records, developed a rating system for the BKE line which identified areas of high risk for slope instability. This system was developed using ArcGIS Online and provided Network Rail with real time access to the information in graphical format as information layers on a map.

- **Bracknell Slope Stability Assessment – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for this slope stability assessment for a failing slope at Bracknell, Berkshire, UK. Tom carried out a visual inspection, scoped ground investigation and undertook monitoring of adjacent drainage and structural assets in order to determine the likely cause of the slope failure.

- **Cess Retention Improvement – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for this report which investigated cess retention measures (including gabions, king post walls, ruglei system, sheet piles etc.) and looked at their advantages and disadvantages. Standard details were also provided.

- **Firwood – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for this slope stabilisation project at Firwood, UK. The project involved the construction of a king post cess retention system to prevent further movement of the tracks due to overfilled ballast. The project was completed from conception to completion on site.

- **Grayswood – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for this slope stabilisation project at Grayswood, Hampshire, UK. The project involved the use of sheet piles and a combined cess / surface water drainage system in order to provide stability for a long stretch of railway which had been the site of several slope failures in recent years. The project was completed from detailed design stage up until completion on site.

- **Liphook Station – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for this slope stabilisation project at Liphook, Hampshire, UK. The project was split into two sections, the first was an emergency works scheme where a temporary bagwork support system was installed prior to a permanent works design consisting of a gabion wall and regrade solution. The project was completed from detailed design stage up until completion on site.

- **Wessex Rapid Response – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for the development and management of the Wessex Rapid Response system which involved the generation of standard designs and a rota system for weekend and holiday periods during the winter. Solutions involving gabions, bagwork and sheet piles were proposed and designed for standard situations that could be used in an emergency situation. Tom also administered the rota and responded to emergency schemes during this time. Notable emergency projects included the Liphook Embankment, Botley Embankment Failure and Wrecclesham slope failure.

- **West Clandon – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager/Lead for this slope failure at West Clandon, Surrey, UK. The project involved the repair of an existing repair which was failing and encroaching on the tracks at West Clandon. The solution involved the use of sheet piles to the rear of the cut and a regrade to the front to ensure a sufficient factor of safety and divert substantial surface flows to a nearby stream. Tom completed this project from initial site visit to completion on site.

- **Withy Beds Feasibility Study – Osborne (Network Rail Framework), 2016**

Tom undertook a feasibility study for this 1.5km long site in Surrey, UK which had been subject to multiple slow failures throughout recent times. Tom proposed a set of solutions, including cess retention, soil nailing and sheet piling at different areas depending on local conditions. Tom used GPR to identify the depth of ballast and as an indicator for potential slope stability issues and previous settlement.



Tom Clayton

Associate Director (Geotechnical)



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- **Wrecchesham Emergency Works – Osborne (Network Rail Framework), 2016**

Tom was the Project Manager and Geotechnical Design Manager / Lead for this emergency works slope failure at Wrecchesham, Hampshire. Tom undertook a site visit, scoped ground investigation and managed the procurement of site investigation. Tom then provided Network Rail with a temporary design and permanent design for the scheme and liaised with Network Rail and the contractor throughout the construction of the temporary design (which consisted of a tied back sheet pile wall with deadman anchors).

Peatland Restoration

- **Derryclare Peat Restoration Project – MKO/Coillte, 2023**

Associate Geotechnical Director for this peat bog restoration project in Co. Galway. Work included peat stability assessment, peat probing.

Flood Defences

- **IDA Limerick Flood Alleviation Scheme – IDA, 2021**

Lead Geotechnical Engineer for this flood defence scheme. Responsible for scoping, procuring, supervising site investigation consisting of trial pits, boreholes, geophysics and laboratory testing. Scheduling of laboratory testing. Interpretation of ground investigation and inputs to preliminary design for flood defence scheme.

- **Titchwell Marsh, Norfolk – RSPB, 2021**

Acted as consultant's representative on site at RSPB Titchwell Marsh for this flood defence and managed retreat scheme aiming to create new saltmarsh and protect existing Freshwater marsh, liaising with the client and the contractor and managing site queries, design changes (including updates to Design Risk Assessments) and payment certification to the contract.

Greenways

- **Grand Canal Greenway Phases 1 & 2, Ongoing**

Associate Geotechnical Director responsible for the design of works for the Grand Canal Greenway Phases 1 & 2. The projects include the design, procurement and construction supervision for walking and cycling routes along the grand canal, including new pedestrian bridges, canal bank widening, pavement design, under bridge crossings and design of trail heads. Total length is approximately 40kms. Scope included scoping, procuring, supervising site investigation consisting of trial pits, boreholes, geophysics and laboratory testing. Scheduling of laboratory testing.

- **Wexford to Rosslare Greenway, 2020**

Associate Geotechnical Director responsible for the route selection, preliminary design, environmental assessment and statutory consent processes for the greenway. The Wexford Town to Rosslare Strand Greenway route will commence in the vicinity of proposed Trinity Wharf development in Wexford Town and extend in southerly direction over an approximate distance of 10-12km to terminate at Rosslare Strand Train Station.

- **Limerick Greenway Limerick, €10M, 2022**

Associate Geotechnical Director for the design of improvement works to 40km of the great southern greenway in Limerick. Works include widening, resurfacing, over bridges and under passes, drainage improvements and trailhead design. Scope included scoping, procuring, supervising site investigation consisting of trial pits, boreholes, geophysics and laboratory testing. Scheduling of laboratory testing. The design phase has been completed and the project is commencing construction.

- **Barrow Blueway Road Crossings, €TBDM, Ongoing**

Associate Geotechnical Director for the design of road crossings and new pedestrian bridges associated with the Barrow Blueway. Scope included scoping, procuring, supervising site investigation consisting of trial pits, boreholes, geophysics and laboratory testing. Scheduling of laboratory testing.

Wind

- **Ballivor Wind Farm – MKO, 2023**

Associate Geotechnical Director for this Peat Stability Assessment and Peat & Spoil Management Plan for EIAR submissions. Site walkover, collation of data, stability assessment, assessment of peat and spoil volumes. Scope, procure and supervision of ground investigation on peatland site and scheduling of laboratory testing.

- **Sheskin South Wind Farm – MKO, 2023**

Associate Geotechnical Director for this Peat Stability Assessment and Peat & Spoil Management Plan for EIAR submissions. Site walkover, collation of data, stability assessment, assessment of peat and spoil volumes. Scope, procure and supervision of ground investigation on peatland site and scheduling of laboratory testing.



Tom Clayton

Associate Director (Geotechnical)



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- **Glenora Wind Farm – MKO, 2023**

Associate Geotechnical Director for this Peat Stability Assessment and Peat & Spoil Management Plan for EIAR submissions. Site walkover, collation of data, stability assessment, assessment of peat and spoil volumes. Scope, procure and supervision of ground investigation on peatland site and scheduling of laboratory testing.

- **Croaghaun Wind Farm, 2022**

Associate Geotechnical Director for the production of EIAR Soils & Geology Chapter for this wind farm project.

- **Coom Green Energy Development, 2020**

Associate Geotechnical Director for the production of EIAR Soils & Geology Chapter for this wind farm and solar energy project in Co. Cork. Included the scoping, specification, procurement, supervision, management and interpretation of ground investigation and scheduling of laboratory testing.

- **Derrinlough Wind Farm – Bord na Mona, 2022**

Associate Geotechnical Director providing geotechnical advisory to Bord na Mona for this wind farm project. Included the completion of laboratory testing schedules to allow detailed design of all elements of the works on this project.

- **Kilgallioch Wind Farm, Farrans, 2018**

Tom took over the Project Manager role for this award winning 96 turbine wind farm project in Scotland towards the end of the construction stage and was responsible for closing out as-built drawings. Tom also undertook the role of Geotechnical Design Lead for a replacement turbine foundation at one location and undertook the formation inspection during the construction of this turbine.

- **Derrysallagh Wind Farm Substitute Consent – Kilronan Wind Farm Ltd, 2018**

Tom was the Geotechnical / Geology Lead for the preparation of a Soils, Geology and Hydrogeology chapter for a retrospective EIS relating to the construction of an electrical cable route from Derrysallagh Wind Farm to a nearby electrical sub-station. As part of this assessment, Tom undertook a full desk study, site visit and provided an assessment of potential and cumulative impacts of the development (including with the wind farm development itself) and mitigation measures that could be implemented.

- **Gortfinbar Phase 2 – Moriarty Civil Engineering Contractors, 2017**

Tom acted as Category III checker for a piled turbine base foundation at this Northern Irish Wind Farm. Tom carried out an independent set of calculations and provided comments to the Designer. Tom also provided slope stability assessments for access road rock cuttings.

- **Teevurcher Wind Farm - Roadbridge, 2017**

Tom was the Lead Geotechnical Designer for this 5 turbine wind farm in Co. Meath and carried out full interpretation of the ground investigation and geotechnical design for all turbine foundations, hardstandings, access roads, substation foundations and met mast. Tom also provided construction stage support, formation inspections and verification of geotechnical testing for all of the above elements.

- **Meenwaun Wind Farm - Roadbridge, 2017**

Tom was the Lead Geotechnical Designer for this 4 turbine wind farm in Co. Offaly and carried out full interpretation of the ground investigation and geotechnical design for all turbine foundations, hardstandings, access roads, substation foundations and met mast. Tom also provided construction stage support, formation inspections and verification of geotechnical testing for all of the above elements.

- **Proposed Wind Farm, Co. Kerry – Joam Consulting Ltd, 2016**

Tom was the Project Manager for this peat stability assessment for a proposed wind farm in Co. Kerry. Tom oversaw the conducting of peat probing and field visits to the site and the preparation of a peat stability assessment in line with Scottish guidance on the preparation of Peat Stability Assessments. This project also involved the 3rd party check of a soil, geology and hydrogeology chapter prepared by others.

- **Raragh Wind Farm – Mainstream Renewables, 2016**

Tom was the Geotechnical / Geology Lead for the preparation of a Soils, Geology and Hydrogeology chapter for an EIS relating to the construction of an electrical cable route from Raragh Wind Farm to Kingscourt, Co. Cavan. As part of this assessment, Tom undertook a full desk study, site visit and provided an assessment of potential and cumulative impacts of the development (including with the wind farm development itself) and mitigation measures that could be implemented.



Tom Clayton

Associate Director (Geotechnical)



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- **Proposed Wind Farm, Co. Donegal – Element Power, 2016**

Tom was the Geotechnical / Geology Lead for the preparation of a Peat Stability Assessment for an EIS relating to the construction of a Wind Farm in Co. Donegal which was a proposed as an 8 turbine site. Tom oversaw the conducting of peat probing and field visits to the site and the preparation of a peat stability assessment in line with Scottish guidance on the preparation of Peat Stability Assessments

Contaminated Land and Waste

- **Whitestown Landfill Remediation Project, Ongoing**

Tom was Lead Geotechnical Engineer for ground investigations carried out on this significant landfill site in Co. Wicklow. Investigation involved a grid of trial pits (100+) with environmental testing, installation of groundwater monitoring wells and investigation boreholes (89 no.) across the site and extensive geophysical investigation using seismic refraction, electrical resistivity and ground conductivity. Works included the scoping of the SI, preparation of extensive specification and tender documents, procurement of ground investigation contractors, management of the supervision of the works and interpretation of the ground investigation fieldwork.

- **Dublin Airport Environmental Assessment – daa (on behalf of Roadbridge), 2018**

Tom has been Project Manager for this environmental investigation project which involved the use of a mix of geophysical and intrusive investigation to map buried waste across a 261-hectare area on the outskirts of the Airport and then the use of environmental sampling to inform disposal and re-use of the materials encountered. Tom led a team including geo-environmental and waste teams and liaised with site investigation contractors.

- **Timoole Landfill Remediation Tender Design – Priority Construction, 2018**

Tom has been the Project Manager and Geotechnical Lead for this remediation design for the removal of 40,000+m³ of assorted waste materials from a site in Co. Meath. The project involved use of the Observational Method for the ongoing assessment of slope stability, with mitigation measures including sheet piling and the construction of berms and dewatering trenches included in the design should signs of instability occur.

- **Dublin Airport Stockpile Soil Classification – daa (on behalf of Ramboll), 2018**

Tom was the Project Manager for this Soil Classification project relating to 70,000+m³ of mixed stockpiles and made ground at Dublin Airport. Tom undertook the management of environmental engineers, site investigation contractors and laboratories in order to produce a Soil Classification Report as part of the tender for removal and disposal of these soils as waste materials.

- **Newhaggard Soil Classification – Fingal County Council, 2018**

Tom was the Project Manager for this Soil Classification project near Lusk, Co. Dublin. 41,000m³ of soil had been deposited previously within the Rogerstown Estuary and the project involved the classification of these soils for re-use, both in terms of contaminants and from a geotechnical point of view. Tom managed sub-contractors to carry out site investigation and staff to prepare a Soil Classification Report.

- **Ballyogan Landfill, 2017**

Tom was the Geotechnical Slope Inspector for this landfill, which included a visual inspection of all side slopes and reporting on any slope stability issues to satisfy the EPA waste licence criteria.

- **Balleally Landfill, 2017**

Tom was the Geotechnical Slope Inspector for this landfill, which included a visual inspection of all side slopes and reporting on any slope stability issues to satisfy the EPA waste licence criteria.

- **Dunsink Landfill, 2017**

Tom was the Geotechnical Slope Inspector for this landfill, which included a visual inspection of all side slopes and reporting on any slope stability issues to satisfy the EPA waste licence criteria.

- **Gortadroma Landfill Slope Stability, 2017**

Tom was the Geotechnical Slope Inspector for this landfill, which included a visual inspection of all side slopes and reporting on any slope stability issues to satisfy the EPA waste licence criteria.

H&S

- **Loughshinny Waterbath Upgrades, Ongoing**

Tom is currently undertaking the role of H&S Coordinator for this gas upgrade project.

- **Gormanstown Boiler Upgrades, Ongoing**

Tom is currently undertaking the role of H&S Coordinator for this gas upgrade project.



Tom Clayton

Associate Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
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- **Diswellstown AGI Upgrades, Ongoing**

Tom is currently undertaking the role of H&S Coordinator for this gas upgrade project.

- **Belview AGI Upgrade**

Tom undertook the role of PSDP for the upgrade of this Above Ground Installation (AGI) at Belview, Dublin.

- **Nangor Road AGI Upgrade**

Tom undertook the role of PSDP for the upgrade of this Above Ground Installation (AGI) at Nangor Road, Dublin

- **4Bar in Building Upgrade Programme, Going**

Tom is currently undertaking the role of PSDP for the upgrade of this extensive residential and commercial property gas upgrade programme throughout Ireland.

- **A737 Dalry Bypass – Farrans Roadbridge, Ongoing**

Tom is currently undertaking the role of Principal Designer during the construction stage of this 4km long new build Bypass in Scotland which includes a multi-span viaduct structure, roundabouts, overbridges, underbridges and other associated highway infrastructure. This role includes liaison with multiple design teams and contractor's temporary works coordinator.

- **Dublin Airport 5H Apron, Ramboll**

Tom undertook the role of PSDP for Fehily Timoney on this extension to the existing apron at Dublin Airport. Tom has liaised with all Designer's at design phase to ensure compliance with the regulations and prepared Preliminary health and safety plans for various works packages.

- **Centre Parcs Feeder Main - Fingleton White**

Tom acted as PSDP and as Geotechnical / Geology lead for this new gas main linking Center Parcs into the gas grid. The scheme is in multiple phases, with ground investigation phase, 1st phase and 2nd phase being undertaken. Tom's role includes liaison with designers and contractors, attendance at all progress meetings, site visits and other communication required to undertake the role. Tom also undertook the Soils, Geology & Hydrogeology chapter during the planning process for the scheme.

- **Mitchelstown Biomethane Plant- Fingleton White**

Tom undertook the role of PSDP during the preliminary design phase for this biomethane injection facility in Co. Cork. Tom also was responsible for the geotechnical team who scoped, procured and managed the site investigation for the project and produced a Geotechnical Investigation Report summarising the geotechnical interpretation and design inputs.

- **Ballincollig AGI Upgrade - Fingleton White**

Tom undertook the role of PSDP during the construction phase for the upgrade of this Above Ground Installation (AGI) at Ballincollig, including preparation of the safety file and liaison with the contractor.



Ian Higgins

Technical Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Ian is a geotechnical engineer with 25 years' experience in the design and supervision of construction of bulk earthworks, geotechnical foundation design, geotechnical monitoring and reviewing, reinforced earth design and 3rd party checking of piling and ground improvement designs. Ian's experience also includes the design, supervision and interpretation of ground investigations, including desk studies, walkover surveys, hazard mapping of rock excavations and slopes.

Ian has experience in many areas of civil engineering including highways, railways, energy projects and commercial developments. Ian's responsibilities include managing junior engineers, reviewing work carried out for ground investigation, reporting and design. Ian has also experience in using a number of geotechnical software packages including slope stability, finite element, pile design and retaining wall design.

Key Skills

- Earthworks Design
- Geotechnical Foundation Design
- Ground Investigation Scoping and Procurement
- Peat Stability Assessments for Wind Farms

Previous Experience Essentials for This Project

- **Dunkettle Interchange**
Part of Earthworks Design team for detailed design of Interchange Upgrade. Produced Design Reports covering the design of ground improvement for soft ground and slope stability assessments.
- **Ballivor, Sheskin South and Glenora Wind Farms**
Undertake Peat Stability Assessment and Peat & Spoil Management Plan for EIAR submissions. Site walkover, collation of data, stability assessment, assessment of peat and spoil volumes. Scope, procure and supervision of ground investigation on peatland site and scheduling of laboratory testing.
- **N19 Shannon Airport Access Road**
Undertake geotechnical assessments as part of Phase 1-4 of the EIAR process. Scope, procure and manage the detailed ground investigation for the scheme, involving scheduling of laboratory testing on soil and rock samples, including soft ground. Provision of a GIR and GDR for the scheme.
- **Croaghaun Wind Farm, Annagh Wind Farm, Coom Green Energy Development**
Production of EIAR Soils & Geology Chapter for several wind farms.
- **Derrinlough Wind Farm, Croagh Wind Farm, Cahermurphy Wind Farm,**
Undertake Peat Stability Assessment and Peat & Spoil Management Plan for EIAR submissions. Site walkover, collation of data, stability assessment, assessment of peat and spoil volumes.
- **Almaty-Korgos Highway, Kazakhstan (ICC)**
Assessment the quantities of all temporary and permanent works executed by the Claimant relating to East-West Roads Project (Almaty-Korgos), part of the Western Europe-Western China International Transit Corridor.
- **A6 Dungiven to Drumahoe**
Part of Earthworks Design team for tender design submission. Assessment of ground investigation information for earthworks reusability and slope stability assessments.

Key Information

Qualifications

BSC. Engineering Geology,
University of Sunderland, 1996

MSc. Geotechnical Engineering,
Heriot Watt University, Edinburgh,
1997

Professional Memberships

Member of the Institute of Engineers
of Ireland

Fellow of the Geological Society of
London (FGS)

Employment History

2019- Present

Fehily Timoney & Company, Carlow

2013 – 2019

Applied Ground Engineering
Consultants Ltd. (AGEC)

2012 – 2013

AGEC Australia

2001 – 2012

Applied Ground Engineering
Consultants Ltd. (AGEC)

1998 – 2001

Geotechnics Ireland Ltd.



Ian Higgins

Technical Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
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- **Oweninny Wind Farm, Mayo**
Geotechnical design of access roads and turbine bases for Phase 1 of wind farm development (29 turbines)
- **Aberdeen Western Peripheral Route, Aberdeenshire, Scotland**
Part of Client's Representative Team, monitoring and checking of earthworks including material selection and testing. Liaison with contractors and preparing daily and weekly reports on work programme and health and safety issues.
- **M17/M18 Gort to Tuam PPP Project**
Geotechnical design category 3 checker for motorway project in the west of Ireland, covering earthworks and foundations for structures.
- **Kilgallioch Wind Farm, Scotland**
Geotechnical design of substation platform, access roads and turbine bases for 96 turbine wind farm.
- **Dersalloch Wind Farm, Scotland**
Geotechnical design of access roads and turbine bases for 23 turbine wind farm.
- **Dublin Waste to Energy Incinerator Project**
Geotechnical assessment of ground conditions, procurement of ground investigation, design of piled foundations, design load transfer platform and reinforced earth structures.
- **Black Law Wind Farm Extension, Scotland**
Geotechnical design of access roads and turbine bases for 23 turbine extension to an existing wind farm including site inspections and sign off during construction.
- **Diyar Al Muharraaq Project, Bahrain**
Assessment of the ground conditions and site investigation data for a deep sewer line particularly regarding the environmental impact on the aquifer.
- **M11 Gorey to Enniscorthy Tender Design Check**
Geotechnical design check for motorway tender design submission.
- **A31 Magherafelt Bypass**
Geotechnical designer for earthworks and foundations for tender design of a 5.8km bypass.
- **A26 Dualling Glarryford to Drones Road**
Geotechnical checker for tender design submission

AGEC Australia Ltd. – Principal Geotechnical Engineer

- **Utah Point Stockyard 2, Port Hedland**
Project manager for the civil, structural and geotechnical design of the Stockyard 2 development at Utah Point. AGECE undertook the ground investigation design and supervision, earthworks design for the new iron ore stockyard construction with stockpiles up to 17m high and foundations design for the associated stackers, reclaimer and conveyors. AGECE also acted as site representatives during construction.
- **Esperance Port Access Corridor**
Geotechnical designer for the temporary works design for excavation support as part of the Esperance Port Access Corridor (EPAC) project, located in Esperance, Western Australia. AGECE undertook temporary works design for the access road upgrading and railway line realignment.
- **Adelaide Terrace Hotel, Perth**
Geotechnical engineer for a proposed new hotel in a Perth CBD restricted site. AGECE undertook the ground investigation design and supervision, soil parameters assessment and geotechnical design for the foundations for a 15 storey hotel with an underground car park 3 basement deep.
- **Mitchell Freeway Widening, Perth**
Geotechnical project manager for the temporary works design for retaining structures.

Applied Ground Engineering Consultants Ltd. (AGEC) – Senior Engineering Geologist

- **Corrib Gas Onshore Pipeline, Co. Mayo, Ireland**
Geotechnical advisor on construction aspects of onshore pipeline. Duties include monitoring and reporting on ground conditions during construction including weekly reporting with analyses and interpretation of data from telemetric and in-situ instrumentation. Construction compliance verification with respect to specification for earthworks materials and earthworks assessment. Liaison with contractor on geotechnical design issues.
- **N17/N18 Gort to Tuam High Quality Dual Carriageway**
Part of Geotechnical Team for Tender Design for approximately 27km of high quality dual carriageway. Assessing ground investigation data for preliminary earthworks design and outline structural foundation design.



Ian Higgins

Technical Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
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- **Flughland Wind Farm**

Review and check of contractors proposed pile design and site supervision of the installation of bored piles for a windfarm development in County Donegal.

- **Slievecallan Wind Farm**

Site inspection of proposed wind farm including an assessment of peat stability. Geotechnical assessment of site by walkover inspection and report on Peat Stability at turbine locations and associated infrastructure.

- **A4/A5 NI DBFO Scheme 3 Realignment, Northern Ireland**

Senior Geotechnical Designer, value engineering, compiling earthwork design reports which included; cutting and embankment design – stability analysis of slopes, assessing settlement, pavement foundation design, assessing acceptability of material for re-usability, design for special measures such as soft ground issues, slope drainage and pile design for a pile supported embankment. Other duties included attending and corresponding with other disciplines, liaising with site staff and giving advice on earthworks.

- **Clonsilla to Dunboyne Railway Scheme**

Supervision of Site Investigation and Preparation of Interpretative Report for Railway Scheme. Includes the interpretation of ground conditions and design recommendations for all earthworks along the rail route, proposed bridge/culvert foundations, proposed and existing stations and proposed new roads.

- **Supervision of Site Investigations in Bailieborough, Cahir and Athlone**

For retail developments. Project manager, responsible for design and supervision of site investigations, interpretation of factual data and writing of interpretative reports for a series of retail developments on brownfield sites in Ireland.

- **Limerick Southern Relief Road**

Geotechnical checker for highway earthworks on scheme involving construction of stage constructed and monitored embankments over soft estuarine deposits.

- **N7 Nenagh to Limerick High Quality Dual Carriageway**

Part of Geotechnical Team for Tender Design for approximately 27km of high quality dual carriageway. Assessing ground investigation data for preliminary earthwork and outline structural foundation design.

- **M4/M6 Kinnegad-Enfield-Kilcock Motorway**

Geotechnical Designer's Site Representative for construction works. Responsible for ensuring the earthworks design was constructed in accordance with the design reports and the relevant specifications. Inspections carried out for all aspects of the earthworks, from removal of soft ground to sub formation and formation inspections for capping. Involved liaising with both the Design Manager for earthworks as well as the designer's site representative for structures, drainage and pavement design.

- **N4/M6 Kinnegad-Enfield-Kilcock Motorway**

Part of geotechnical design team for earthworks and structure foundation.

- **N25 Waterford Bypass**

Resident Engineer for the supervision of the Supplementary Ground Investigation for MMEPO/Tramore House (NRA).

- **R292 Sligo to Strandhill**

Slope stability assessment of sidelong ground embankment to be constructed on glacial till with restricted land access and weak subgrade.

- **N4/N6 Kilcock to Kinnegad Motorway**

Assessment of potential borrow areas for road construction material. Requirement to identify about 1M cubic metres of suitable and selected fill. Included walk-over survey, ground investigation and reporting of findings to tendering consortium.

- **St. Fintan's High School, Sutton**

Supervision of the remediation of ground subsidence due to underground tunnel works. Site representative for the school on remediation work, which included trenching, compaction by vibratory probe, placement of geotextile, compaction and reinstatement of ground. Report produced on findings.

- **M1 Northern Motorway, Gormanstown to Monasterboice**

Logging of rock faces in cuttings and determination of rock quality from borehole logs, laboratory results and field observations.

Geotechnics Ireland Ltd. – Engineering Geologist

- **Dundrum Town Centre Development**

Site representative during enablement works for town centre development in Dundrum. Involved hazard mapping of rock faces of up to 14m in height, monitoring of on-site blasting by contractor, monitoring of groundwater table fluctuations as excavation progressed, recording ground conditions in both soil and rock during excavation, and monitoring rock and soil slope stability.



Ian Higgins

Technical Director (Geotechnical)



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

- **Supervision of Site Investigations in Cookstown, Larne and Ballymoney for retail developments**

Project manager, responsible for design and supervision of site investigations, interpretation of factual data and writing of interpretative reports for a series of retail developments on brownfield sites in Northern Ireland.

- **M1 Dundalk Western Bypass**

Checking and processing of factual data for geotechnical interpretative report. Carried out desk study and walkover survey of route of proposed bypass. Checking of digital data (AGS) supplied by contractor.

- **M1 Dunleer-Dundalk Bypass Contract No. 3**

Logging of rock faces in cuttings and determination of rock strength and excavatability from borehole logs, laboratory results and field observations.

- **Xerox Production Facility, Dundalk**

Supervision and direction of site investigation including logging of trial pits, shell & auger and rotary core boreholes and dynamic probing for a major industrial development on the edge of Dundalk.

- **N25 Kilmacthomas Realignment**

Detailed logging of trial trenches excavated in rock along route of major cutting. Assessment of rock strength and excavatability from field observations.



Leigh Doyle

Project Engineer



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

Profile

Leigh is a Project Engineer at Fehily Timoney and Company with 3 years experience working in the Energy and Planning department. He holds a ME degree in Civil, Structural and Environmental Engineering from UCC.

Leigh currently works on renewable energy projects preparing traffic and transport chapters of the EIAR for wind farms, Environmental and Planning Reports for solar farms, and grid infrastructure developments. He also has experience in the design of renewable energy developments. He conducts walkover surveys inspecting environmental constraints on site and carries out site access assessments for several wind and solar farm sites to ensure the desired entrances meet TII guidelines.

Key Skills

Leigh has experience in the following:

- EIAR, EIA
- Renewable Energy Development Design
- Coordination of Feasibility Studies
- Site Assessment
- Declaration of Identity and Planning Compliance Inspections
- Roads Department Consultation

Previous Experience Essentials for this Project

- **Fahy Beg Wind Farm, 2023.**
Fahy Beg is an onshore wind development in Co. Clare comprising 8 turbines and a total installed capacity of up to 38MW. Leigh was responsible for the Traffic and Transport chapter of the EIAR and the design of site entrances for the wind farm. Leigh conducted site walkover assessments within the quarry site to determine a suitable location for the onsite substation. The application was successfully submitted to the local authority in early 2023.
- **Ballylongford Solar Farm,**
Ballylongford Solar Farm is a 70MW commercial solar farm development in Co. Kerry. Leigh coordinated the site entrance and traffic impact assessment and design of the site and led the consultation with the local roads department. He was responsible for the Traffic and Transport assessment and the Construction Environmental Management Plan within the Planning and Environmental Report. The project received a conditional grant of permission from the local planning authority.
- **Rahanisky Solar Farm, Ongoing.**
Rahanisky Solar Farm is a 30MW commercial solar farm development in Co. Cork. Leigh led and coordinated the initial feasibility and design of the site which progressed to planning application stage. He is responsible for the Traffic and Transport assessment and the Construction Environmental Management Plan within the Planning and Environmental Report.
- **Milltownpass Wind Farm, Ongoing.**
Milltownpass wind farm is a 4 turbine wind energy development located in Co. Westmeath. The development has a total installed capacity of up to 29 MW. Leigh

Key Information

Qualifications

Masters (ME),
Civil, Structural &
Environmental Engineering,
University College Cork, 2021

Certificate in Professional
Engineering, Engineers Ireland and TU
Dublin, 2023

Professional Memberships

Member of the Institution of
Engineers of Ireland (MIEI)

Employment History 2023 – Present

Fehily Timoney & Company
Project Engineer

2021 – 2023

Fehily Timoney & Company
Graduate Engineer

2020

Fehily Timoney & Company
Intern

2019

Sweco UK Ltd
Student Internship

Summer 2017 & 2018

Doyle Bros Construction
Construction Operative



Leigh Doyle
Project Engineer

is leading the design of the wind farm incorporating the internal civils layout of onsite access tracks and drainage network, hard standings, turning heads, and associated ancillary infrastructure. Leigh conducted the site access survey for the site to determine suitable entrances which conform to TII requirements for direct accesses and completed a walkover of drainage and hydrological features on site.

- **Millvale Declaration of Identity (DoI) and Planning Compliance, 2021.**

Leigh led the site inspection for the first commercial Irish solar farm DoI and Planning compliance checks. He completed the compliance report providing evidence of the development conforming to local authority planning conditions and ensured development boundaries were within the consented lands.

- **Counnagappul Wind Farm, Ongoing.**

Counnagappul wind farm is a large scale wind energy development located in Co. Waterford. The wind farm comprises 11 turbines with a total installed capacity of up to 72MW. Leigh assisted in the design of wind farm infrastructure including the design of a bridge crossing location. Leigh was responsible for the Traffic and Transport assessment and Scoping Report for the wind farm application.

- **Woodstock Tourism Accommodation, 2021.**

Prepared the Engineering Feasibility Report for a 60 unit tourism accommodation development within the Woodstock Estate of Instioge, County Kilkenny. The report evaluated the viability of the development in terms of site access, location of the development, services, water and wastewater, and ancillary facilities.

- **Dunkettle Interchange Upgrade Scheme, Ongoing.**

Responsible for environmental monitoring (noise, vibration, and particulates) at Viatris pharmaceutical manufacturing plant for a major infrastructure project including site visits, troubleshooting, maintenance, and online monitoring.

- **Ballinagree Wind Farm, Co. Cork.**

Conducted a geotechnical walkover – including peat depth probing, shear vane tests, recording slope angles and identifying possible borrow pit locations. Carried out a receptor survey on site to determine active dwellings and commercial buildings in the vicinity of the wind farm site. Undertook a planning search for the site to determine nearby developments.

- **Annagh Wind Farm, Cork.**

Undertook a bridge inspection and assessment of proposed horizontal directional drilling location and assessment of the local road network along the turbine delivery route for a 6-turbine wind farm application in North County Cork.

- **Knockraha Synchronous Compensator, Cork.**

Conducted a site access survey to determine suitable entrances to the site that conform to TII requirements for direct access. Completed a geotechnical walkover of ground conditions on site.

- **Acres Wind Farm, Co. Donegal.**

Produced a report assessing the shadow flicker control system within the 6-turbine wind farm. The report reviewed datasets of the control system within the 6 turbines, receptors captured in the control system, and excluded receptors which FT identified. The report recommended remapping of receptors within the shadow flicker buffer zone and revised shut down durations to minimize shadow flicker events going forward.



Emily Archer

Senior Geologist



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

Profile

Emily is a Chartered Senior Geologist at Fehily Timoney & Company working in the Infrastructure Department and holds a BSc. in Geology and an MSc. in Applied Environmental Geology both from University College Cork.

Emily has 7 years' experience and a broad skill set gained by working on a wide range of geotechnical, contaminated land, environmental monitoring and EIA projects. Emily has significant experience of field work relating to peat, including peat probing, peat sampling and logging, in-situ peat strength measurements and geomorphological assessments. Relevant projects that Emily has carried out fieldwork and undertaken peat stability assessments for include Dernacart Wind Farm, Coom Green Energy Park, Ballivor Wind Farm, Proposed wind farms in Co. Mayo, Proposed wind farms in Co. Offaly, Ballinagree Wind Farm and several other confidential projects in various counties.

Emily has also worked on various contaminated land, slope stability, landfill remediation, wind farm and road projects. She has also been involved in geotechnical site investigation, geological logging and sampling, EIARs, geotechnical and environmental investigation works and groundwater and surface water monitoring.

Key Skills

- Investigation and remediation of contaminated lands and landfill sites
- Environmental Risk Assessment
- Ground Investigations
- Peat Stability Assessments
- Soil and groundwater remediation
- Engineering Geology
- Hydrogeological assessment
- Expert Witness
- DSR
- Employer's Representative
- Project Management

Previous Experience Essentials For This Project

- **Bantry Relief Road**
Emily was involved in completing the Geotechnical Design Report for Phase 1 of this scheme which involved working closely with the structures team and GI contractors. Emily also reviewed all ground investigation information and assisted with the geotechnical interpretation report.
- **Gannow Wind Farm**
Emily was involved in project managing this project as well as carrying out the site walkover, procuring and supervising the ground investigation, writing up the peat stability assessment report and the peat and spoil management plan. This involved liaising with the client and contractors and executing the deliverables within the agreed timeframe.
- **Derrynadarragh Wind Farm, Co. Laois**
Emily was responsible for the Land, Soils and Geology chapter of the EIAR for this project and associated peat stability assessment. This involved a site walkover, peat probing and shear vane testing (where necessary) and the review of all online

Key Information

Qualifications

MSc. Applied Environmental Geology, University College Cork, 2018

BSc. Geology, University College Cork, 2017

Professional Memberships

Chartered Member of the Institute of Geologists Ireland

Employment History

2018- Present

Fehily Timoney & Company
Geotechnical Engineer/ Geologist

2018 – 2018

Fehily Timoney & Company
Internship

2016

ESB International Cork
Undergraduate Work Placement



Emily Archer

Senior Geologist



DESIGNING AND DELIVERING
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available data relevant to the site to complete a detailed desk study. Emily liaised with GI contractors and coordinated the trial pitting and boreholes at proposed infrastructure locations

- **Dunkettle Interchange**

Emily assisted with the day to day management and logging of intrusive site investigations on site, at the existing Dunkettle Roundabout. This role involved acting as the Designers Representative to ensure site investigations were undertaken in accordance with the Designers requirements and Euro Code 7. These works encompassed a range of site investigation techniques including cable percussion, rotary drilling and geophysical surveying. Ground conditions at the site were challenging due to extensive soft ground associated with buried channel features. As such she assisted with updating the ground model as information arrived from the investigations. This role also involved presenting progress reports and technical information to the project team to communicate ground risks encountered during the works. Emily assisted with the drafting of the Baseline Groundwater Monitoring Report. This involved reviewing and collecting the data from the groundwater monitoring wells on site and preparing a draft of the groundwater monitoring report. Emily was also involved on site as the Designer's Site Representative. This role involved supervising and monitoring the earthworks that were taking place and ensuring that the work carried out on site was in line with the designer's specifications. During this period Emily was involved in the write up of the Ground Investigation Report and the Geotechnical Feedback Report.

- **Ballinagree Wind Farm, Co. Cork**

Emily was responsible for the Land, Soils and Geology chapter of the EIAR for this project and associated peat stability assessment. This involved a site walkover, peat probing and shear vane testing (where necessary) and the review of all online available data relevant to the site to complete a detailed desk study. Emily liaised with GI contractors and coordinated the trial pitting and boreholes at proposed borrow pit locations and turbine locations.

- **Youghal Landfill Capping, Co. Cork**

Emily acted as Employer's Representative on site for the capping works at Youghal Landfill. This involved supervising and monitoring all works on site while liaising with the crews both on and off site. Emily ensured that all works were carried out in accordance with the specifications and looked after all change orders, correspondence and claims that arose.

- **Cloonkett Wind Farm, Co. Clare**

Emily carried out hydrogeological monitoring across this site which involved the installation of a series of piezometers across the site along with monthly monitoring of the water levels. The results from this were assessed within a hydrogeological report as part of the main EIAR chapters.

- **Lemanaghan Wind Farm, Co. Offaly**

Emily logged and supervised trial pitting at proposed borrow pit and infrastructure locations and created detailed logs using HoleBase. This helped to inform the client on the areas of high risk and areas where it is likely to get good material that can be re-used on site.

- **Ballivor Wind Farm, Co. Meath/Westmeath**

Emily logged and supervised trial pitting at proposed borrow pit locations and created detailed logs using HoleBase. Emily also carried out a detailed site walkover that involved peat probing, shear vane testing and a review of all online available data to make informed decisions on where the areas of high risk are located across the site.

- **Proposed Wind Farms, Co. Mayo**

Emily carried out a series of peat stability assessments and peat and spoil management plans across three proposed wind farm sites. This involved detailed site walkovers, peat probing, shear vane testing and trial pit supervision (in two of the sites). These assessments helped to inform the clients of the high risk areas and areas of deep peat. Emily also assisted with a walkover of a peat slippage at one of these sites.

- **Cush Wind Farm, Co. Offaly**

Emily carried out a peat stability assessment which involved a site walkover, peat probing, shear vane testing and associated reporting. This helped to inform the client on the high risk areas, areas of deep peat and areas where peat instability may be a concern.

- **Ballydermot Wind Farm, Co. Offaly**

Emily carried out a peat stability assessment which involved a site walkover, peat probing, shear vane testing and associated reporting. This helped to inform the client on the high risk areas, areas of deep peat and areas where peat instability may be a concern.

- **PFAS Investigations – Cork Airport**

Emily supervised the installation of a series of groundwater monitoring wells in Cork Airport. She was also involved in the collection of groundwater samples from each of these wells, the development of the Phase 2 wells and assisted with slug testing across the site.



Emily Archer

Senior Geologist



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- **MSD Brinny Oil Interceptor Options**

Emily was involved in site investigation works carried out for a proposed oil interceptor located on site at MSD Brinny. Emily's role included a review of all available online data to assist with the selection of the ground investigation locations and the logging of the boreholes and trial pits, creation of the detailed logs using HoleBase and creating a conceptual ground model using the ground investigation information.

- **Unregulated Historical Landfills, Kerry**

Emily was responsible for the preparation of a number Tier 2 and Tier 3 environmental risk assessment reports for 13 no. unregulated historic landfills located in Co. Kerry. Assessments and reports are prepared as per the EPA's Code of Practice on Environmental Risk Assessment for Unregulated Waste Management. Work included comprehensive desk study review of landfill sites and surrounding environment characteristics, review and interpretation of site investigation data, environmental monitoring results, historical reports and assessments and the development of Conceptual Site Models for each site.

- **Unregulated Historical Landfills, Tipperary**

Emily was responsible for the preparation of Tier 2 environmental risk assessment reports for 4 no. unregulated historic landfill sites located in Co. Tipperary. Assessments and reports are prepared as per the EPA's Code of Practice on Environmental Risk Assessment for Unregulated Waste Management. Work includes comprehensive desk study review of landfill sites and surrounding environment characteristics, review and interpretation of site investigation data, environmental monitoring results, historical reports and assessments and the development of Conceptual Site Models for each site.

- **Climate Change and Adaptation Resilience Works Listowel Municipal District**

Emily was responsible for producing the ground investigation and topographical specifications for an area with slope stability issues in Ballybunion, Co. Kerry. This involved choosing suitable locations and investigation methods within to achieve enough information to inform the slope stability design.

- **Coom Green Energy Park, Co. Cork**

Emily drafted up the Land, Soils and Geology chapter of the EIAR for this project. This involved a site walkover, peat probing and shear vane testing (where necessary) and the review of all online available data relevant to the site to complete a detailed desk study. Emily also logged and supervised trial pitting at proposed borrow pit locations and created detailed logs using HoleBase, that were input into the Land, Soils and Geology chapter. Emily was also involved in the supervision of the geophysical surveys and creation of conceptual ground models at each proposed turbine location.

- **Nenagh Pedestrian and Cycle Scheme**

Emily was responsible for producing the ground investigation specification for the proposed pedestrian and cycle scheme in Nenagh. This involved choosing suitable locations and investigation methods along the scheme to achieve enough information to inform the design.

- **Min Ryan Skate Park, Co. Wexford**

Emily was responsible for the ground investigation report for the proposed skate park location to determine the existing ground conditions in Min Ryan Park, Co. Wexford. Emily's role included a comprehensive desk study review of the site and surrounding environment characteristics, sampling and logging of trial pits, review and interpretation of site investigation data, creating detailed logs using HoleBase and the development of a Conceptual Site Model.

- **N22 Macroom – Ballyvourney Road, Access Track**

Emily was involved in the geotechnical design report for the N22 Ballyvourney to Macroom scheme access roads, hardstands and borrow pit. Emily's role included a comprehensive desk study review of the site and surrounding environment characteristics, sampling and logging of trial pits, review and interpretation of site investigation data, creating detailed logs using HoleBase, development of a geotechnical risk register and drafting up the geotechnical design report.

- **HSE Discharge Licence Compliance**

Compliance work was carried out across 17 no. sites in Co. Cork in relation to wastewater discharges. Emily was involved in the data review and processing of the quarterly results from each site. Quarterly email updates were sent to the HSE containing all tabulated and processed monitoring results.

- **Dublin Airport, North Runway**

Emily assisted with a groundwater and surface water risk appraisal report and developed a conceptual site model of the site using site investigation data that had been carried out previously.

- **Dublin Airport Stockpile Sampling**

Emily logged a series of trial pits, collected environmental samples from a series of stockpiles for waste classification and assisted with the write up of the environmental report. Emily used HoleBase to create detailed logs of the trial pits that were input into the environmental report. The purpose of this was to classify any possible waste material that was within these stockpiles prior to removal.



Emily Archer

Senior Geologist



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- **Croom Apartments, Co. Limerick**

Emily carried out a road condition survey as part of a Further Information request for Limerick County Council.

- **Site Supervision Waste Investigation, Kilkenny County Council**

Emily was involved in logging the uprisings from a series of trial pits and producing detailed logs using HoleBase, summary reports of the findings, across 3 unauthorized waste deposition sites in Co. Kilkenny. The purpose of this was to assess and classify any buried waste material present within these sites. Emily also acted as an expert witness in the court case that followed for two of the sites.

- **Renewable Gas Facility, Cúil na Móna, Portlaoise**

Emily's role included drafting up the Land, Soils and Geology and the Hydrogeology chapters of the EIAR for this project. This included a site walkover, peat probing, shear vane testing and the review of all online available data relevant to the site to complete a detailed desk study.

- **Gortadroma Slope Stability Assessment**

Emily carried out the slope stability assessment on a historic landfill site in Limerick.



Madeleine van der Poel

Senior Ecologist



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Profile

Madeleine holds a Bachelor of Science from the University of Auckland, New Zealand and a Master of Science from Wageningen University, Netherlands with her Thesis focusing on the Cascade effects of the ENSO cycle on a Neo-tropical felid.

She is a dedicated ecologist with a strong background in fieldwork and providing ecological assessments for a variety of projects. Madeleine is proficient in data analysis and visualization using tools such as R and GIS software. She is competent in handling native wildlife and working in challenging environments, both terrestrial and freshwater. She has keen desire to protect environmental integrity within the demands of expanding infrastructure and is committed to further learning and professional development, with international experience across various environments.

Key Skills

Forename has experience in the XX projects including:

- Detailed
- Experience
- And
- Skills
- Here relevant to project tender

Previous Experience Essentials for this Project

- **Ecologist | Roughan & O'Donovan | Dublin, Ireland**
Flora and fauna surveys and Ecological Clerk of Works, Project management, EIAR Biodiversity chapter and AA/NIS Author, Roading projects, greenways, bridges and policy work
- **Ecologist | Scott Cawley | Dublin, Ireland**
Terrestrial flora and fauna field surveys and mitigation work, Providing ecological impact assessments, AA screening reports, constraints mapping and Biodiversity Net Gain assessments, Project management
- **Ecologist | Bioresearches | Auckland, New Zealand**
Terrestrial flora and fauna field surveys and mitigation work, Experience handling native wildlife and working in difficult terrain, Providing ecological surveys, environmental impact assessments and management reports for a wide range of projects, Member of The Environment Institute of Australia and New Zealand (EIANZ)
- **Graduate ecologist | Tonkin + Taylor | Auckland, New Zealand**
Freshwater assessments (Stream Ecological Valuations), Freshwater fish and native lizard salvage and relocations, Macroinvertebrate sampling, Monitoring surveys, data analysis and report preparation

Key Information

Qualifications

- Master of Science, 2017,
Wageningen University, Netherlands
- Bachelor of Science, 2015,
University of Auckland, New Zealand
- International Baccalaureate Diploma,
2011,
Saint Kentigern College, New Zealand

Professional Memberships

List here most recent first

Employment History

2026 – Present

Fehily Timoney & Company
Senior Ecologist

2024 – 2026

Roughan & O'Donovan
Ecologist

2023 – 2024

Scott Cawley
Ecologist

2020 – 2023

Bioresearches
Ecologist

2019 – 2020

Tonkin & Taylor
Graduate Ecologist



Maureen Marsden

Senior Project Engineer



DESIGNING AND DELIVERING
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Profile

Maureen holds Master of Engineering degree in Acoustics and Vibration from Southampton University (Institute of Sound and Vibration Research).

She has 28 years postgraduate experience and is currently a Senior Project Engineer with Fehily Timoney.

Maureen specializes in environmental noise including industrial, energy infrastructure projects and transportation projects.

Maureen has a broad range of experience in noise and vibration across a variety of sectors including building, transport, industrial and energy sector projects.

She is currently a member of the Institute of Acoustics and Engineers Ireland.

Key Skills

Maureen has experience in the building/industrial/energy/gas projects including:

- Noise measurement
- Operational noise predictions
- Construction noise predictions
- Noise and vibration assessments

Previous Experience Essentials for this Project

• Wind Farm Projects

Involved in all stages of windfarm projects, from pre-planning to post construction compliance monitoring:

- Conducted baseline noise measurements within Ireland to determine prevailing background noise in the vicinity of proposed windfarms. Analysed noise based on the Institute of Acoustics Good Practice Guide to the Application of ESTU-R-97 and the Institute of Acoustics Good Practice Guidelines. Determined noise limits in line with the Wind Energy Development Guidelines 2006 to define site noise criteria.
- Predicted operational noise from proposed windfarms using 3-D noise modelling software to determine compliance with noise criteria, based on methodology in ISO9613 Attenuation of sound during propagation outdoors. Where noise limits were exceeded, determined curtailment strategy based on quieter turbine operational modes.
- Assessed noise from temporary works associated with windfarm construction using BS5228 Code of Practice for noise and vibration control on construction sites. Predicted construction noise and advised on mitigation works as required. This assessment also includes consideration of construction noise from proposed grid connection works.
- Produced Environmental Impact Assessment Reports for Windfarm developments, based on the operational and construction noise assessment as detailed above.
- Conducted post construction compliance noise survey and analysed data for comparison with noise limits to determine compliance with the planning criteria.

Key Information

Qualifications

Master of Engineering in Acoustics and Vibration, Southampton University, 1994

Professional Memberships

Member of the Institute of Acoustics
Member of Engineers Ireland

Employment History

2019 – Present

Fehily Timoney & Company
Senior Project Engineer

2017 – 2018

Resonate Acoustics
Senior Acoustic Consultant

2015 – 2017

Soundsorba
Sales Engineer

2011 – 2015

Kellogg Brown and Root
Senior Technical Professional
(Noise and Vibration)

2011 – 2011

Mott Mac Donald
Senior Acoustic Consultant

2011 – 2011

Mott Mac Donald
Senior Acoustic Consultant

2008 – 2010

Applied Acoustic Design
Senior Acoustic Consultant

2007 – 2008

Hoare Lea Acoustics
Senior Acoustic Consultant

2002 – 2006

Sound Research Laboratories
Acoustic Consultant

1998 – 2001

Arup Acoustics
Acoustic Engineer



Maureen Marsden

Senior Project Engineer



DESIGNING AND DELIVERING
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- Conducted baseline noise surveys for windfarms where lifetime extension or windfarm repowering is required. Assessed operational windfarm noise in line with current guidance since the original windfarm application. Assessed noise and vibration impacts from proposed repowering as part of the planning process.
Sample projects include: Annagh Windfarm, Ballagh Windfarm, Ballinagree Windfarm , Barnadivine Windfarm, Carrane Hill Windfarm, Coom Green Energy Park, Coumnaagappul Windfarm, Croaghaun Windfarm, Dernacart Windfarm, Drehid Windfarm, Fahy Beg Windfarm, Gneevs Windfarm, Letteragh Windfarm, Moanvane Windfarm, Tullahennel Windfarm,
- **Solar Farm Projects**
Derived noise criteria for solar farms based on EPA criteria. Predicted operational noise from proposed solar farm equipment (inverters and transformers) to determine compliance with the noise criteria. Advised on noise control measures where required including equipment relocation relative to noise sensitive locations, selection of quieter equipment and mitigation of equipment where required. Predicted construction noise from the temporary works associated with the solar farm construction and recommended mitigation as required.
Sample projects include: Ballyvalode Solar Farm, Clashwilliam Solar , Dunmurray Golf Course Solar Farm , Milltown Solar Farm, Moortown Solar farm, Kilcurly Solar Farm, Killough Solar Farm, Kilmorna Solar Farm, Rahanisky Solar Farm, Rathdrinagh Solar Farm.
- **Rotating Stabiliser Projects**
Conducted baseline noise survey, to allow noise criteria to be determined in line with EPA noise guidance. Predicted noise from the proposed rotating stabiliser to determine compliance with criteria. Measured transformer noise from a nearby substation to determine existing noise sources.
Sample projects Knockraha Rotating Stabiliser, Co. Cork, and Maynooth Rotating Stabiliser, Co. Kildare.
- **Transportation Projects 1994-2023**
Worked on a variety of transportation projects including railway and road as summarized below:
 - Environmental Impact Assessment for N19 Shannon Airport Access Road Improvement Scheme. Project included setting appropriate noise and vibration limits for the scheme in terms of the temporary construction works and the permanent works. Predicted operational noise from the scheme using 3-D Softnoise Predictor software. Compared predicted noise levels with criteria within Guidelines for Treatment of Noise and Vibration in National Road Schemes to determine requirement for noise mitigation. Assessed construction noise from the proposed works to assist in developing suitable noise mitigation for construction works. Predicted construction noise levels at adjacent shoreline area for input into Ecology assessment.
 - In situ measurement of acoustic performance of noise barriers over a 5 year period on Motorways in Ireland in accordance with ISO EN 1793-5 and 6 on behalf of Transport Infrastructure Ireland.
 - Measured noise at a residential property near the N7 dual carriageway following noise complaints and assessed against criteria within the Kildare County Council Noise Action Plan.
 - Predicted noise for different route options for the N19 upgrade project during the route selection stage based on TII Guidelines.
 - Predicted operational and construction noise for a range of railway transport projects including the Channel Tunnel Highspeed Rail Link project and Sunderland Metro. Developed noise mitigation schemes using noise barriers and earthworks.
 - Measured operational noise levels post construction at Docklands Light Railway extension.
 - Measured internal noise of Inter-city trains for the purpose of developing a specification for new rolling stock.
 - Conducted baseline noise survey for Dublin Port Tunnel.
- **Building Acoustic Projects 2022-2019**
Provided acoustic advice on a range of building acoustic projects.
 - Conducted baseline noise surveys and predicted mechanical services noise during the planning stage. The survey and Local Authority criteria were used to set the noise criteria. Where appropriate advised on noise mitigation to meet the planning requirements.
 - Advised on noise break-in and external building envelope design requirements for residential and office developments to meet suitable internal acoustic criteria (based on guidance such as ProPG: Planning and Noise and other guidance)
 - Assessed noise breakout from leisure facilities including restaurants, nightclubs and bars to advise on building envelope upgrades to meet Local Authority Criteria.
 - Advised on sound insulation requirements to meet building regulation requirements (Approved Document E) for residential and hotel developments, in addition to sound insulation requirements for office fit-outs based on privacy requirements between adjacent spaces.



Maureen Marsden

Senior Project Engineer



DESIGNING AND DELIVERING
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- Measured airborne and impact sound insulation performance of residential, hotel, and office buildings and advised on areas for improvements where performance criteria were not met.
- Provided advice on meeting internal acoustic absorption requirements to improve acoustic comfort and speech intelligibility within a range of spaces including community halls, churches, sports halls and schools.

Sample projects include Travelodge hotels, Chelsea Academy and Hammersmith Academy Schools, Deutsche Bank, Luminar Leisure, Hewitt Mills Cork.

- **Compliance Monitoring at EPA Licenced Facilities**

Monitored noise at EPA licensed facilities to determine if emission limits within license conditions are met. This included food and drink production facilities, civic amenity sites, waste processing facilities and engineering facilities.

Advised on contribution from off site sources to determine if noise limits are exceeded. Assessed noise in line with EPA NG4 guidelines and BS4142 Methods for rating and assessing industrial and commercial sound.

- **Gas Projects 2014-2023**

Conducted baseline noise surveys for proposed compressed natural gas (CNG) installations following noise attenuation works. Predicted and assessed operational noise for inclusion within planning submission, where required.

Conducted a series of internal and external measurements at eleven Above Ground Installations (AGI's) in Ireland. Internal measurements were used to assess noise levels against occupational noise criteria for workers. External measurements were used to assess noise levels against external environmental noise criteria.

Conducted a baseline noise survey at Whitegate AGI (Above ground installation), prior to construction works.

Sample projects for proposed CNG installations include Carhoo, Birdhill service station, M7 Junction 14 Mayfield, Cappagh Rd, Virginia, City North. Sample projects for AGI installations include: Scholarstown AGI, Swords Road AGI, Kilshane AGI, Ballynaneashagh AGI, Cork Gas AGI, Abbotstown AGI, Ardree AGI, Ballyduff AGI.

- **Industrial Noise Assessments, 2011 - 2019**

Predicted noise from a range of industrial facilities using 3-D noise modelling software for a range of industrial developments including LNG(liquid natural gas) facilities, dairy facilities and water works schemes to advise on noise control measures to meet appropriate environmental legislation. Also predicted in-plant noise contours for purposes of identifying hazardous zones related to Noise at Work requirements.

Sample projects include Thames Water projects, Irish Water projects, Co. Kilkenny, Ballyragget Glanbia site, Co. Kilkenny, Jazan Refinery, Saudi Arabia, Bioatlantis, Co. Kerry.

- **Port Noise Assessments 2017-2023**

Monitored noise at noise sensitive locations over several weeks overlooking the Ringaskiddy Deepwater port, Co. Cork. Noise was monitored over a period of weeks during the arrival and unloading activities of a particular ship which had led to noise complaints. The measured levels were compared the noise limits with NG4 criteria. Also BS4142 was used to assess the likelihood of adverse impact at nearby properties.

Measured noise at Dublin Port for the purpose of assessing if security personnel had the potential to exceed noise at work limits. The assessment was based on a combination of attended measurements in addition to use of noise dosimeters worn by key personnel. This was used to advise on the effect of the type of work undertaken by staff in order to meet noise at work limits.



Aoife Hurd

Senior Project Engineer



DESIGNING AND DELIVERING
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Profile

Aoife is a Senior Project Engineer in the Energy and Planning Department at Fehily Timoney and Company. She holds a Bachelors and Masters Degree in Civil, Structural, and Environmental Engineering from Trinity College Dublin. Aoife has ~3 years postgraduate experience working on residential, infrastructure, and renewable energy projects at all stages from concept to construction.

Aoife currently works on renewable energy projects preparing chapters of the EIAR for wind farms, solar farms and grid infrastructure developments, specifically the Traffic and Transport chapter and Air Quality and Climate chapter. She also has experience in designing renewable energy developments and carries out site inspection surveys to identify on-site constraints and solutions.

Key Skills

Aoife has experience in the following:

- EIAR, EIA
- Renewable Energy Development Design
- Coordination of Feasibility Studies
- Site Assessment
- Infrastructure and Utility Design
- Transport & Policy Analysis
- GIS & Data Reporting

Previous Experience Essentials for this Project

- **Large Scale Wind Farm Project, Co. Clare, Ongoing.**
The proposed development is a 14-no. turbine wind farm located in Co. Clare. Aoife was responsible for the preparation of the Construction and Environmental Management Plan (CEMP) and Air Quality and Climate chapter of the EIAR. She also designed the onsite cable routes using AutoCAD in preparation for the planning application.
- **Large Scale Wind Farm Project, Co. Offaly, Ongoing.**
The proposed development comprises of 9-no. turbines, spanning across 208 hectares of land in the jurisdiction of Co. Kildare and Co. Offaly. Aoife was responsible for the preparation of the CEMP and Traffic and Transport chapter of the EIAR. She also performed the site drainage design using AutoCAD ensuring all designs were in line with relevant standards.
- **Drummalough, Lettermore and Srananagh Long Duration Energy Storage, Ongoing.**
Feasibility studies were carried out for two potential long duration energy storage sites at Drummalough and Lettermore in Co. Donegal. Aoife assessed the existing utility infrastructure by reviewing and mapping Uisce Éireann records in ArcGIS to evaluate potential connection options and identify constraints.

Key Information

Qualifications

Masters (MAI), Civil, Structural, & Environmental Engineering
Trinity College Dublin – First Class
Hons (Distinction), 2022

Bachelors (BAI) Civil, Structural, & Environmental Engineering
Trinity College Dublin – First Class
Hons, 2017 - 2021

Professional Memberships

Member of the Institution of
Engineers of Ireland (MIEI)

Overview of Safety, Health & Welfare
at Work (Construction) Regulations
2013, April 2024

SOLAS Safe Pass, December 2023

Employment History

March 2025 – Present

Fehily Timoney & Company
Senior Project Engineer

2023 – 2025

AECOM
Civil Engineer

2022 – 2023

AECOM
Transport Planner

2021

RPS
Engineering Intern



Aoife Hurd

Senior Project Engineer



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- **Donore Project, Dublin 8, 2025.**

The proposed development, comprising 542 homes as well as a new creche, community spaces and landscaped public areas, is located on the former St. Teresa's Gardens site, in Dublin 8. Aoife was involved with this project throughout the planning, tender and construction stages and was responsible for infrastructure and drainage design, liaison with Uisce Éireann to manage connection and diversion applications and coordination with the client, contractor and multidisciplinary teams to effectively meet project deadlines. Aoife also regularly conducted site visits to inspect the progress of civil works on site.

- **School Street / Thomas Court Bawn Estate Renewal, Dublin 8, 2025.**

The proposed development involves the retrofit and development of 114 new residential units in place of the current 79 no. unit residential site as well as a multi-use childcare facility and all associated site infrastructure and landscaping. Aoife was responsible for preparing technical reports, including the Stage 2 Infrastructure Report and Flood Risk Assessment. She assisted with the planning application and carried out the design of Sustainable Urban Drainage Systems (SuDS), including detailed calculations for green and blue roofs and drainage modelling using Innovyze InfoDrainage. Aoife attended design team meetings and coordinated with Uisce Éireann and other multidisciplinary teams.

- **Maynooth Area Based Transportation Assessment (ABTA), 2023.**

The scope of work involved analysing current and future transportation demands, assessing infrastructure capacity, and considering the effects of planned developments or changes. Aoife was responsible for developing a walking / permeability strategy for Maynooth ABTA. She used VISUM and ArcMap, specifically the ArcMap Network Analyst tool, to accurately assess the walking distance to key destinations in Maynooth and quantified the benefits using GeoDirectory data.



Ida Wulff

Graduate Planner



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Profile

Ida holds a Masters in Planning and Sustainable Development in University College Cork. She is a Graduate Planner with Fehily Timoney in the Energy and Planning sector. Ida has a keen interest in all areas of planning, renewable energy, and sustainable development.

Ida specializes in preparing EIAR Chapters for wind farms and associated developments to industry standards.

Ida has experience in preparing planning applications for active travel paths and greenways as well as remedial works within urban/rural settings.

She is currently a Graduate Member of the Irish Planning Institute and a Licentiate Member of the Royal Town Planning Institute.

Key Skills

Ida's key skills include:

- Planning Knowledge
- Report Writing
- Presentation
- GIS
- Community Consultation

Previous Experience Essentials for this Project

- **Littleton Wind Farm, 2026**
Prepared EIAR Chapters in line with industry standards.
- **Littleton Peat Extraction Substitute Consent, 2026**
Prepared rEIAR Chapters in line with industry standards.
- **Cloonkett Wind Farm, 2025**
Prepared EIAR Chapters in line with industry standards.
- **Coom Green Energy Park Grid Connection, 2026**
Prepared EIAR Chapters in line with industry standards.
- **Cliff Protection at Dunmore East, 2025**
Prepared planning documents related to remedial works and amenity area in ecologically sensitive area.

Key Information

Qualifications

MPlan Planning and Sustainable Development
University College Cork
September 2023 - June 2025

BSc International Development and Food Policy
University College Cork
September 2017 - May 2021

Professional Memberships

Royal Town Planning Institute
Licentiate Member

Irish Planning Institute
Graduate Member

Employment History

2025 – Present

Fehily Timoney & Company
Graduate Planner

2024 – 2025

Fehily Timoney & Company
Planning Intern



Cathal Creedon

Graduate Planner



DESIGNING AND DELIVERING
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Profile

Cathal holds a Bachelor of Arts degree (Geography and History) and a Master’s Degree in Planning and Sustainable Development from University College Cork. He is currently a Graduate Planner with Fehily Timoney and Company. Cathal has a keen interest in all areas of planning, sustainable development, and urban design. He possesses excellent interpersonal, entrepreneurial and communication skills with proven ability to work in teams. Cathal is a highly organized, hardworking, and reliable person with excellent leadership skills. He has proven experience of working in a fast-paced environment with the ability to work towards deadlines.

Key Skills

- Teamwork skills with the ability to negotiate and mediate with members to achieve goals.
- Great people skills with a proven ability to adapt and understand a variety of personalities.
- Naturally patient and capable of remaining calm when working towards deadlines.
- Flexibility to work across a variety of roles, tasks and in varied situations.
- Resilient, diligent, and dedicated to my work whether it be my education or part – time jobs.
- Good organisational skills, capable of working on my own initiative.
- Dedicated to fulfilling the trust employers and academic team members have given me.
- Punctual in all areas of my life possessing excellent time management skills balancing part time work, full time education and sport.

Previous Experience Essentials for this Project

- **Project, Capital Value, Year**
Description
- **Project, Capital Value, Year**
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- **Project, Capital Value, Year**
Description
- **Project, Capital Value, Year**

Key Information

Qualifications

BA Arts (Geography & History),
University College Cork,2023

M.A. Planning and Sustainable
Development., University College
Cork, 2024

Employment History

2024 – Present

Fehily Timoney & Company
Graduate Planner



Cathal Creedon
Graduate Planner



DESIGNING AND DELIVERING
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- Description
- **Project, Capital Value, Year**
Description
 - **Project, Capital Value, Year**
Description



Philip McDowell

Project Engineer



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Profile

Philip holds a Masters of Civil, Structural and Environmental Engineering and a Bachelors of Civil, Structural and Environmental Engineering from Trinity College Dublin. He is a passionate person who is focused on doing impactful work. He has two years' experience as a Civil Engineer with exposure to Structural Engineering at an Engineering Consultancy. He cares deeply for the environment, focusing on mitigating and where possible restoring damage done to the natural world. Philip is a Project Engineer at Fehily Timoney and Company.

Key Skills

- Causeway Flow
- AutoCAD
- QGIS
- HEC-RAS
- Tekla
- MasterSeries

Previous Experience

- **Project, Capital Value, Year**
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Key Information

Qualifications

Masters of Civil, Structural and Environmental Engineering, Trinity College Dublin, 2022

Bachelors of Civil, Structural and Environmental Engineering, Trinity College Dublin, 2021

Employment History

2025 – Present

Fehily Timoney & Company
Project Engineer

2023 – 2025

PUNCH Consulting Engineers
Graduate Engineer

2021 – 2021

Nicholas O'Dwyer Ltd
Engineering Intern



Eoin Downing

Graduate Engineer



DESIGNING AND DELIVERING
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Profile

Eoin holds a Master's degree in Sustainable Resource Management: Policy and Practice and a Bachelor's degree in Civil Engineering, in which he achieved First Class Honours in both degrees. He is currently a graduate engineer with Fehily Timoney in the Energy and Planning Sector. Eoin has a keen interest in all areas of engineering, sustainable development, and renewable energy. He has a strong work ethic and a passion for the environment. He has a broad range of skills including problem solving, communication, teamwork and leadership skills, and experience working both in design and on site in the construction industry.

Key Skills

Eoin's key skills include:

- AutoCad
- ArcGIS
- Project Management
- Report Writing
- Data Analysis
- Presentations
- Data Analysis

Previous Experience Essentials for this Project

- **Derryfadda Wind Farm, 2024**
Eoin conducted a site access survey to determine suitable entrances to the site that conform to TII requirements for direct access. Eoin was also involved in the Site Access Assessment, the Traffic and Transport Chapter and the Construction Environmental Management Plan within the Planning and Environmental Report.
- **Killough Solar Farm, 2024**
Eoin conducted a site access survey to determine suitable entrances to the site that conform to TII requirements for direct access. Eoin was also involved in the Site Access Assessment, the Traffic and Transport Chapter and the Construction Environmental Management Plan within the Planning and Environmental Report.
- **Coolnagun Wind Farm, 2024**
Eoin identified potential grid route options using ArcGIS from the wind farms to nearby substations.
- **Cloonkett Wind Farm, 2024**
Eoin completed a hydrological walkover of the site recording waterways. Eoin also was involved in a geotechnical walkover of ground conditions on site partaking in peat probing and shear vane testing of the soil to determine its depth and strength.
- **South Mayo Wind Farm, 2024**
Eoin was involved in the Site Access Assessment, the Traffic and Transport Chapter and the Construction Environmental Management Plan within the Planning and Environmental Report.
- **Drehid Wind Farm, 2024**
Eoin was involved in the drainage design of the wind farm using AutoCAD.
- **Bachelor's Dissertation, 2023**

Key Information

Qualifications

MSc Sustainable Resources Management: Policy and Practice.
University of Limerick and University of Galway, 2024

BEng Civil Engineering, University of Limerick, 2023

Professional Memberships

Engineers Ireland

Employment History

2024 – Present

Fehily Timoney & Company
Graduate Engineer

2022

Ward and Burke
Site Engineer

2022

Roadbridge Construction
Design Engineer



Eoin Downing

Graduate Engineer



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An Evaluation of the Feasibility of Micro-consolidation Hubs in Limerick City: In this project Eoin focused on the role that can be played by micro-consolidation hubs and the use of electric cargo bikes for last mile parcel distribution in reducing freight traffic in Limerick City. This included a detailed analysis of the environmental impacts of such a system on the area. He analysed the competitiveness of urban deliveries with micro-consolidation hubs and e-bikes and compared this with diesel vans from a suburban depot. He found that micro-consolidation hubs and electric bikes not only reduce emissions in comparison to suburban depot-van operations but are also a more cost-effective option. He therefore proved over the course of his project that micro-consolidation hubs are a feasible solution to last mile deliveries in Limerick City. He used several techniques and software in my projects, including ArcGIS Pro to determine the micro-consolidation hub locations and Microsoft Excel to determine the emissions and the costs. Eoin presented his findings in a report and a poster presentation to the civil engineering department.

- **Master's Dissertation, 2024**

An Evaluation of the Environmental, Energy and Social Impacts of Onshore and Offshore Wind Farms: In this project Eoin evaluated the carbon emissions and the energy production, as well as the shadow flicker, the noise and the visual impact of an onshore and an offshore wind farm. The wind farms that I evaluated and compared include Oriel offshore wind farm off the coast of Co. Louth, Ireland, and Zeewolde onshore wind farm in The Netherlands. I determined that the offshore wind farm produces more carbon emissions than its onshore counterpart. However, the offshore wind farm also produces more energy and has lesser social impacts when compared to the onshore wind farm. I used several techniques and softwares in this project including Google Earth Pro to determine the social impacts and Microsoft Excel to determine the energy production and the carbon production.



Anthony Ryan

Project Planner



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Profile

Anthony graduated with First Class Honours from both the Master's in Planning and Sustainable Development (MPlan) at University College Cork and the B.A. in Heritage Studies from Galway-Mayo Institute of Technology, Galway.

Before joining FT, Anthony worked as a Graduate Town and Environmental Planning Consultant for The Planning Partnership Planning Consultants, Cork and the Department of Strategic Planning & Economic Development in Cork City Council. Since joining FT in 2021, Anthony has worked on a number of wind and solar renewable energy projects. Anthony prepares planning statements and environmental assessments, and project manages these projects into the planning system.

Key Skills

- Research and report writing
- Microsoft Word, PowerPoint and ArcGIS
- Strategic Planning
- Project Management
- Full/Clean Irish driving licence and Safe Pass holder

Previous Experience

• The Planning Partnership, Cork, 2020-2021

Anthony was a Graduate Planning Consultant. His role involved working within the Town, Environmental and Retail Planning team on projects which involved a varying workload while working within the office or remotely delivering projects within a deadline and to a professional standard. His responsibilities required working on projects of varying scale and nature, and included stakeholder interaction, desk-based research, and site visits to prepare assessments and reports for residential, commercial, retail and mixed-use development, as well as renewable energy projects and Development Plan submissions.

Anthony used Microsoft office suite such as Word, Excel and PowerPoint and research tools such as ArcGIS to draft and prepare multi-source reports such as Planning Reports, Replies to Requests for Further Information (RFI) and Planning Status Reports. These required attention to detail and high standards of presentation and allowed Anthony to develop his communication, research and report writing skills and expand his knowledge of the Irish Planning System and Irish and Policies, as well as European planning and environmental legislation such as Birds and Habitat Directives.

• Woodies D.I.Y & Garden Centre, Galway and Cork, 2008-2020

Anthony was a Store Horticulturalist. He was responsible for managing all aspects of Garden Centre operations and maintaining a customer-focused shopping experience through practical gardening and plant advice, training, communication, and teamwork. He grew sales through increased customer footfall and loyalty by providing outstanding customer service, professional gardening advice, excellent stock quality and providing positive shopping experience.

Anthony generated year-on-year sales increases and annual savings by implementing stock management procedures and more efficient processes in reducing wasted resources to increase sales margins.

Key Information

Qualifications

Master's in Planning and Sustainable Development (MPlan),
University College Cork,
2020

B.A in Heritage Studies,
Galway-Mayo Institute of Technology,
2017

Diploma in Commercial Horticulture,
Warrenstown Horticultural College,
1999

Employment History

2021 – Present

Fehily Timoney & Company, Cork
Graduate Planner – Energy and
Planning Team

2020 – 2021

The Planning Partnership, Cork
Graduate Planning Consultant

2008 – 2020

Woodies D.I.Y., Cork
Horticulturalist

2019 – 2019

Cork City Council
Planning Clerical Officer

2006 – 2007

Queensland Federal Government,
Agricultural and Crop Inspector

2003 – 2006

Emerald Group Christmas Tree
Growers, Co. Wicklow,
Field Supervisor

1998 – 2003

New Place Nurseries, UK
Horticulturalist



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- **Cork City Council, Cork, 2019**

Anthony was a Planning Clerical Officer working within the Department of Strategic Planning & Economic Development to finalise the city-wide Vacancy Survey for Cork City. He researched and updated all GIS data required information needed for accurate and detailed data regarding property vacancy and dereliction within Cork City. The survey's contributed to creating an understanding of levels of building vacancy and dereliction, allowing Cork City Council to develop and implement measures to reduce its prevalence and resolve the circumstances which lead to it emerging. Anthony also carried out surveys on visitor habits, patterns and demographics in Bishop Lucey Park and Kent Train Station. The survey's assisted in creating an understanding of the usage patterns and general requirements of both locations as part of proposed re-development and upgrade work to their functionality and the public realm.

- **Queensland Federal Government, Brisbane, Australia, 2006-2007**

Horticultural Inspector.

- **Emerald Group Christmas Tree Growers, Co. Wicklow, 2003-2006**

Field Supervisor.

- **New Place Nurseries, UK, 1998-2003**

Horticulturalist.

Previous FT Experience Essentials for this Project

Wind Energy Projects

Anthony contributed to various wind farm projects planning applications and assisted in the preparation and drafting of non-technical reports, finalising notices and forms, reviewing of planning drawings and collating of applications for submission. Anthony provided project management of a response to Further Information. Anthony worked on several projects where he directly contributed to client engagement and landholder interactions in relation to day-to-day client interface, ensuring that objectives were met and that projects were delivered to time, cost and quality targets. Anthony has carried out site visits and gained end-to-end knowledge of the planning application and commissioning process, including experience of client and landowner interaction in relation to site evaluation and constraints assessments (ArcGIS and Landdirect.ie), land management and Site Notice and planning compliance. Anthony has contributed to EIAR chapters to include Chapter 1, 'Introduction', Chapter 2 'Site Selection and Alternatives' and Chapter 4 'Policy and Public Consultation'.

- **On-Shore Wind Farms 2021-2022**

Anthony provided Planning Support for several Wind Farm developments nationwide which included the drafting of non-technical reports, finalising notices and forms, reviewing of planning drawings and collating of applications for submission. Anthony provided project management of a response to Further Information.

- **Ballinagree Wind Farm 2020-2022**

Provision of Planning Support including the drafting of statutory SID notices and forms. Review of planning drawings and collating of application for submission of this 22-turbine wind farm in Co. Cork.

- **Coom Green Energy Park 2021**

Collation and project management of a response to Further Information on this 20-turbine wind farm in North Cork.

- **Extension of Use Application**

Anthony provided planning support for an 'Extension of Use' Application for a Temporary Met Mast on the following project:

- Coom Green (P21-141)

Anthony participated in drafting and submitting the following:

- **Environmental Impact Assessment Reports (EIAR)**

Anthony participated in drafting non-technical chapters for the EIAR into the effects a proposed project may have on the environment for the following projects:

- Coumnaappul Wind Farm, Co. Waterford (P2360): Chapter 1, 'Introduction', Chapter 2 'Development Description' and Chapter 4 'Policy', Chapter 17 'Interactions of the Foregoing'.
- Garryhinch Wind Farm, Co. Offaly (P21-180): Chapter 1, 'Introduction' and Chapter 4 'Policy'.
- Littleton Wind Farm, Co. Tipperary (P20-211): Chapter 1, 'Introduction' and Chapter 4 'Policy and Public Consultation'.
- Annagh Wind Farm, Co. Cork (P2359): Chapter 1, 'Introduction', Chapter 2 'Site Selection and Alternatives' and Chapter 4 'Policy'.
- Ballinagree Wind Farm, Co. Cork (P2114): Chapter 1, 'Introduction', Chapter 17 'Interactions of the Foregoing'.



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Project Planner



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- Fahy Beg, Co. Clare (P20-003): Chapter 1, 'Introduction', Chapter 2 'Site Selection and Alternatives' and Chapter 4 'Policy'.
- Milltownpass (20-030): Chapter 1, 'Introduction', Chapter 2 'Development Description' and Chapter 4 'Policy'.
- Shancloon, Co. Galway (P20-306): Chapter 1, 'Introduction', Chapter 2 'Development Description' and Chapter 4 'Policy'.
- Cloonkett Wind Farm, Co. Clare (P22-125); Chapter 4 'Policy', Chapter 6: 'Population, Human Health' and Chapter 17: 'Telecommunications, Aviation and Material Assets'.
- **Substitute Consent Report / Applications**

Anthony participated in the preparation of Substitute Consent Planning Reports and documents to support the application to An Bord Pleanála under Section 177C of the Planning and Development Act 2000 (as amended):

 - Littleton Wind Farm (P20-211): Planning Report for leave to apply for Substitute Consent for historic peat extraction activities (and all associated bog development works) that have been carried out on lands within Littleton Bog Group, Co. Tipperary.
 - Garryhinch Wind Farm, Co. Offaly (P21-180): Report to support application for leave to apply for Substitute Consent under Section 177C of the Planning and Development Act, 2000 (as amended) to regularise the planning status of historic peat extraction (and ancillary bog development works) in the Garrymore Bog, County Laois and neighbouring Garryhinch Bog, County Offaly.
 - Littleton Peat Extraction (P23-035): Report to support application for leave to apply for Substitute Consent under Section 177C of the Planning and Development Act, 2000 (as amended) to regularise the planning status of historic peat extraction (and ancillary bog development works) that have been carried out on Longford Pass, Littleton, Lanespark and Derryvella Bogs in Co. Tipperary.

Solar Energy Projects

Anthony contributed to various solar farm planning applications nationwide, including the Project Management of a portfolio of 4 solar farms in Co. Tipperary, which required the preparation of the Planning and Environmental report and finalising of statutory forms, documents and drawings. This portfolio successfully received a grant of planning permission in 2021.

Anthony assisted with and project managed the preparation and submission of planning applications for solar PV renewable energy developments. Each solar application was accompanied by reports such as a detailed environmental and planning report which assesses the impact of the solar development on a multitude of factors including Archaeology & Cultural Heritage, Ecology & Biodiversity, Glint and Glare, Landscape and Visual Impact, Noise, Hydrology and Traffic/Road assessments. Each solar application was accompanied by drawings and further reports providing specific development details as part of the planning application where Anthony contributed to reviewing drawings and reports such as Ecological Impact Assessment (EclA), Appropriate Assessment Screening Reports (AA), Natura Impact Statements (NIS), Construction Environmental Management Plans (CEMP), Flood Risk Assessments (FRA). In addition, all application material has to be reviewed and checked to ensure a valid application can be submitted and ensure a successful outcome.

Anthony participated in drafting and submitting of the following:

- **Solar Stage I Feasibility Study**

Anthony carried out to a Stage I Feasibility Study to analysis the feasibility of developing a solar PV farm for the following projects:

 - Rahanisky Solar Farm, Cork County & City (P22-036)
 - South Galway Solar Farm, Co. Galway (P21-243)
 - Drummin (Castlebank), Co. Clare (P21-103)
 - Corkbeg, Co. Cork (P21-230)
 - Ballynookery, Co. Cork (P21-249)
 - Rathleash, Co. Laois (P21-302)
 - Clondardis, Co. Westmeath (P22-124)
- **Solar Stage II Feasibility Study**

Anthony carried out to a Stage II Feasibility Study to analysis the feasibility of developing a solar PV farm for the following projects:

 - Kilmorna, Co. Kerry (P21-282)
 - South Galway Solar Farm, Co. Galway (P21-243)
 - Drummin, Co. Clare (Castlebank) (P21-187)
 - South Galway, Co. Galway (P21-243)
 - Kilmorna, Co. Kerry (P21-182)
 - Shantallow, Co. Galway (P23-011)



Anthony Ryan

Project Planner



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- Milltown Extension, Co. Meath (P22-261)
- **Solar Farm Planning Applications**

Anthony participated in and project managed the preparation and lodgement of planning applications for the following Solar Farm developments:

 - Milltown, Co. Meath (P20-030)
 - Clashwilliam, Co. Kilkenny (P21-191)
 - Rathdrinagh, Co. Meath (P21-126)
 - Cahir Solar Farm 1, Co. Tipperary (P21-061)
 - Carrick SLR 2, Co. Tipperary (P21-061)
 - Deerpark 3, Co. Tipperary (P21-061)
 - Ballyvalode, Co. Limerick (P20-142)
 - Kilcormac Solar Farm, Co. Offaly (20-316)
 - Rahanisky, Cork County & City (P22-266)
 - Killough Solar Farm, Co. Tipperary (P24-169)
 - Cappakeel Solar Farm, Co. Laois (P23-226)
 - Ballylongford Solar Farm Amendment Application (P24-371)
- **A Section 177AE application**

Anthony completed the Planning and Environmental Report and associated documents on behalf of Cork City Council in support of a Section 177AE application to An Bord Pleanála for approval of repair and rehabilitation works at Glyntown Bridge.

 - Cork City Council - Glyntown Bridge (P21-200)
 - Cork County Council - Ardcahan Bridge (P1959)
- **Strategic Infrastructure Development (SID)**

Prepared documents for Strategic Infrastructure Development (SID) applications to An Bord Pleanála for electrical infrastructure projects associated with solar developments for the following projects:

 - Kilcormac, Co. Kerry (P20-316)



Tom Collins

GIS and Data Management Lead



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Profile

Tom holds a BSc in Environmental and Earth System Science from University College Cork. Tom is an environmental Geographic Information Systems (GIS) and Computer-aided design (CAD) Analyst with 13 years' postgraduate experience. Tom is the GIS Analyst and Data Management Lead with FT. Tom has significant experience working in spatial data acquisition and processing, leading spatial information processing teams across the globe. His experiences encompass all phases of a GIS/CAD project's lifecycle, having worked for public and private international and domestic sectors across Asia, Europe, and Australia.

Key Skills

Tom's key skills include:

- Spatial Data Acquisition Processing
- Digital Terrain and hydrological modelling
- MBES and Single Beam data processing
- ArcGIS Online Application development
- Quality Assurance and quality control
- Offshore Pipeline Inspection
- Offshore Charting and Drawing production

Previous Experience Essentials for this Project

2025 – Ongoing

P22-154 - Cahir to Cashel Greenway (Phases 0 to 4)

As Senior GIS Analyst, responsible for preparation of GIS data and reporting figures to support delivery of Cahir to Cashel Greenway through Phase 2 (Option Selection), 3 (Design and Environmental Evaluation) and 4 (Statutory Processes):

- Responsible for the production of GIS figures to add to public consultation brochure.
- Responsible for the creation of bespoke online WebApp to be used in public consultation, allowing members of public to review route options.

2025 – Ongoing

South East Greenway

As Senior GIS Analyst, responsible for preparation of report figures to support delivery of the Southeast Greenway, which travels from Mountelliot outside New Ross, Co. Wexford to Ferrybank, Co. Waterford at a length of c.24km:

- Responsible for the production of geological and hydrological mapping using GIS.
- Responsible for the import of CAD and PDF services data for use in map production.

2025 – Ongoing

N56 Doonwell to Drumbrick Road Scheme

As Senior GIS Analyst, responsible for preparation of GIS data to support delivery of 1.2 km long section of the N56 National Primary Route, to be upgraded to Type 2 single c/way, with additional cycleway extending to north and south for an additional 1.4km:

- Reception of ecology site data and conversion to GIS for figure production.
- Conversion of CAD data and subsequent publication to online WebApp, to aid analysis decision-making.cahir

Key Information

Qualifications

BSc Environmental and Earth System Sciences, University College Cork, 2012

MTCS Competency - ICMA ROV & Offshore Survey Division
Surveyor Grade 1 2014

MTCS Competency - ICMA ROV & Offshore Survey Division
Senior Data Processor 2017

Employment History

2025 – Present

Fehily Timoney & Company
GIS Analyst and Data Management Lead

2020 – 2025

Síor Consulting Ltd
Environmental GIS and CAD Analyst

2020 – 2020

Sulmara Subsea Ltd
Senior Data Processor

2013 – 2019

UTEC Survey Australia Pty Ltd
Hydrographic Surveyor and Senior Data Processor



Tom Collins

GIS and Data Management Lead



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2025 – Ongoing

Gorey Relief Road - Ballytegan Avenue

As Senior GIS Analyst, responsible for preparation of report figures to support delivery of approximate 1.2km section of relief road from preliminary design and planning, through to construction and handover:

- Responsible for GIS conversion of site data, and subsequent publication of data to online WebApp, allowing infrastructure team to quickly and effectively review and aid decision-making.
- Responsible for the production of geological and hydrological mapping using GIS.

2025 - 2026

SEA/AA of Proposed Variation No. 1 to Dún Laoghaire-Rathdown CDP

As Senior GIS Analyst, responsible for the organisation and collation of data received from DLR council to support reporting works for proposed rezoning and long-term strategic and sustainable development sites:

- Production of figures detailing biodiversity areas, protected areas, noise mapping and other environmental constraints.
- Responsible for GIS conversion of council data, and subsequent publication of data to online WebApp, as single source of truth, allowing team to quickly and effectively review and download data.

2025 – Ongoing

Remediation of Contaminated Lands at Whitestown

As Senior GIS Analyst, responsible for preparation of figures for supporting CoA Applications, AA documentation/NIS, EIA, compiling data from various sources.

- Responsible for data management and integration to GIS of site information as received from field teams.
- Production of figures detailing spatial distribution of chemical concentrations from groundwater wells across contaminated lands.
- Responsible for the production of groundwater contour mapping and figures using GIS.

2025 – Ongoing

N19 Shannon Airport Access Road Improvement Scheme

As Senior GIS Analyst, responsible for the organisation and collation of site data received from ecology field team to support reporting works.

- Reception of ecology site data and conversion to GIS for figure production.
- Publication of data to online WebApp, as single source of truth, allowing team to quickly and effectively review and download data.

2025

Shanclon Wind Farm EIAR

As Senior GIS Analyst, responsible for the production of figures across all chapters of the Shanclon EIAR process, compiling data from various sources.

- Production of figures detailing geological and hydrological sensitivities, noise mapping, habitat mapping, haul & turbine delivery routes and site infrastructure.
- Responsible for CAD to GIS conversions and Online WebApp management.

2025

Arthurstown Groundwater Monitoring Follow-On Work

As Senior GIS Analyst, responsible for figure production and reception of groundwater data following field team's installation and logging of groundwater logger data.

- Responsible for the production of groundwater contour mapping and figures using GIS.

2021 - 2025

GIS Database Creation and Modelling | Florida, USA FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

As GIS Analyst, responsible for the review and compilation of existing pertinent data and advisory activities.

- Production of land survey and bathymetric survey design drawings, as well as catchment area and sub-catchment drawings to support client proposal works.



Tom Collins

GIS and Data Management Lead



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

- Bathymetric Elevation Model (BEM) integration with LiDAR derived Digital Elevation Model (DEM) to produce a seamless combined DEM-BEM surface used for volumetric analyses.
- Responsible for inundation model drawing production in GIS, working closely with the client to produce final drawing sets to support final reporting.

2020 - 2024

High-Speed Rail Environmental Safeguarding | London to Birmingham, UK EKFB

As GIS Analyst, provision of GIS expertise for safeguarding of environmental receptors over 3,600 km² (along an 85 km- long section of the HS2 railway trace) for temporary HS2 construction works.

- Primary responsibilities included GIS environmental analysis, data management, production, and use of LiDAR-derived Digital Terrain Models for hydrological and hydrogeological characterisation, production of spatially and temporally distributed parameterisation for GIS-based hydrological models and production of GIS drawings, 3D-fly throughs, and Web App development.
- Responsible for hosting meetings using GIS, share-screening with environmental teams to detail project progress.

2019

WindFloat Atlantic Project | Porto, Portugal REPSOL

- Offshore processing of Kongsberg M3 data for prelay and as-laid surveys.
- Responsible for MBES data processing, freespan rectification support using EIVA processing suite.
- Production of offshore charting using Autochart to support reporting.

2018

Beatrice Wind Farm and North Sea Link Projects | Offshore Scotland, UK CANYON

- Provided offshore data processing and charting for cable-trenching and freespan rectification.
- Utilised dual-headed R2 Sonic MBES data for accurate as-built survey deliverables.
- Delivered 3D visualisation outputs to support construction progress and environmental monitoring.

2017

MoD Wreck Surveys | Offshore Malaysia SUBSEA 7

- Responsible for offshore processing of R2 Sonic 2024 MBES data for UXO survey of WWII battleships off eastern Malaysian coastline.
- MBES data QC and processing using EIVA processing suite before final delivery for government QC.
- Production of offshore charting using Autochart to support reporting.

2014 – 2015

ICHTYS GEP | Offshore Australia SAIPEM

- Offshore processing of R2 Sonic 2024 MBES for prelay and as-laid pipeline surveys.
- MBES data QC and processing using EIVA processing suite.
- Production of offshore charting using Autochart to support reporting.
- Responsible for survey support for pipeline and USBL positioning.



Gavan Wallace

GIS Analyst

CV 01



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

Profile

Gavan holds a Bachelor of Science: Social Sciences Joint Major and Master of Science: Geospatial Data Analysis

He is a Graduate GIS Analyst with Fehily Timoney. Gavan has great communication skills and extensive experience with working and collaborating as part of a team.

Key Skills

Gavan has knowledge in:

- ArcGIS Desktop (Pro)
- ArcGIS Online Suite (Dashboards, FieldMaps, ExperienceBuilder)
- Automation: Python Scripting & ModelBuilder (ArcGIS)
- QGIS
- Database Compiling and Management
- Legal Mapping
- Project Management

Previous Experience Essentials for this Project

• Shancloon Wind Farm EIS, 722,414.90 EUR, 2024

Production of figures across all chapters of the Shancloon EIAR process, compiling data from various sources. Examples include geological and hydrological sensitivities, noise mapping, habitat mapping, haul & turbine delivery routes and site infrastructure. Other tasks included CAD conversions and Online WebApp management.

• Derryfadda Wind Farm, 718,010.84 EUR, 2024

Coordinated and produced the substation developable area for one of the current projects design iterations. This involved the consideration of various constraints around the site using GIS analysis.

• Littleton Wind Farm EIAR, Planning and Ecology, 1,471,771 EUR, 2024

Undertaking various analysis such as constraints analysis, facilitation of digitised ecology surveying. Facilitating the production of all GIS figures across EIAR chapters as well as bespoke figures at the request of planners, ecologists and clients. Management of geospatial data using AGOL platform.

Key Information

Qualifications

Master of Science: Geospatial Data Analysis, University College Dublin, 2024

Bachelor of Science: Social Sciences Joint Major, University College Dublin, 2023

Employment History

2024 – Present

Fehily Timoney & Company
GIS Analyst

2023 – 2024

Murphy Geospatial Dublin
Digital Engineering Intern



Gavan Wallace

GIS Analyst

CV 01



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

- **Cappakeel Solar Farm, 273,194.72 EUR, 2024**

Production of figures for CEMP, NIS, PER, and EclA reports relating to the Solar Farm planning application. Other tasks included CAD conversions and Online WebApp management. Further planning and constraints analysis and figure production for subsequent grid route/substation SID application.

- **Carker Mountain Energy Development, 796,703.00 EUR, 2025**

Consists of a combined Wind, Solar and BESS renewable energy development. Involves to date, the production of constraints analysis and the creation/maintenance of AGOL data sharing platform.

- **Drehid Cable Route EIAR and Ecology, 705,691.38 EUR, 2024**

Production of maps for the EIAR and CEMP and ecological reports, which span across topics such as geology, hydrology, ecology, and population/human health.

- **Ballinla Wind Farm Ornithological Survey, 213,664.61 EUR, 2024**

Production of flightline maps and habitat maps for the survey area.

Ross Macklin PhD (in prep) B.Sc. (Hons) MCIEEM., MIFM, HDip GIS, PDip IPM
Principal ecologist – Triturus Environmental Ltd.
rossmacklin@gmail.com
087-9208742



Biography

Ross is an ecologist with over 15 years' professional experience in Ireland. He specialises in freshwater fisheries ecology, biology and water quality. He has considerable experience in a wide range of ecological and environmental projects including EIAR, EcIA and AA/NIS reporting, as well as biodiversity, water quality monitoring, invasive species and fisheries management. He also has expert identification skills in macrophytes, freshwater invertebrates, protected aquatic habitats and protected aquatic species including freshwater pearl mussel. His diverse project list includes work on renewable energy developments, flood relief schemes, road schemes, blueways/greenways, biodiversity projects, fisheries management projects and catchment wide water quality management.

He is currently completing his Ph.D. on the ecology and impact of common carp (*Cyprinus carpio*) in Irish waters.

Qualifications

- B.Sc. (Hons) Applied Ecology, University College Cork (2000-2004)
- HDip GIS, University College Cork (2006)
- PDip Integrated Pest Management, University College Dublin (2016)
- Ph.D. Environmental Science, University College Cork (2011-present part-time)

Professional affiliations

- Full member of Chartered Institute of Ecology and Environmental Management (CIEEM)
- Registered member Institute of Fisheries Management (MIFM)

Employment history

- 2005 – 2009 – Environmental consultant, Atkins
- 2010 – 2018 – Self-employed environmental consultant, Triturus Environmental Services
- April 2019 – present – Principal ecologist, Triturus Environmental Ltd.

Key skills and assets

- EIAR, EcIA, AA, NIS
- Fisheries assessments & fisheries habitat management
- Ecological Clerk of Works & expert witness
- Biological water quality (Q-sampling, SSRS, SSIS, RIVPACS)
- Habitat mapping
- Ecological design and habitat creation
- RHAT, River Habitat Surveys, Lake Habitat Surveys, Canal Habitat Surveys, Pond Surveys, Habitat Suitability Indices
- Invasive species
- Otter surveys (including Human Disturbance Index)
- Protected species (white-clawed crayfish, freshwater pearl mussel, amphibians, mammals, macrophytes, bryophytes)
- Biodiversity enhancement & community engagement
- Catchment water quality management plans
- Geographical Information Systems, Digital Terrain Models, Lake Bathymetric Studies & Drone Flight

Selected project experience

Lake and river habitat surveys (including water quality analysis)

Páirc na Mara Marine Innovation Park, 2018-2020 (client: Ryan Hanley/ Údarás na Gaeltachta)

Preparation and management of Biodiversity & Water Quality Chapter for EIAR report. The project involved fresh water abstraction from the Lough Skannive catchment, Co. Galway and the development of a marine innovation park. Extensive baseline surveys were completed including catchment-wide electro-fishing, Arctic charr netting and spawning surveys, physiochemical water quality including Q-sampling, lake macro-invertebrates, detailed lake habitat surveys including macrophytes and classification of Annex I oligotrophic isoetid lake habitat (3110). The baseline surveys were conducted in 4 lake basins and in multiple feeder rivers. The baseline data compiled informed the preparation of a very detailed Environmental Impact Assessment report that involved a multidisciplinary approach. It included the application of water balance modelling according to UKTAG thresholds relative to the identified aquatic sensitivities. This ensured Water Framework Directive compliance in adherence to a detailed schedule of environmental commitments. It also delivered commitments to protect Annex I aquatic habitats and salmonid fish.

Loch an Mhuilinn water abstraction, 2017 (client: Ryan Hanley)

Detailed bathymetric study of Loch an Mhuilinn, Co. Galway to inform fresh water abstraction, in addition to aerial drone surveys. Surveys were undertaken using state of the art hardware and software, RTK-enabled Trimble GPS, Lowrance SONAR, Ebee Sensee Fixed Wing Drone and Reefmaster Software. The Annex I littoral habitat 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) was characterised with over 20 species of macrophyte plants records including *Nitella flexillis* and *Elatine hydropiper*. Lacustrine littoral salmonid spawning areas were identified and a comprehensive report was prepared.

Dublin City otter survey, 2018-2020 (client: Ryan Hanley)

Completed the largest survey of urban otter populations in Ireland to date and prepared a comprehensive report with a large focus on management and conservation. The lower reaches of over 20 watercourses within Dublin City were surveyed for otter signs, with a particular emphasis on quantifying and mapping otter habitat. RHAT methodology was used to classify and map otter habitat quality along 500m sections of each watercourse. Novel methodology (the Human Disturbance Index, HDI) was developed by Triturus and used to detect relative levels of human disturbance/encroachment on riparian areas and the relative effects on otter sign distribution. The study identified an important link between riparian seclusion and otter breeding areas, greatly informing future management in Dublin City and improving knowledge of urban otter populations.

Irish Water SSRS surveys, 2018 (client: Irish Water)

SSRS surveys and reporting were undertaken for the National Certificate of Authorisation Programme (NCAP), which provides for smaller wastewater agglomerations (i.e. <500 PE). A survey and reporting was undertaken in receiving watercourses within 25 catchments inclusive of reporting.

IPPC licence compliance, 2019 (client: Duffy Meats t/a Kerry Foods)

Detailed Q-sampling and physiochemical analysis was undertaken across 12 no. watercourses to ensure IPPC licence compliance. This included riverine habitat surveys examining algae coverage, macrophyte coverage, gravel condition index and physiochemical data analysis of historical trends relative to targets of the Surface Water Regulations S.I. No. 77/2019.

Kilbarry Bog landfill, 2018-2020 (client: Ecosystem Services & Waterford City Council)

Detailed physiochemical and biological water quality analysis (Q-sampling) in addition to macrophyte surveys were undertaken to inform the preparation of the aquatic elements of annual environmental reporting. This included physiochemical and biological water quality sampling of 10 no. riverine sites in addition to 3 no. habitat compensation pond habitats (including PSYM methodology to assess ecological quality).

Kepak Environmental Report & IPPC license return, 2009-2014 (client: Kepak Group)

Preparation of biological and pathogenic water quality reports for Kepak Group, Condonstown, Co. Cork as part of their annual license return. This involved Q-sampling of riverine invertebrates and pathogenic water quality analysis.

Castlewaller wind farm, Co. Limerick, 2019 (client: Fehily Timoney)

Baseline physiochemical and biological water quality sampling (Q-sampling, 12 sites) in addition to catchment-wide electro-fishing and white-clawed crayfish surveys, was undertaken along a proposed cable route in the catchment of the proposed Castlewaller wind farm, Co. Limerick to inform EIAR preparation.

Derrinlough wind farm, Co. Offaly, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling) in addition to a fisheries habitat assessment, was undertaken in the catchment of the proposed Derrinlough wind farm, Co. Offaly to inform EIAR preparation.

Croagh wind farm, Co. Leitrim, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling, 13 sites) in addition to catchment-wide electro-fishing was undertaken along a proposed cable route in the catchment of the proposed Castlewaller wind farm, Co. Leitrim to inform EIAR preparation.

Croaghaun wind farm, Co. Carlow, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling, 21 sites) in addition to catchment-wide electro-fishing was undertaken in the catchment of the proposed Croaghaun wind farm, Co. Carlow to inform EIAR preparation.

Knockharley landfill, 2019 (client: Fehily Timoney)

Baseline physiochemical and biological water quality sampling (Q-sampling & SSRS), RHAT scores and electro-fishing was undertaken in the catchment of Knockharley Landfill to inform EIAR preparation.

Fisheries

Ballynacarrig River rehabilitation project, Co. Offaly, 2019 (client: LAWPRO)

Undertook a baseline aquatic assessment of the Ballynacarrig River (Silver River tributary) that included an assessment of fisheries (electro-fishing), biological and physiochemical water quality, and macrophytes. A detailed river management plan was prepared to help LAWPRO enhance the water quality and fisheries value as part of the Environmental River Enhancement Fund (EREP), as a designated 'Area For Action' within the wider catchment.

Owenacurra (Midleton) Flood Relief Scheme, 2018-2019 (client: Arup)

Conducted a catchment-wide electro-fishing survey in the Owenacurra and Dungourney River systems to establish a baseline of lamprey, salmonid and eel populations. Utilised a fixed-wing drone and RHAT surveys to establish the most pristine areas of channel pre-construction works and conducted detailed redd counting surveys and substrate assessments for sea trout and Atlantic salmon populations in the catchment.

River Barrow weirs fisheries survey, 2018 (client: McCarthy Keville O' Sullivan & Waterways Ireland)

Conducted an electro-fishing survey of three large weir sites on the River Barrow and prepared a detailed fisheries report on the conservation objective fish species found in the River Barrow and River Nore SAC. Used a 3m-RIB and bathymetric software to profile the sediment classes in order to establish the distribution of soft lamprey ammocoete habitat relative to proposed weir upgrade works and identified fisheries constraints based on the proposals.

Sea Lamprey *Petromyzon marinus* spawning survey, Lower Mulkear River, 2018 (client; IDA & Fehily Timoney)

Undertook a sea lamprey spawning survey of the Lower Mulkear River, Co. Limerick used a fixed-wing drone and infrared imagery to detect sea lamprey redds. Redd sites were validated on the ground using an RTK-enabled Trimble GPS and a correction factor was developed based on the accuracy of detection by the drone relative to data collected in the field. The project successfully established the most important zones of the river used by spawning lamprey with over 50 redds detected. This was the first time an aerial drone had been used to map sea lamprey redds in Ireland.

Macrophytes

Lough Skannive water abstraction, Carna 2019 (client: Ryan Hanley)

Conducted a detailed lake habitat survey of the macrophyte community of a 50-hectare lake using transects. This helped profile vegetation corresponding to the Annex I 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) and informed EIAR preparation.

Killaloe Canal Greenway, Co. Clare, 2019 (client: MKO).

Conducted detailed macrophyte, invasive species and fisheries surveys to inform an Ecological Impact Assessment (EclA) for a proposed Blueway development in Killaloe.

Opposite-leaved pondweed (*Groenlandia densa*) management plan, 2018 (client: Fehily Timony)

Undertook an opposite-leaved pondweed survey of the Loughmore Canal, Co. Limerick through a full macrophyte plant audit of the canal. A detailed management plan was prepared in light of proposed flood alleviation works

Floating river vegetation survey of the Lower River Lee, Co. Cork, 2015 (client: Ryan Hanley & OPW)

Conducted a detailed study of the distribution of floating river vegetation in the Lower River Lee between Inniscarra Dam and Cork City Centre. Transect and underwater dive surveys were undertaken using random replicated blocks. The distribution and cover of *Ranunculus*, *Potamogeton*, *Callitriche* and moss species was estimated and distribution maps compiled. It represented one of the most detailed studies in the south of Ireland on the Annex I habitat (3260) Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation.

Bill Brazier B.Sc. (Hons) MIFM

Aquatic ecologist – Triturus Environmental Ltd.

b.brazier@hotmail.com

086-3758585

<https://www.linkedin.com/in/bill-brazier/>



Biography

Bill is an aquatic ecologist with 10 years' professional experience in Ireland. He specialises in freshwater fisheries ecology, biology and water quality. He has considerable experience in a wide range of ecological and environmental projects including EIAR, EcIA and AA/NIS reporting, as well as biodiversity, invasive species and fisheries management. His diverse project list includes work on wind farm developments, flood relief schemes, road schemes, blueways/greenways and biodiversity projects.

He is currently completing his Ph.D. on the genetics, reproductive biology and invasive potential impact of common carp (*Cyprinus carpio*) in Irish waters. Additionally, Bill runs the highly respected Off the Scale magazine, Ireland's biggest and most read recreational angling publication and is the national coordinator for the novel Anglers National Line Recycling Scheme (ANLRS).

Qualifications

- B.Sc. (Hons) Applied Freshwater & Marine Biology, Galway-Mayo IT (2006-2010) (1.1)
- Ph.D. fish ecology & genetics (final year deferred), University College Cork (2010-present)

Professional affiliations

- Registered member Institute of Fisheries Management (MIFM)

Employment history

- 2010 - Marine Institute Archival Data Analyst bursar
- 2011 – 2018 – Freelance ecological consultant
- April 2019 – present – Aquatic ecologist, Triturus Environmental Ltd.

Key skills and assets

- EIAR, EcIA, AA, NIS
- Fisheries assessments & management
- Ecological Clerk of Works
- Biological water quality (Q-sampling, SSRS)
- Habitat mapping
- Ecological design and habitat creation
- RHAT, RHS, RCS, LHS, PSYM, HSI
- Invasive species
- Otter surveys (including Human Disturbance Index)
- Protected species (white-clawed crayfish, amphibians, mammals, macrophytes)
- Biodiversity enhancement & community engagement
- ISA National Powerboat Handling Certificate (Level 2)
- Certificate in Personal Sea Survival Techniques
- GIS, bathymetric mapping
- Graphic/web design and digital/print publication (Adobe InDesign, Illustrator, Photoshop, Lightroom, Premiere Pro)

Selected project experience

Lake and river habitat

Páirc na Mara Marine Innovation Park, 2018-2020 (client: Ryan Hanley/ Údarás na Gaeltachta)

Preparation and management of Biodiversity & Water Quality Chapter for EIAR report. The project involved fresh water abstraction from the Lough Skannive catchment, Co. Galway and the development of a marine innovation park. Extensive baseline surveys were completed including catchment-wide electro-fishing, Arctic charr netting and spawning surveys, physiochemical water quality including Q-sampling, lake macro-invertebrates, detailed lake habitat surveys including macrophytes and classification of Annex I oligotrophic isoetid lake habitat (3110). The baseline surveys were conducted in 4 lake basins and in multiple feeder rivers. The baseline data compiled informed the preparation of a very detailed Environmental Impact Assessment report that involved a multidisciplinary approach. It included the application of water balance modelling according to UKTAG thresholds relative to the identified aquatic sensitivities. This ensured Water Framework Directive compliance in adherence to a detailed schedule of environmental commitments.

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Water quality

Kilbarry Bog landfill, 2018-2020 (client: Ecosystem Services)

Detailed physiochemical and biological water quality analysis (Q-sampling) in addition to macrophyte surveys were undertaken to inform the preparation of the aquatic elements of Annual Environmental reporting. This included physiochemical and biological water quality sampling of 10 no. riverine sites in addition to 3 no. habitat compensation pond habitats (including PSYM methodology to assess ecological quality).

Timahoe solar farm, Co. Offaly, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling) in addition to fisheries, otter and white-clawed crayfish surveys, was undertaken the catchment of the proposed Timahoe solar farm, Co. Offaly to inform EIAR preparation.

Castlewaller wind farm, Co. Limerick, 2019 (client: Fehily Timoney)

Baseline physiochemical and biological water quality sampling (Q-sampling, 12 sites) in addition to catchment-wide electro-fishing and white-clawed crayfish surveys, was undertaken along a proposed cable route in the catchment of the proposed Castlewaller wind farm, Co. Limerick to inform EIAR preparation.

Derrinlough wind farm, Co. Offaly, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling) in addition to a fisheries habitat assessment, was undertaken in the catchment of the proposed Derrinlough wind farm, Co. Offaly to inform EIAR preparation.

Croagh wind farm, Co. Leitrim, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling, 13 sites) in addition to catchment-wide electro-fishing was undertaken along a proposed cable route in the catchment of the proposed Castlewaller wind farm, Co. Leitrim to inform EIAR preparation.

Croaghaun wind farm, Co. Carlow, 2019 (client: Fehily Timoney)

Baseline biological water quality sampling (Q-sampling, 21 sites) in addition to catchment-wide electro-fishing was undertaken in the catchment of the proposed Croaghaun wind farm, Co. Carlow to inform EIAR preparation.

Knockharley landfill, 2019 (client: Fehily Timoney)

Baseline physiochemical and biological water quality sampling (Q-sampling & SSRS), RHAT scores and electro-fishing was undertaken in the catchment of Knockharley Landfill to inform EIAR preparation.

Small Streams Risk Score (SSRS) training, 20xx (client: Waterford County Council)

Undertook training of environmental staff from Waterford County Council on the use of the riverine invertebrates as a bio-indicator of pollution risk for small catchments using SSRS, the second most prominent biological indicator system used in Ireland after the Q-sampling system.

Fisheries

Croaghaun wind farm, Co. Carlow, 2019 (client: Fehily Timoney)

Catchment-wide electro-fishing (24 sites) and white-clawed crayfish surveys were undertaken in the catchment of Croaghaun wind farm, Co. Carlow to inform EIAR preparation.

Ballynacarrig River rehabilitation project, Co. Offaly, 2019 (client: LAWPRO)

Undertook a baseline aquatic assessment of the Ballynacarrig River (Silver River tributary) that included an assessment of fisheries (electro-fishing), biological and physiochemical water quality, and macrophytes. A detailed river management plan was prepared to help LAWPRO enhance the water quality and fisheries value as part of the Environmental River Enhancement Fund (EREP), as a designated 'Area For Action' within the wider catchment.

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River Barrow weirs fisheries survey, 2018 (client: McCarthy Keville O' Sullivan & Waterways Ireland)

Conducted an electro-fishing survey of three large weir sites on the River Barrow and prepared a detailed fisheries report on the conservation objective fish species found in the River Barrow and River Nore SAC. Used a 3m-RIB and bathymetric software to profile the sediment classes in order to establish the distribution of soft lamprey ammocoete habitat relative to proposed weir upgrade works and identified fisheries constraints based on the proposals.

Sea Lamprey *Petromyzon marinus* spawning survey, Lower Mulkear River, 2018 (client: IDA & Fehily Timoney)

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Macrophytes

Lough Skannive water abstraction, Carna (client: Ryan Hanley)

Conducted a detailed lake habitat survey of the macrophyte community of a 50-hectare lake using transects. This helped profile vegetation corresponding to the Annex I 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) and informed EIA preparation.

Killaloe Canal Greenway, Co. Clare, 2019 (client: MKO).

Conducted detailed macrophyte, invasive species and fisheries surveys to inform an Ecological Impact Assessment (EIA) for a proposed Blueway development in Killaloe.

Opposite-leaved pondweed (*Groenlandia densa*) management plan, 2018 (client: Fehily Timoney)

Undertook an opposite-leaved pondweed survey of the Loughmore Canal, Co. Limerick through a full macrophyte plant audit of the canal. A detailed management plan was prepared in light of proposed flood alleviation works

Floating river vegetation survey of the Lower River Lee, Co. Cork, 2015 (client: Ryan Hanley & OPW)

Conducted a detailed study of the distribution of floating river vegetation in the Lower River Lee between Inniscarra Dam and Cork City Centre. Transect and underwater dive surveys were undertaken using random replicated blocks. The distribution and cover of *Ranunculus*, *Potamogeton*, *Callitriche* and moss species was estimated and distribution maps compiled. It represented one of the most detailed studies in the south of Ireland on the Annex I habitat (3260) Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation.

Tony Cummins BA MA

Senior Archaeologist & EIA Consultant (John Cronin and Associates)

TONY CUMMINS has been a Senior Archaeologist with John Cronin & Associates since 2009 and has over 29 years' continuous industry experience. He has extensive experience in the preparation of screening reports, option assessments and EIAR chapters for a wide range of large-scale developments, including various wind farm projects (examples provided below).

Professional Qualifications

Batchelor Degree (Archaeology) University College Cork, 1992

Master's Degree (Archaeology), University College Cork, 1994

Areas of Expertise

- Field Surveyor
- Excavation Director
- Desktop Research
- Environmental Impact Assessment Reports (EIAR)
- Archaeological Project Manager on infrastructure schemes
- Liaising with design teams and state/local authorities
- GIS analysis and production of mapping datasets

Relevant Experience

Mr. Cummins worked on a wide range of excavation projects following his graduation with a master's degree in Archaeology in 1994 and was approved as a licence-eligible archaeologist by the National Monuments Service in 1998. Since that time, he has directed numerous excavations in Ireland and also participated in archaeological projects in Britain and Lebanon. He has also accumulated management experience as the senior project archaeologist on large-scale infrastructure road schemes, including the Limerick Southern Ring Road and the Waterford City Bypass. Mr. Cummins has prepared assessments for a wide range of energy supply projects over recent decades, and these have included ESBI transmission lines, wind farm and solar farm developments (including associated grid connection and haul routes). His inputs to these projects have included liaising with developers, project designers, statutory authorities and other EIA consultants as well as the preparation of EIAR chapters based on programmes of detailed desktop research and field surveys.

The following are examples of some of his current and recent wind farm projects:

- Garryhinch Wind Farm, Co. Laois
- Castlepook Wind Farm, Co. Cork
- Fahy Beg Wind Farm, Co. Clare
- Annagh Wind Farm, Co. Cork
- Coom Wind Farm, Co. Cork
- Gort Uí Rathaile Wind Farm, Co. Cork
- Inse Mhór Wind Farm, Co. Cork
- Ballykett Wind Farm, Co. Clare
- Moanmore Wind Farm, Co. Clare
- Tullaghmore Wind Farm, Co. Galway
- Croaghaun Wind Farm, Co. Carlow
- Castlegarden Wind Farm, Co. Kilkenny
- Coomnagappul Wind Farm, Co. Waterford
- Dyrick Hill Wind Farm, Co. Waterford

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 19 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 is the managing director of Macro Works, overseeing 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 100 wind farms and a similar number of solar farms including 15 SID projects. Consequently, he has considerable oral hearing expert witness experience. This extends to more than 15 oral hearings 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.

Key Projects

Castlebanny Wind Farm	Coillte joint venture	70MW SID wind energy development
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

PROFESSIONAL PROFILE



DAMIAN MURPHY – PROJECT MANAGER

2011 to Present - TLI Group

Position: Project Manager

Duties:

Manager responsible for departmental design team at TLI Group. Involved primarily in the design and construction of Wind Farm grid connections at all voltages.

- Management of design personnel
- Planning & Development
- Client liaison
- Cost Control
- Programme Management
- Business Development

1999 to 2011 - Mott MacDonald Ltd (formally E.G. Pettit & Co.)

Position: Consultancy Manager – Killarney Office

Duties:

Design team & office management

Management of a multidisciplinary design team. Design team leader on wide variety of projects ranging from commercial and industrial developments, office blocks, sports facilities, refurbishment work, conservation projects, residential developments, community projects. Project Management from project inception to completion, structural inspections and reporting, Health & Safety responsibilities including PSDP.

1992 to 1999 - Walls Construction

Position: Site Engineer, Project Manager

Duties:

Site based project management

Project Manager Project Manager involved in various commercial developments. Responsible for sub-contractor co-ordination, programming, budget monitoring, site health & safety, quality audits, client liaison

1991 to 1992 - Mahon McPhillips CEM

Position: Site Engineer

Duties:

Setting out, subcontractor co-ordination

Responsible for setting out works & sub-contractor co-ordination.

Training: -

- ESB Induction
- ESB Substation Training
- Safe Pass
- Manual handling
- Occupational First Aid
- Civil Engineering (BA, BAI)
- Trinity College, Dublin 1991
- Diploma - Project Management (P. Grad Dip)
- Trinity College, Dublin 1997

Professional Skills: -

- MIEI – Engineers Ireland

Personal Skills: -

- 20 years mixed experience both Consultancy and Contracting.
- Good interpersonal communication skills.
- Extensive experience in managing multidisciplinary design teams.
- Strong knowledge of planning and development regulations and statutory environmental requirements.
- Strong background with regards implementation and use of ISO quality procedures.

Computer Application Skills: -

- Microsoft Office
- Microsoft Project

PROFESSIONAL PROFILE



James Cronin – Design Technician

March 2020 to Present – TLI Group

Position: Design Technician

Duties:

- Setting up drawings/pdfs for Feasibility Study, Downloading and handling Services data.
- Creating drawings and handling data to be used for Cable pulling Calculation.
- Setting up cross Sections to be used In Planning Applications.
- Downloading and requesting Services and Constraints to be used for Planning Applications.
- Handling OSI and BlueSky aerial photos data to be used in the preparation of drawings.

Recent Projects:

- Ballinagree WF
- Ballinagree WF

December 2019 - March 2020 - ASC Automated Systems & Controls Limited

Position: CAD Technician

Duties:

- Used AutoCAD to produce 3D layouts of switchgear cabinets and 2D single line schematics of electrical equipment.
- Complied with design standards and standard procedures for CAD drawings.
- Compiled equipment and cable schedules for completed cabinets.
- Completed design packs for finished products.

June 2019 - November 2019 – William O'Brien Plant Hire

Position: CAD Technician

Duties:

- Worked with AutoCAD and Crammax to complete 2D and 3D drawings of site plans.
- Analysed site drawings to work out the best orientation and set up for the cranes.
- Coordinated with engineers to bring site drawings to the correct standard.
- Worked off site plans to set up the correct lifting method of equipment on site.

November 2017 – March 2020 – Kinsale Community College

Position: Munster Programming Training Teacher

Duties:

- Travelled to different schools and substituted for teachers.
- Worked on short term notice preparing classes to ensure the students did not fall behind in their learning.
- Worked in a range of different subjects.

Training:

- BTech in (Education) in Materials and Architectural Technology
- MSc (Hons) in Interactive Media (Computer Science)

Professional Skills:

- AutoCAD
- Solid Works
- Blender
- Unity
- 3D Printing

Personal Skills:

- Strong organisational and planning skills
- Problem solving, creative and critical thinking

Computer Application Skills:

- Java, JavaScript, Python, HTML, PHP, Swift, MySQL, Revit.

PROFESSIONAL PROFILE



Bojana Milosevic - Design Technician

June 2021 to Present - TLI Group

Position: Design Technician

Duties:

- Producing detailed drawings, plans, and sections for the site infrastructure using AutoCAD
- Production of 3D models using AutoCAD and Revit
- Working with a design team and individually on CAD projects
- Preparation of maps to aid design teams and build teams in the field
- Preparing and creating 3D models in accordance with the design principles established and the company's system practices

Recent Projects:

- Davidstown Solar Park
- Sligo 110KV Substation
- Gallanstown Solar Park
- Avonbeg 38kv Station

October 2018 to June 2021 - Southwest Engineering

Position: CAD Technician

Duties:

- Create high-quality detailed technical drawings and plans based on designs supplied by engineers and designers.
- Liaise with engineers and designers to understand their design requirements and provide technical advice.
- Ensure drawings are compliant with industry and health and safety standards and protocols.
- Conducting final model rendering and delivering the final product.

April 2018 to October 2018 – Supervalu

Position: Deli Assistant

Duties:

- Merchandising and rotating stock in grocery department maintaining hygiene and food safety standards in all departments.
- Processing of customer sales, deliveries and requests.
- Ensuring customer transactions are carried out efficiently and effectively

Training:

- Bachelor of Science in Civil Engineering, Major in Road Construction and Engineering
- Certificate in Building Information Modelling with Revit MEP
- HDip in BIM for Civil Engineering and Constructions

Professional Skills:

- Proficiency with MicroStation and Revit
- AutoCad

Personal Skills:

- Being able to meet deadlines
- Being able to work alone or with a team
- Having analytical skills
- Having good communication abilities
- Being able to visualize in 3 dimensions
- Having understanding of construction methods
- Having problem solving abilities
- Being able to work under pressure

Computer Application Skills:

- Microsoft word and excel

PROFESSIONAL PROFILE



DAMIEN BROWNE – ELECTRICAL ENGINEER

September 2018 – Present – TLI Group

Position: Senior Electrical Engineer (Design Team Lead)

Duties:

- Design of Electrical Grid Connections
- Responsible for analysis of Layouts, Rating Studies and Loading characteristics within network scopes
- Project writing, studies, documenting and specification reviews delivered by TLI Group
- Feasibility and Route Selection within project reviews
- Detailed Network Designing with use of CMCAP and Grid Cable Max

Recent Projects:

- Clogherchor Windfarm (UGC Grid Connection to Tievebrack SS)
- Gortrahilly Windfarm (UGC Grid Connection to Ballyvouskil Node)
- Codling Offshore Windfarm (Onshore 220kV Grid elements)
- Glenard Windfarm (UGC Grid Connection to Trillick SS)
- Avonbeg BESS & Macallian Solar Farm Grid Connections
- DUB20 Cable Design

2017 to 2018 – EnerMech LTD MEI, Sydney

Position: Electrical Project Engineer

Duties:

- Provision of Electrical Engineering Support in service delivery and maintenance for clients including ALSTOM and Sydney Transport.
- Management of project documentation being delivered by EnerMech for clients.
- Co-ordination and planning of testing equipment resources required for testing procedures for substation commissioning projects.
- Relay to client service costs and rates for project tenders

2017 – H&MV

Position: Graduate Electrical Engineer

Duties:

- Carried out electrical design risk assessments ensuring safety of both design and system.
- Design of HV and MV substation panel layouts, general services and lighting layouts, fire and intruder alarm layouts.
- Procurement specifications for power transformer, instrument transformer, disconnects, circuit breakers and steelwork.
- Carried out voltage regulation studies and power losses of distribution system.
- Cable sizing calculation with use of Cymcap 7.2 Software and ETAP 16.0. Power factor correction / Protection co-ordination studies.

Training:

- Manual Handling
- Safepass
- BEng. Electrical Engineering (Hons) Cork Institute of Technology, Ireland

Professional Skills:

- SafePass
- AC/DC Elementary Course
- Manual Handling
- Fire Safety Awareness
- ETAP 16.0
- Power Factory
- AutoCAD
- CymCap 7.2

Computer Application Skills:

- MS Excel, Access, Word and Powerpoint

PROFESSIONAL PROFILE



Padriac O Sullivan Graduate Engineer

May 2021 to Present TLI Group

Position: Graduate Engineer

Duties:

- Underground grid connection designs for renewable energy projects in both wind farms and solar parks.
- Preparation of technical studies, reports, drawings and spreadsheets
- Preparation of Planning Apps and Section 5 exempted development Apps
- Feasibility studies, route selection and site surveys for proposed grid connections
- Preparation of grid connection detailed design
- Preliminary substation design for 20kV – 110kV

Recent Projects:

- Cummeenabuddoge Wind Farm 110kV
- Firlough Wind Farm 110kV
- Mainscourt Solar Park 38kV
- Creevy Solar Park 20kV

April 2015 to May 2021 Richard Boyle & Sons Ltd

Position: Store Assistant

Duties:

Work as a general operative within the shop, dealing with customers. Trained operative within Paint counter.

March 2015 to April 2015 Liebherr Container Cranes Ltd

Position: Work Experience Apprentice

Duties:

Shadow Apprentices for the month, assisting in tasks in the workshop.

November 2014 to February 2015 Astellas Ireland Co. Ltd

Position: Work Experience

Duties:

Shadow engineering technicians, production operators and environmental engineers and assisting in any tasks given.

Training:

- Safe Pass

Professional Skills:

- Auto CAD Design skills

Personal Skills:

- Report Writing skills
- Communication skills
- Team-work Skills

Computer Application Skills:

- Microsoft Word, Excel and Powerpoint



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

APPENDIX 1.2

Glossary of Terms and
Abbreviations

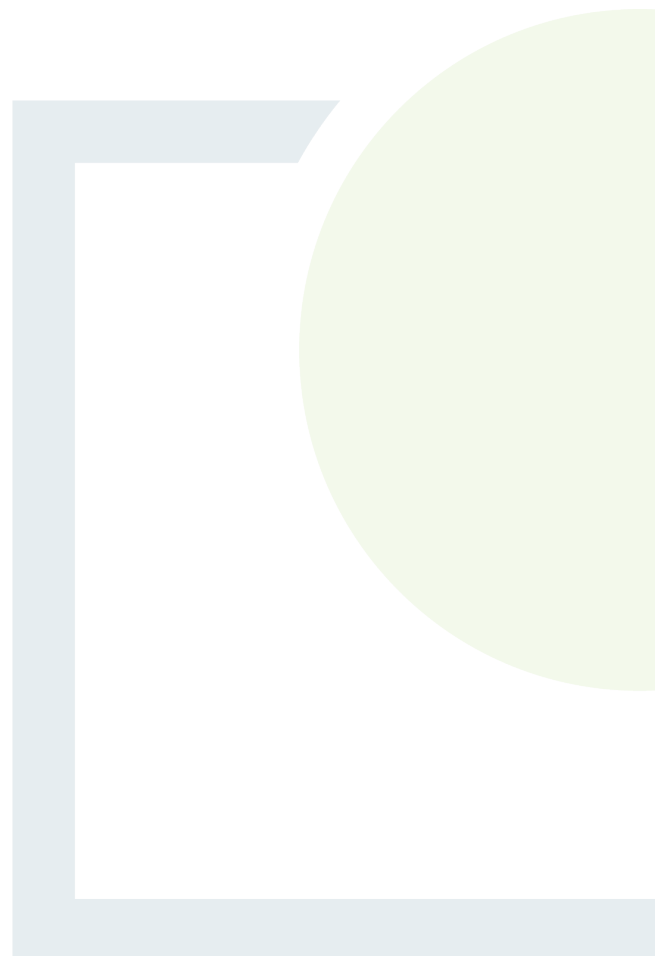


Table 1: Glossary of Terms

Key Terms	Definition
The Applicant	Coom Green Energy Park Limited
Baseline	Existing status (and likely evolution thereof) of the receiving environment within the Study Area.
Biodiversity Management and Enhancement Plan (BEMP)	Management Plan detailing the implementation and management of biodiversity mitigation and enhancements to be carried out as part of the Proposed Development.
Biodiversity Management and Enhancement Plan Lands (BEMP Lands)	Lands where activities associated with the Biodiversity Enhancement and Management Plan is to be carried out.
Blue Line Boundary	Denotes one or more areas of land within the ownership or control of The Applicant for the Proposed Development.
Construction Borrow Pit	Areas where rock and aggregate are extracted within the site and they are subsequently restored to agricultural land
Chartered Institute of Ecology and Environmental Management (CIEEM)	The Chartered Institute of Ecology and Environmental Management is the professional membership body representing and supporting Ecologists and Environmental professionals in the UK, Ireland and abroad. Previously known as Institute of Ecology and Environmental Management (IEEM).
Collision Risk Modelling (CRM)	Method used to predict the potential number of bird collisions that might be caused by the operation of a wind farm.
Community Benefit Scheme	A fund that is unique to the Proposed Development and whose design is typically driven by the community that administer and avail of it. It can include for example: • Contributing to the improvement of local recreational amenities

Key Terms	Definition
	- Supporting local projects that benefit the wider community; - Engaging with local communities in enhancing sustainable energy awareness, use and efficiency.
Competent Authority	Organisation that has the obligation to carry out Appropriate Assessment and or Environmental Impact Assessment.
Construction Compound	Strategically located construction hubs within the Site which will be the core location for project management (engineering, planning and construction delivery) during the construction phase of the Proposed Development.
Construction Phase	The period during which infrastructure is being installed, up to official commissioning of the development.
Coom Green Energy Park	The consented Coom Green Energy Park development (ACP Ref: 308885-20) consisting of a 22-turbine wind farm, 110 kV substation, 20 no. battery energy storage containers and all associated ancillary works.
The Council	Refers to the County Council in whose jurisdiction proposed works are taking place.
Decommissioning Phase	The period during which project infrastructure is being removed at the end of the operational lifetime of the Proposed Development.
Department for Transport, Tourism and Sport (DTTAS)	The Irish government department responsible for Transport, Tourism and Sport with a mission to support economic growth and social progress.
Department of Agriculture, Food and the Marine (DAFM)	The Irish government department responsible for agriculture, food and the marine.
Department of Communications, Climate Action and Environment (DCCAE)	The Irish government department responsible for communications, climate action, environment, broadcasting, energy, natural resources and postal services. The department must ensure that all of its policies are in line with EU and global obligations.

Key Terms	Definition
Department of Communications, Marine and Natural Resources (DCMNR)	Previous name of the Department of Communications, Climate Action and Environment.
Department of Housing, Planning, and Local Government (DHPLG)	The Irish government department responsible for housing, planning and local government.
Design Parameters	Set of parameters by which the Proposed Development is defined, and which will be used to form the basis of assessments in the EIAR.
Development Consent	Permission from An Coimisiún Pleanála and /or Cork County Council for the development to proceed.
Development Phase	This relates to the development of the Proposed Development through commercial, environmental, technical and engineering consideration prior to construction commencing.
EIAR Scoping Report	The EIAR Scoping Report sets out the proposed scope of work and methods to be applied in the development of the Environmental Impact Assessment Report (EIAR).
EirGrid	State-owned electric power Transmission System Operator (TSO) in Ireland
Electricity Supply Board Networks (ESBN)	Licensed owner and operator of the electricity distribution system and onshore transmission asset owner in the Republic of Ireland, responsible for carrying out operations, maintenance, repairs and construction on the national electricity grid.
Electromagnetic Field (EMF)	This is a property of space caused by the motion of an electric charge. A stationary charge will produce only an electric field in the surrounding space. If the charge is moving, a magnetic field is also produced. An electric field can be produced also by a changing magnetic field.
Environmental Impact Assessment (EIA)	A systematic means of assessing a development's likely significant effects undertaken in accordance with the EIA Directive (Directive 2011/92/EU as amended by Directive

Key Terms	Definition
	2014/52/EU). It is an assessment carried out by the Competent Authority.
Environmental Impact Assessment Report (EIAR)	A report prepared by the Applicant to describe the likely significant effects of a project and submitted with an application for Development Consent.
Environmental Protection Agency (EPA)	An independent public body established under the Environmental Protection Agency Act, 1992 whose purpose is to protect, improve and restore the environment through regulation, scientific knowledge and working with others.
European Commission (EC)	The executive body of the European Union responsible for proposing legislation, enforcing European law, setting objectives and priorities for action, negotiating trade agreements and managing implementing European Union policies and the budget.
Fehily Timoney and Company (FT)	Planning and Environmental Consultants responsible for leading preparation of the EIAR for the Proposed Development
Felling Licence	A licence granted by the Minister for Agriculture, Food and the Marine provides authority under the Forestry Act 2014 to fell or otherwise remove a tree or trees.
Geographical Information System (GIS)	A digital system that captures, stores, analyses, manages and presents data linked to geographic location. It links spatial information to a digital database.
Landscape and Visual Impact Assessment	A tool used to identify and assess the likely significant effects of change resulting from the Proposed Development on the landscape as an environmental resource in its own right and on views and Visual Amenity experienced by human & other receptors.
Maximum Export Capacity (MEC)	The Maximum Export Capacity (MEC) is the value (in MW, MVA, kW and/or kVA) provided in accordance with the User's Grid Connection Agreement or DSO Demand Customer's DSO Connection Agreement. This is the maximum capacity that can be exported to the Electricity

Key Terms	Definition
	Transmission/Distribution System by an electricity generation project.
National Parks and Wildlife Service (NPWS)	The National Parks and Wildlife Service manages the Irish State's nature conservation responsibilities. The activities of the NPWS include the designation and protection of Natural Heritage Areas, Special Areas of Conservation and Special Protection Areas.
Natura Impact Statement (NIS)	This is a report prepared to inform Appropriate Assessment (AA) of Natura 2000 sites as required under the EU Habitats Directive which presents information on the assessment and the process of collating data on a project and its potential significant effects on Natura 2000 site(s).
Natura 2000 sites	Sites both onshore and offshore which are designated for conservation and protection under the EU Habitats Directive and Bird Directive.
Permanent Met Mast	Refers to a proposed 110 m high lattice steel Meteorological mast with a shallow concrete foundation, which includes a 4m lightning rod which will extend above the mast structure.
Operations and Maintenance (O&M)	O&M is the activity that follows commissioning to ensure the safe and economic running of the Proposed Development. The objective of this activity is to make sure the Proposed Development achieves the best balance between running cost and electricity output.
Operational Phase	The period over which the energy park is generating electricity, and any works are for repair or maintenance purposes.
Prescribed Bodies	A public body or institution declared by the Minister as set out in the Planning & Development Act 2000 (as amended). These are bodies that should be notified by a Planning Authority or Competent Authority of applications for Consent that may fall within their remit.

Key Terms	Definition
Ramsar site	A wetland site designated to be of international importance under the Convention on Wetlands, known as the Ramsar Convention.
Receptor	Environmental component that may be affected, adversely or beneficially, by the Proposed Development.
Red Line Boundary/Planning Boundary	Refers to the land which is the subject of the application for Development Consent for the Proposed Development.
Restoration Borrow Pit	A 'restoration or peatland borrow pit' is a minimal, localised, peat-based extraction area created in order to utilise suitable peat substrate to dam an adjacent drain with minimal disturbance to the habitat - (Mackin et al., 2017)
Recreational Amenity	Infrastructure associated with proposed recreational amenity contained within the energy park site including walking/cycling trails, car parking, signage and all associated works.
Renewable Energy Support Scheme (RESS)	Set up by Department of the Environment, Climate and Communications (DECC), the RESS aims to promote the generation of electricity from renewable sources by providing support to renewable energy projects in Ireland.
River Basin Management Plan	A national plan that sets out the actions (Programme of Measures and Areas for Action) that Ireland will take to improve water quality and achieve 'good' ecological status.
Site Boundary	A boundary surrounding proposed infrastructure which is subject to assessment within the EIAR and NIS and shown on associated figures. Not to be confused with the Red Line Boundary/Planning Boundary is the subject of the application for Development Consent for the Proposed Development.
Special Area of Conservation (SAC)	Areas defined in the European Union's Habitats Directive (92/43/EEC) for protection of one or more special habitats and/or species terrestrial or marine.

Key Terms	Definition
Special Protection Area (SPA)	Sites classified in accordance with Article 4 of the EC Birds Directive (2009/147/EC). They are classified for rare and vulnerable birds (as listed on Annex 1 of the Directive), and for regularly occurring migratory species.
Species	A group of interbreeding organisms that seldom or never interbreed with individuals in other such groups, under natural conditions; most species are made up of subspecies or populations.
Study Area	The physical area defined for each EIAR topic includes the potential spatial and temporal considerations of the effects on relevant receptors. The Study Area for each EIAR topic is intended to cover the area within which an effect can be reasonably expected relative to that topic.
The Proposed Development	Refers to all elements of the project to be assessed in the EIAR, the details of which are set out within Chapter 2: Development Description. Namely: • A 110 kV Underground Cable (UGC) Grid Connection Route from the permitted onsite substation at Lackendarragh to the existing Barrymore 110 kV substation located near Rathcormac, Co. Cork. • A 33kV Underground Cable (UGC) Collector Network Route between the western and eastern arrays of the permitted Coom Green Energy Park (CGEP) development. • A 110kV onsite substation at Lackendarragh, in line with the latest Eirgrid functional specifications.
The Consented Energy Park	The consented Coom Green Energy Park development (ACP Ref: 308885-20) consisting of a 22-turbine wind farm, 110 kV substation, 20 no. battery energy storage containers and all associated ancillary works.
The Site	The site associated with the Proposed Development as defined above.

Key Terms	Definition
Turbine Delivery Route (TDR)	The turbine delivery route (TDR) from Junction 4 on the M8 Motorway to the Proposed Coom Green Energy Park site.
TDR Node(s)	Temporary accommodation works along the TDR to facilitate turbine component deliveries to the Proposed Coom Green Energy Park site.
Waterbody	A discrete and significant element of surface water such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water, designated for the purposes of implementing the Water Framework Directive (WFD).
Wind Turbine Generator (WTG)	Wind Turbine Generators (WTG) or “WTGs” are unit(s) generating electricity from wind. These electricity generating machines typically comprise a tower, rotor with three blades connected at the hub, nacelle and ancillary electrical and other equipment.
Zone of Influence (ZOI)	The area of the receiving environment which may experience both positive and negative effects as a result of a project.
Zone of Theoretical Visibility (ZTV)	A map, digitally produced, showing areas of land and or sea within which different elements of a project is theoretically visible.
110 kV Underground Cable (UGC) Grid Connection Route	The 110 kV Underground Cable (UGC) Grid Connection Route from the permitted onsite substation at Lackendarragh to the existing Barrymore 110 kV substation located near Rathcormac, Co. Cork.
33kV Underground Cable (UGC) Collector Network Route	The 33kV Underground Cable (UGC) Collector Network Route between the western and eastern arrays of the permitted Coom Green Energy Park (CGEP) development.

Table 2: Glossary of Abbreviations

Abbreviation	Term in Full
AA	Appropriate Assessment
ACP	An Coimisiún Pleanála
AIS	Air Insulated Switchgear
BEMP	Biodiversity Management and Enhancement Plan
CA	Competent Authority
CAA	Civil Aviation Authority
CAP	Climate Action Plan
CAS	Controlled Airspace
CCTV	Closed Circuit Television
CDP	County Development Plan
CEMP	Construction Environmental Management Plan
CIA	Cumulative Impact Assessment
CIEEM	Chartered Institute of Ecology and Environmental Management
CNR	Collector Network Route
cSAC	candidate Special Areas of Conservation
DAFM	Department of Agriculture, Food and the Marine
dB	decibel
DECC	Department of the Environment, Climate and Communications, formerly Department of Communications, Climate Action and Environment (DCCAE)
DoD	Department of Defence
DoHLGH	Department of Housing, Local Government and Heritage, formerly Department of Housing, Planning, and Local Government (DHPLG).
DoT	Department of Transport
EC	European Commission
ECC	Electrical Cable Corridor
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EIS	Environmental Impact Statement
EMF	Electromagnetic Field
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
ESBN	Electricity Supply Board Networks
EU	European Union
EU DCF	EU Data Collection Framework
EUNIS	European Nature Information System
FT	Fehily Timoney and Company
FPM	Freshwater pearl mussel

GC	Grid Connection
GCR	Grid Connection Route
GIS	Geographic Information System
GIS	Gas Insulated Switchgear
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, Third Edition
GPS	Global Positioning Systems
GSI	Geological Survey Ireland
GW	Gigawatt
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicles
HV	High Voltage
HVAC	Heating Ventilation Air Conditioning
IAA	Irish Aviation Authority
IAC	Irish Air Corps
ICAO	International Civil Aviation Organisation
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
IFI	Inland Fisheries Ireland
INNS	Invasive and Non-Native Species
IROPI	Imperative Reasons of Overriding Public Interest
IWeBs	Irish Wetland Bird Survey
IWT	Irish Wildlife Trust
JNCC	Joint Nature Conservation Committee
KCC	Kilkenny County Council
km	Kilometre
kV	KiloVolts
LSE	Likely Significant Effects
LVIA	Landscape and Visual Impact Assessment
MEC	Maximum Export Capacity
MW	Megawatts
NATS	National Air Traffic Service
NBDC	National Biodiversity Data Centre
NDP	Project Ireland 2040: National Development Plan 2018 – 2027
NECP	Ireland's National Energy and Climate Plan
NGO	Non-government Organisation
NHA	Natural Heritage Areas
NIAH	National Inventory of Architectural Heritage
NIFM	National Indicative Flood Mapping

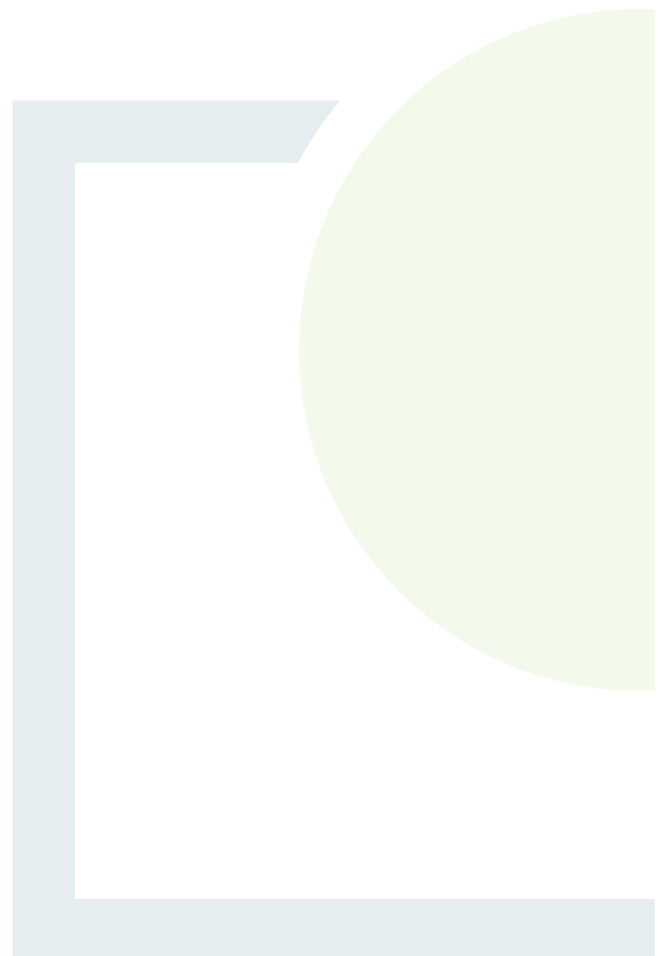
NIS	Natura Impact Statement
NMI	National Museum of Ireland
NMS	National Monuments Service
NPF	National Planning Framework
NPWS	National Parks and Wildlife Services
NREAP	National Renewable Energy Action Plan
OD	Ordinance Datum
O&M	Operation and Maintenance
OPW	Office of Public Works
P&D	Planning and Development Act 2000
PoC	Point of Connection
pNHA	proposed Natural Heritage Areas
SAC	Special Area of Conservation
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SPM	Suspended Particulate Matter
STATCOMS	Static Synchronous Compensators
TCC	Tipperary County Council
TDR	Turbine Delivery Route
TII	Transport Infrastructure Ireland
UGC	Underground Cable
VP	Vantage Point
WFD	Water Framework Directive
WTG	Wind Turbine Generator
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility



DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

APPENDIX 1.3

List of Developments for
Cumulative Assessment



Development Name/Type	Coordinates (ITM)	Year	Planning Reference Number	Decision	Status	Description	Address	Distance from CGEP
Coom Green Energy Park	X 563696 Y 590821	2023	PA04.308885	Grant	Unbuilt	10 year permission for the construction of up to 22 no. wind turbines and all related site works and ancillary development.	Glashaboy North, Coom (Hudson), Tooreen South, Killeagh, Coom (Fitzgerald), Knuttery, Mullenaboree, Knockacullata, Knoppoge, Carrig, Glannasack, Knockdoorty, Lackendarragh North, Glashaboy South, Toorgarrif, Castleblagh, County Cork.	0 km
Bottlehill Landfill	X 563730 Y 590266	2004	EL2016	Grant	Constructed, Not in use	Landfill facility at Bottlehill, Co. Cork, located in the Townlands of Toreen South, Coom (Hudson), Coom (Fitzgerald) and Glashaboy North.	Bottlehill County Cork	0 km
Castlepook Wind Farm	X 561881 Y 615914	2011	114947 PL04.240434	Grant	Constructed	The development consists of a Wind Energy Project comprising 14 wind turbines, access tracks, a fenced Electrical Transformer Station comprising a single-storey Control Building and Substation, an effluent treatment system, two anemometer masts, borrow pits and all associated site works, above and below ground. Each wind turbine has an overall tip height of 135 metres.	Castlepook County Cork	c.21.8km
Knocknatallig Wind Farm	X 560241 Y 616962	2013	135885	Grant	Constructed	Wind farm consisting of 6no. wind turbines of 135m tip height, ancillary equipment for the generation of electricity, upgrading of access tracks and construction of new access tracks, a fenced electrical compound comprising a single storey control building and substation, transformers, towers, and all associated site works.	Streamhill East and Streamhill West Doneraile County Cork	c.24km
Boggeragh Wind Farm	X 537671 Y 587773	2011	108067 PL04.239775	Grant	Constructed	38 no. turbine wind farm with a tip height of 136.5m. Development includes substation, met. mast and all ancillary works.	Ballynagree East Carrigagulla County Cork	c.23km
Esk Wind Farm	X 538865 Y 586955	2014	1105276 PL04.240281 145608 PL 04.245196	Grant	Unbuilt	12 no. turbine wind farm with a tip height of 136.5m. Development includes new access roads and access junctions.	Derrygowna Knockavaddra Monanveel County Cork	c. 21km
Single Wind Turbine	X 570509 Y 592853	2011	116168 PL 04.241037	Grant	Unbuilt	Construction of one wind turbine generator (with a maximum hub height of up to 76 metres, a maximum rotor diameter of up to 56 metres, and a maximum blade tip height of up to 100 metres) associated crane hardstanding area, electrical substation, access tracks and ancillary facilities including underground cabling.	Moneygorm, Glenville County Cork	c. 1.4km
Dunkettle Interchange	X 573313 Y 572547	2013	HA0039	Grant	Constructed	Dunkettle Interchange Improvement Motorway Scheme. Construction is expected to start 2020.	Dunkettle County Cork	c. 19km
Existing Forestry Activity					Ongoing	Forestry activity in the proximity to the CGEP site.		0km

Proposed Solar Farm in Esk South and Glannaharee West		2024	236017	Application Finalised	Proposed	16 Ha Solar Farm with 2 no. single storey control cabins with associated electrical transformer unit and hardstand areas, 1 no. ring main unit, underground cabling within the solar array site to connect solar array field parcels, 33kV underground grid connection cabling to the existing Bweeng 38kV substation, security fencing, CCTV, access tracks, upgrades to existing agricultural field entrance on the L5258, landscaping and all associated ancillary apparatus and development works.	Esk South Glannaharee West Co.Cork	c. 19.5km
Proposed Solar Farm in Clykeel North, Rathcormac		2021	205898 ACP322301-25	Grant	Unbuilt	A solar farm comprising of up to 27,690 of photovoltaic panels on ground mounted frames within a site area of approximately 15.18 hectares, 2 no. single storey inverter/transformer stations, 1 no. single storey delivery station, security fencing, CCTV, and all associated ancillary development works.	Clykeel North, Rathcormac, Fermoy, Co. Cork	c. 4.5km
Lysaghtstown Solar Farm		2021	206891	Application Finalised	Proposed	A solar farm consisting of circa 14,600 m2 of solar panels on ground mounted frames, 2 no. single storey electrical inverter/transformer stations, battery storage container, battery control unit, security fencing, satellite pole, CCTV, access tracks, upgrade to existing agricultural field entrance, temporary construction compound, landscaping and all associated ancillary development works.	Lysaghtstown, Midleton, Co. Cork	c. 18.8km
Ballynaclashy Solar Farm		2021	214050	Application Finalised	Proposed	A solar farm consisting of up to 220,100 m2 of solar panels on ground mounted frames, 13 no. single storey electrical inverter/transformer stations and associated spare equipment container, battery storage container, customer switchgear container, security fencing, satellite communications pole, CCTV, access tracks, upgrades to two existing agricultural field entrances, temporary construction compounds, landscaping and all associated ancillary development works.	Ballynaclashy and Ballycurrany East, Midleton, Co. Cork	c. 17.8km
Proposed Solar Farm in Dromgarraiff, Whitechurch		2022	224056	Grant	Constructed	5MW solar farm comprising approximately 22,200 photovoltaic panels on ground mounted frames within a site area of 10.24ha, 2 no. single storey inverter/transformer stations, 1 no. single storey delivery station, security fencing CCTV and all associated ancillary development works.	Dromgarraiff, Whitechurch, Co.Cork	c. 11.6km
Proposed Solar Farm in Killavarrig, Rahanisky & Ballynahina, Whitechurch		2023	234245	Grant	Unbuilt	A solar farm consisting of approximately 71,742 photovoltaic panels on ground mounted frames within a site area of 64.55ha, 9 no. single storey inverter/transformer stations, 1 no. single storey spare parts storage container, 1 no. 38kV substation compound with single storey substation building, 1 no. clear span bridge, upgrading of existing agricultural entrances, internal access tracks, security fencing, CCTV, landscaping and all associated development site works.	Killavarrig, Rahanisky & Ballynahina, Whitechurch, Co. Cork	c. 11.3km
Rahanisky Solar Farm		2023	235486	Grant	Unbuilt	A Solar Farm and underground grid connection within an overall site area of 61.08 hectares. The solar farm consists of 330,200 square meters of solar photovoltaic panels on ground mounted steel frames; on-site electrical substation; electrical skids (containing inverters, transformers and switchgear); underground power and communication cables and ducts; boundary security fencing; new internal access tracks and associated drainage infrastructure; new site entrance to the L6965 local road; 10 no. CCTV/lighting posts and all associated site services and works.	Rahanisky, Killeendaniel, Monard, Co. Cork	c. 12.1km

Proposed Solar Farm in Castlelyons, Fermoy		2025	245211	Grant	Unbuilt	A solar farm consisting of solar photovoltaic panels on ground mounted frames, 4 single storey transformer stations, 4 single storey spare parts storage containers, 1 single storey MV electrical kiosk, a 38kV substation compound with 1 single storey substation building, underground electrical ducting, cabling and joint bays within the development site and all associated development site works.	Corrin, Kill Saint Anne North, Clykeel North, Ballinvarrig East, Ballinvarrig West, Deerpark, Knockaduff, Kill Saint Anne South, Ballyarra, Mohera, Spuree, Castlelyons, Fermoy, Co. Cork	c. 0.8km
Proposed Solar Farm in the townlands of Ballysallagh, Dundullerick East, Dundullerick West and Rathcobane		2025	245630 ACP 323747	New Application	Proposed	A solar farm with a total area of circa 179 hectares. The solar farm will consist of solar panels on ground mounted frames, 25no. single storey electrical inverter/transformer stations, 3 no. single storey spare parts containers, 3 no. Ring Main Units, 7 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 7 no. stream/drain deck crossings, temporary construction compounds, landscaping and all associated ancillary development and drainage works.	Ballysallagh, Dundullerick East, Dundullerick West, Rathcobane, Co.Cork	c. 11.3km
Proposed Solar Farm in the townlands of Ballycurrany East and Barrymore		2025	255524	New Application	Proposed	A solar farm consisting of approximately 37,268.29m2 of solar panels mounted on ground-mounted frames, 24 no. electrical inverters, 1no. electrical transformer unit, security fencing, landscaping, underground cabling crossing through the L7694 public road extending into private land and all associated ancillary development works.	Ballycurrany East, Barrymore, Co.Cork	c. 15.2km
Proposed Solar Farm in Curraleigh, Inniscarra		2021	214505	Application Finalised	Proposed	A 5 MW solar farm comprising approximately 22,200 photovoltaic panels on ground mounted frames within a site area of 10.5 hectares, 2 no. single storey inverter/transformer stations, 1 no. single storey delivery station, security fencing, CCTV, and all associated ancillary development works	Curraleigh, Inniscarra, Co. Cork	c. 16.4km
Midelton Battery Energy Storage System		2023	235246	Application Finalised	Proposed	An Energy Storage System, which will connect to the adjoining ESB Midleton 110kV Electricity Substation. The proposed development will have a projected life span of 30 years. The development will consist of the construction of 1) enclosed battery energy storage system within a site compound on a total of up to c.0.83 hectare site, to include: 1 no. single storey 110kV customer substation, control and switch rooms; up to 13 battery blocks on concrete support structures including heating, ventilation and air conditioning unit (HVAC units); transformer and inverter units; including access tracks and site entrance along existing roadway; associated electrical cabling and ducting; security gates, 2.6m palisade perimeter security fencing; CCTV system; landscaping works and all other associated ancillary infrastructure.	Carrigogna, Midleton, Co Cork	c. 18.5km
Sanmina Stationary Battery Energy Storage Facility		2023	226085	Application Finalised	Proposed	Planning permission for (i) construction of a Stationary Battery Energy Storage Facility which includes five 20ft containers and one medium voltage transformer and (ii) all associated site development works.	Sanmina Ireland Unlimited Company lands, Rathhealy Road, Rath Healy , Fermoy, Co. Cork	c. 5km

Ballinrea BESS and Grid Connection		2025	254299	Application Finalised	Proposed	A Battery Energy Storage System with associated infrastructure including a new internal access road approximately 0.8km in length , a 1.6km 33kV double circuit underground cable grid connection to be permitted Ballinrea Solar Farm 110kV substation (Planning ref ABP-317706), to be installed in an excavated trench including underground ducting; modular office and welfare buildings, three steel storage containers and all associated site development and reinstatement works	Ballinrea, Carrigaline, Co.Cork	c. 5km
Tullacondra Green Energy Project		2025	245503	Appealed	Proposed	A wind energy development including: • 9 wind turbines each with a blade tip height of 175 metres, rotor diameter of 150 metres, hub height of 100 metres and a rated output of 4.5 megawatts. • Turbine Foundations, crane pad hardstanding areas and associated drainage. • Upgrade of existing site tracks and construction of new site tracks and associated drainage and all other associated ancillary infrastructure.	Polnareagha, Ardskeagh, Tullacondra, Crougta Kilmaclenine, Ballyclogh, Knockaunavaddreen, Copestown, Ballybeg, Baltydaniel East, Twopothouse, Caurraghakerry, Co. Cork	c. 18.2km