

- Appraisal and monitoring of civils and rigging contractors
- Review of safe systems of work at height, climbing, emergency and rescue procedures
- Review of training and choice of fall arrest equipment
- Review of documentation and records
- Appraisal of risk management for retrofit of fall protection systems

WindSafety provides experience in planning, monitoring and auditing specialist work at height operations.

WindSafety was founded by Jack Hennessy to provide a specialist safety engineering and management service to the wind energy sector.

We have built a solid reputation with our Irish and German clients based on experience, technical and legislative knowledge, and attention to detail. All our wind farm projects have been construction without one serious accident.



Our founder and Managing Director, Jack Hennessy is a professional safety practitioner and a chartered safety and health practitioner. He set up Jack Hennessy & Co. in 1997 and founded WindSafety a number of years later to provide a specialist service to the wind energy sector and to focus on high value utility projects.

Admitted as a Corporate Member of the Institution of Occupational Safety & Health, 1998.
Admitted as a Member of the International Institute of Risk and Safety Management, 1999.
Admitted to the Register of Safety Practitioners, Institution of Occupational Safety & Health, 2005.
Installed as a Chartered Member of the Institution of Occupational Safety & Health, 2005.
Elected as a Professional Member of the American Society of Safety Engineers, 2006.
BS OHSAS 18001:2007 Lead Auditor.
Temporary Traffic Management Designer.
Competent tower climber, abseiler, and rescuer.



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Areas of expertise provided to the wind industry and utility sector include:

- Safety management of energy and renewable projects such as onshore windfarms (including concrete tower erection) and utility upgrades, remedials, extensions and new build.
- Design of traffic management systems for grid connections; Project Supervisor Design and Construction roles;
- Design safe systems of work for development of windfarm developments, including ducting, roadworks, preparation of site, hard stands, set-down areas and foundations;
- Preparation of method statements for construction of foundations;
- Review of turbine supplier and installer documentation, including work instructions and method statements, O&Ms and safety files;
- Development of safe working procedures for blade inspections and blade exchanges;
- Preparation of safety documentation for construction of 20 – 110kV substations;
- Development of protocols and procedures for the operation of 110kV substations post-construction;
- Work at height safety; and
- Compliance monitoring, on behalf of contractors, developers, and lender's engineers.

Areas of expertise provided to local authorities and the civil engineering and construction sector include:

- Undertake the statutory role of Project Supervisor Design Process and/or Construction Stage, or providing support for PSDP/PSCS.
- Lead audit team and/or undertake sole audits to international standards.
- Inspections, surveys and audits on client operations and systems.
- Implementing safety management systems for client organisations, such as OHSAS 18001 and SafeTCert.
- Developing and delivering training programmes for local authority engineers.
- Develop and deliver safety seminars for management in the private sector and local authorities.
- Provision of advises and technical skills to designers.
- Development of safety statements, safety and health plans at design and construction stage.
- Drafting method statements for demolition and building projects.
- Provision of advises re. derelict sites and unfinished estates.
- Civil and criminal liability – accident investigations.
- Assisting firms who have been subject to enforcement action by the Health and Safety Authority.
- Liaison with statutory bodies on behalf of clients.
- Internal audits on existing safety management systems.
- Development of traffic management systems for roadworks.

Current projects include:

ESB 400kV Project Moneypoint
ESB 110kV GIS Project Ardnacrusha
ESB National Minor Civils Works
Dunbeg Wind Farm Co Derry
Faughery Wind Farm Co Leitrim
LGLP Wind Farm, Co Galway
Kill Hill Wind Farm, Co Tipperary
Cloghboola Wind Farm, Co Kerry
Graiguenamanagh Urban Renewal, Co Kilkenny
Waterford City Flood Alleviation Scheme

Experience in Planning, Monitoring and Auditing Specialist Work at Height Operations

Sole reviewer of Irish Local Government Management Services Board, *Policy and Procedure for Work at Height*, a document produced for all local authorities in Ireland.

Lead auditor, BS OHSAS 18001, for an international certification / accreditation body, specialising in auditing telecommunications market leaders in Ireland.

Appraisal of approval and control of civils and rigging contractors; review of safe systems of work at height, climbing, emergency and rescue procedures; review of training and choice of fall arrest equipment. Review of documentation and records. Appraisal of risk management for retrofit of fall protection systems.

Wind Energy

Project Supervisor Design and Construction.

Design safe systems of work for development of windfarms, including ducting, roadworks, preparation of site, hard stands, set-down areas and foundations.

Preparation of method statements for construction of foundations.

Review of turbine supplier and installer documentation, including work instructions and method statements, O&Ms and safety files.

Development of safe working procedures for blade inspections and blade exchanges.

Preparation of safety documentation for construction of 20 – 110kV substations, and developing protocols and procedures for the operation of 110kV substations post-construction.

Health and Safety Authority – Wind Farm Safety

Developed, coordinated and delivered a wind farm safety awareness training day for H.S.A. inspectors, including site visit and nacelle inspection, consisting of three major elements: safety during construction of the windfarm; operation and maintenance safety; and sub-station safety.

Legal Work

Jack Hennessy has investigated accidents, prepared reports and opinions, and given expert witness on behalf of clients defending actions at Circuit and High Court in Ireland. Those cases have varied from road traffic accidents at roadworks, to personal injury cases arising out of incidents on construction sites.

He has also given expert witness at many arbitration hearings and CPO assessments.

Auditing

Jack Hennessy was retained for five years as a Technical Expert (BS OHSAS 18001), and Lead Auditor by a leading national certification and inspection body. Now retained as a Lead Auditor by an international certification and inspection body, he specialises in auditing telecommunications, utilities and project management companies.

Jack is expert in auditing safety management systems within complex organisations, in addition to defining and implementing 18001 systems which are easy to manage and give benefit to the organisation.

Ghost Estates and Incomplete Construction Projects

Jack has provided expert opinion to local authorities and receivers in relation to risk mitigation and remediation. Many of these sites fall outside the jurisdiction of the Health and Safety Authority as works are not ongoing, so it can be a contentious area.

Non-exhaustive list of projects to date:

UTILITIES, Power Generation

^L : *live works*

- Senior safety engineering consultant to Amey plc, ESB 220kV GIS Project, Knockanure, Co Kerry, Ireland. ^L (2013)
- Senior safety engineering consultant to ENERCON GmbH:
E101 97m concrete/steel tower WEC project for Glaxo Smith Kline (GSK), Cork, Ireland;
Dunbeg Wind Farm, Limavady, Co Derry, Ireland;
Ballycurreen Wind Farm, Ring, Co Waterford, Ireland;
Lettergunnet/Letterpeak Wind Farm, Co Galway, Ireland;
Kill Hill Wind Farm, Co Tipperary, Ireland.
- Compliance monitoring and development of method statements for the control rooms refurbishment of ESB Turlough Hill, pumped storage hydro-electric station. ^L
- Development of Project Supervisor Design Process Philosophy and Methodology, and Statement of Competency (as PSDP) for Enercon GmbH, Germany.
- Post-construction inspection and review of procedures at Moanmore Windfarm (7 nr. 2MW E70 turbines), Co Clare, Ireland for Enercon GmbH.
- Post-construction inspection and review of procedures at Carrigannon Windfarm (10 nr. 2.3MW E70 turbines), Co Cork, Ireland for Enercon GmbH.
- Preparation of safety statement (Sicherheit Grundsatzerklärung) for Irish Wind Farm Operations for Gustav-A. Neeb & Co. KG, Wuppertal, Germany (Heavy Lift Operations).
- Preparation of Safety Method Statements and Risk Assessments (Arbeitsanweisung und Gefährdungsanalyse) for rigging and de-rigging of Liebherr LTM 11200-9.1 and Liebherr LTM 1500-8.1 Mobile Telescopic Cranes on behalf of Gustav-A. Neeb & Co. KG, Wuppertal, Germany for windfarm operations in Ireland and the UK.
- Project Supervisor Construction Stage, Castledockrell-Bolamore 41.4 MW Windfarm (18 nr. E70 83m turbines) and associated works including the construction of 110kV sub-station at Castledockrell, Co Wexford and over 13km of public roadworks and 9km of on-site roadworks and trenching.
- Project Supervisor Construction Stage Coordination, Cloghboola 36.8 MW Windfarm (16 nr. E82 turbines) and associated works, including 8km of on-site roadworks and the construction of a 110kV sub-station.
- Project Supervisor Construction Stage, Ballycadden 24.2 MW Windfarm (9 nr. E82 turbines) and associated works, including 10km of public roadworks.
- Project Supervisor Construction Stage, Ballywater 42MW Windfarm 110kV Cable Rerouting Project
- Project Supervisor Construction Stage, Ballywater 42 MW Windfarm Blade Exchange Project
- Project Supervisor Design Process, Ballyduff Windfarm, Ferns, Co Wexford.
- Project Supervisor Design Process and Project Supervisor Construction Stage, Hub Exchange project, Bolamore Windfarm, Co Wexford.
- Project Supervisor Construction Stage Coordinator, Phase 1, roadworks – cable laying and jointing, Gibbett Hill windfarm, Bunclody, Co Wexford.
- Project Supervisor Construction Stage Coordinator, roadworks – cable laying and jointing; construction of on site roads, hard stands, and electrical sub-station, Ballyduff Windfarm, Ferns, Co Wexford.
- Development of safe operating procedures and manuals for Castledockrell, Ballycadden and Ballynancoran Wind Farms.

UTILITIES, Power Distribution

- ESB 400kV Project, Moneypoint, Co Clare.
- ESB National Minor Civils Works Project (May 2014 onwards) ^L
- ESB 220kV GIS Project, Knockanure, Co Kerry. ^L
- ESB 110kV GIS Project, Ardnacrusha, Co Clare. ^L
- ESB 220kV GIS Project, Carrickmines, Co Dublin. ^L
- ESB 110kV GIS Project, Screebe, Co Galway. ^L
- ESB 110kV GIS Project, Fortunestown, Co Dublin.
- ESB minor remedials project, Stephenstown, Co Dublin. ^L
- ESB 110kV Extensions and upgrades to Cookstown and Citywest Stations, Co Dublin. ^L
- ESB 38kV Station upgrade, Killinick, Co Wexford. ^L
- ESB 38kV Station upgrade, Tullow, Co Carlow. ^L
- ESB 220kV Station upgrade, Raffeen, Co Cork.
- MV Development 110kV ESB Station, Arklow, Co Wicklow. ^L
- 2 nr 63MVA Transformers & 38kV Busbar Upgrade at Carlow 110kV Station. ^L
- Single storey extension to Clonmel ESB Depot.
- 220kV Upgrade and Extensions to GIS, Inchicore, Dublin. ^L
- 110kV Upgrade Works, Cookstown, Dublin. ^L
- 110kV Upgrade Works, Carrickmines. ^L
- ESB Marina, Cork, disposal of contaminated materials.
- Construction of new offices and depot, ESB Networks, Old Dublin Road, Enniscorthy.

(^L : *live works*)

LOCAL AUTHORITIES

Project Supervisor Construction Stage

- New County Hall Project, Wexford
- Gorey Civic Offices, Gorey, Co Wexford

Project Supervisor Design Process

- New County Hall Project, Wexford
- Riverchapel Community Complex
- Refurbishment of public housing for the Housing Department, Wexford County Council.
- Construction of new public housing schemes in Co Wexford, 2000-2004.

Implementation of BS OHSAS 18001

- Wexford County Fire and Rescue Service

Legal issues / liaison with officials from the regulatory authorities:

- Consultant to Wexford County Council road engineering team liaising with the H.S.A. in relation to the Improvement Notices which were issued to local authorities by the H.S.A. and which culminated in the judgement of Hedigan, J: *Cork County Council –v– Health and Safety Authority and another*. [2008] IEHC 304.

Wexford County Council, Housing Department:

- Conduct an audit of safety procedures, with particular reference to how Wexford County Council discharges its duties as Client, Designer and Project Supervisor Design Stage under the Safety, Health and Welfare at Work Act and the Construction Regulations.
- Drafting preliminary safety plans for housing projects at Ballindaggin, Bannow, Castlebridge, Campile, and Gorey.
- Site safety inspections.
- Audit of Project Supervisors Construction Stage on Wexford County Council sites.
- Advises re. non-compliant Project Supervisor Construction Stage and liaison with H.S.A.

Wexford County Council, Roads Department:

- Provide workshops, seminars and training for engineering staff; and opinions and advises to senior management in relation to roadworks.
- Drafting preliminary safety plan templates for use by council engineers.
- Prepare & deliver briefing paper on Construction Regulations 2006, new Safety Act 2005, duties of Project Supervisors Design & Construction to WCC Engineers.
- Audit of Council's safety management system for direct labour works.
- Realignment of N30 at Ballymackesy, Co Wexford.
- Realignment of R741 at Smith's Cross, Ballycanew, Co Wexford.

Wexford County Council, Environment Department:

- Drafting preliminary safety plan template for use by council engineers.

Wexford Borough Council:

- Advises to and liaison with Borough Engineer re. demolition of unsafe structures.
- Preparation of safety management system for grave digging.

Wexford County Council:

- Developing emergency plans and ancillary safety statements for new County Hall, Wexford.

Carlow County Council, Water Services and Environmental Section:

- Drafting preliminary safety plan templates for use by council engineers.
- Drafting SOP for emergency procedures on site.
- Drafting method statement for cutting of ACM watermains.
- Devise a safety management system for use by area engineers in undertaking the duties of Project Supervisors Design Stage.
- Draft safety inspection checksheets for use by area engineers inspecting contractors.
- Draft developed Safety & Health Plan for discussion purposes with Senior Engineer.
- Prepare & deliver briefing paper on Construction Regulations, new Safety Act 2005, duties of Project Supervisors Design & Construction to CCC Engineers.
- Preparation of preliminary safety plans for major infrastructure projects at Tullow and Carlow.

Carlow County Council, Roads Department:

- Preparation of preliminary safety plans for pavement improvement works on NRA roads and 2 nr. bridge refurbishment works on the N80.

Limerick City Council:

- We acted as Project Supervisor Design Process on the Limerick Regeneration Demolition Framework. The scope of work included asbestos surveys and air monitoring, preparation of preliminary safety plans, design risk assessments and safety files; in addition to acting for Limerick City Council in undertaking compliance monitoring on the demolition works. We were in association with *Phoenix Environmental Safety Ltd.* for this project.

ACCIDENT INVESTIGATION

Sample of accidents investigated:

Carpenter lacerated thumb when cutting too many pieces of timber, above the fence, on a chop saw.

Fatality at roadworks in Co Dublin.

Piling rig striking 10kV underground cables when sheet piling.

Continuous flight auger piling rig striking 10kV underground cable.

Road traffic accidents at roadworks.

Carpenter falling from scaffold which he had adjusted himself.

Teleporter brakes failing causing teleporter to run out of control on steep slope and subsequently overturn.

Piling rig operator crushing thumb in a hammer gate.

Members of the public tripping and falling over streetworks barriers.

Member of the public being run over by articulated truck adjacent to roadworks.

Collapse of precast concrete stairs during installation.

Unintentional release of tower crane hoisting rope onto busy street during replacement.

Tower crane failing to danger and load traveling outside site when controls failed.

Collapse of 90T mobile telescopic crane during piling operation.

Overturning of 130T mobile telescopic crane due to driver error / ground conditions.

Collapse of 50T mobile telescopic crane during removal of formwork (UK).

DESIGN FOR CONSTRUCTION SAFETY

Designing for Construction Safety is a process in which engineers and architects explicitly consider the safety of construction and maintenance workers during the design process. As Project Supervisor Design Process we engage with designers early in the process to ensure projects can be constructed safely, and that post-construction safety for routine maintenance and cleaning is achieved.

Additionally, we advise designers in the preparation of design risk assessments, in addition to preparing preliminary safety & health plans, drafting opinions on construction accidents, and the provision of advises to project supervisors for design process.

GENERAL BUILDING AND CIVILS CONTRACTS

We have been involved with numerous prestigious projects under the following headings:

- *Golf*
- *Institutional / Public Works*
- *Hotels*
- *Industrial*
- *Commercial / Retail*
- *Residential*
- *Demolition*

If you wish to receive more information on our involvement and expertise in construction design safety or general building and civils contracts, please email us: info@windsafety.ie or call us at +353 53 9155167.