

## **Appendix 1.2**

### **List of Competent Experts for EIAR**

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Role and EIAR Input	Name	Company	No. years of experience	Professional Qualifications and Relevant Expertise	Professional Affiliations
<b>EIA Manager</b> <b>Ch 1 Introduction</b> <b>Ch 18 Cumulative Effects, Other Effects and Interactions</b> <b>Ch 19 Summary of Mitigation Measures and Residual Effects</b>	Fiona Patterson	Arup	18 years	Bachelor of Science (BSc) (Hons) Earth Science, University College Cork, (1997); Master of Science (MSc) Environmental Engineering, Queens University Belfast (1998); Diploma Field Ecology, University College Cork (2016); Advanced Diploma in Planning and Environmental Law, King's Inns (2018).  Fiona is a senior environmental consultant with experience in delivering environmental advisory services on projects in a variety of sectors, including highways, rail, energy, water, science and industry, wastewater, education, manufacturing and commercial/residential. Relevant projects include Indaver Ringaskiddy Resource Recovery Centre EIAR.	Affiliate member of Institute of Environmental Management and Assessment (IEMA)
<b>EIA Coordinator</b>	Alexandra Fleming	Arup	5 years	BSc Environmental Science, National University of Ireland, Galway (2010) MSc Environmental Consulting, Newcastle University (2014)  Alexandra is an Environmental Consultant with experience working on EIARs in a number of areas including water, industrial/manufacturing and residential/commercial developments. Relevant projects include Indaver Resource Recovery Centre EIS/EIAR (2016 and 2019) and Eli Lilly IE2B EIAR (2019).	
<b>Ch 2 Policy Planning and Need for the Scheme</b>	Jackie Keaney	Indaver	19 years	BSc Environmental Science, University College Dublin, 1996; MSc Environmental Studies, Trinity College Dublin, 1998.  Jackie is the Commercial Director of Indaver and has worked on most of Indaver's EIA projects starting with the EIA for Duleek in 2000. Jackie has been to the forefront in advocating for policy changes at EU and at national level in the field of waste management and sustainability for almost 20 years. Jackie has been an employee of Indaver since March 1998.	
	Julie Bowe	Indaver	11 years	LLB Law & European Studies, UL, 1998 LLM Masters in Commercial Law, UCD, 2003 New York State Bar, 2006 Barrister-at-law Degree, Kings Inns 2008  Julie is Legal Counsel with Indaver and has assisted with the preparation of legal aspects of the present EIAR Report and more generally with Indaver's business	

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				<p>development projects in Ireland and other jurisdictions.</p> <p>Julie has previously worked for Eunomia Research &amp; Consulting and was responsible for conducting Compliance Assessments on behalf of DG Environment of the European Commission including legal analysis of the EU environmental acquis of the Former Republic of Macedonia regarding the country's proposed accession to the EU. Julie has been an employee of Indaver since March 2017.</p>	
<b>Ch 3 Alternatives</b>	Julie Bowe	Indaver	11 years	<p>LLB Law &amp; European Studies, UL, 1998</p> <p>LLM Masters in Commercial Law, UCD, 2003 New York State Bar, 2006</p> <p>Barrister-at-law Degree, Kings Inns 2008</p> <p>Julie is Legal Counsel with Indaver and has assisted with the preparation of legal aspects of the present EIAR Report and more generally with Indaver's business development projects in Ireland and other jurisdictions.</p> <p>Julie has previously worked for Eunomia Research &amp; Consulting and was responsible for conducting Compliance Assessments on behalf of DG Environment of the European Commission including legal analysis of the EU environmental acquis of the Former Republic of Macedonia regarding the country's proposed accession to the EU. Julie has been an employee of Indaver since March 2017.</p>	
	Conor Jones	Indaver	18 years	<p>BE (Chem), UCD, 1996</p> <p>Conor is the Regional Engineering Director of Indaver and has worked on most of Indaver's EIA projects from both a planning and industrial licensing perspective starting with the initial EIA for the Ringaskiddy project in 2001. Conor has been an employee of Indaver since January 1999 and was Plant Manager at Indaver's Duleek Waste to Energy plant from 2014 to 2016</p>	
<b>Ch 4 Description of the Proposed Development</b>  <b>Ch 5 Construction Activities</b>	Conor Jones	Indaver	18 years	<p>BE (Chem), UCD, 1996</p> <p>Conor is the Regional Engineering Director of Indaver and has worked on most of Indaver's EIA projects from both a planning and industrial licensing perspective starting with the initial EIA for the Ringaskiddy project in 2001. Conor has been an employee of Indaver since January 1999 and was Plant Manager at Indaver's Duleek Waste to Energy plant from 2014 to 2016</p>	

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	Niall Kearney	McElroy Associates	33 years	B.Eng, MBA, C.Eng, MIEI EurIng Chartered Engineer specialising in the design of Industrial Buildings and structures.	Engineers Ireland
	Minka McInerney	McElroy Associates	23 years	B.Arch, MRIAI, ARB, MSc AEES Chartered Architect specialising in the design of Industrial Buildings and Sustainability aspects of Buildings	RIAI
	Joe McDonnell	McElroy Associates	18 years	BEng Tech BEng (Hons) MIEI Project/Design Engineer specialising in the design of Industrial Buildings and structures.	Engineers Ireland
<b>Ch 6 Population and Human Health</b>	Martin Hogan	Corporate Health Ireland	32 years	MB BCh BAO UCC 1987, MRCGP 1992, FRCPI 2008, FFOM (RCPI) 2000, AFOM (RCPI Lond)  Martin is a Consultant Occupational & Environmental Physician for 25 years. He is Managing Director of CHI (Cork) and has been involved in Environmental Impact Assessments for 23 years.	Faculty of Occupational Medicine Royal College of Physicians of Ireland
<b>Ch 7 Traffic and Transportation</b>	Clifford Killeen	Arup	15 years	BEng, Civil (Hons), University College Cork, 2004 Chartered Engineer (accredited 2014)  Clifford is a Senior Engineer within the Arup Transportation & Urban Design Team, with 15 years' experience in transportation including planning, design and analysis. Relevant project experience includes preparation of a number of EIAR traffic chapters for a wide range of development types, and the preparation of the Indaver EIAR Traffic Assessment for the Resource Recovery Centre 2016 application and 2019 update of same for submission for a Waste Management License.	Chartered Engineer, Member of Engineers Ireland
<b>Ch 8 Air Quality Ch 9 Climate</b>	Edward Porter	AWN	22 years	BSc (Hons) Chemistry, 1 <sup>st</sup> Class, University of Sussex PhD Environmental Chemistry (Air Quality), University College Dublin,  Edward is Director of Air Quality & Climate team with the AWN Consulting in Dublin. Edward has worked on a numerous air quality projects in the areas of industrial licensing and development. Edward is lead author of the EPA publications "Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)" and "Odour Emissions Guidance Note (AG9)", and has peer reviewed the NRA Air	Full Member of the Institute of Environmental Sciences (MIEnvSc), a Full Member of the Institute of Air Quality Managements (MIAQM) and is a

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	Ciara Nolan	AWN	3 years	<p>Quality Guidelines (NRA, 2006). He specialises in the fields of ambient air quality, odour assessment, climate impacts and air dispersion modelling.</p> <p>Bachelor of Science (BSc) (Hons) Energy Systems Engineering, University College Dublin (2014)</p> <p>Master of Science (MSc) Applied Environmental Science, University College Dublin (2016)</p> <p>Ciara is an Environmental Consultant specialising in the field of Air Quality. She specialises in the areas of air monitoring, air dispersion modelling and EIA. She has worked on a number of EIARs for various developments including residential, commercial, industrial, pharmaceutical and data centres.</p>	<p>Chartered Chemist (C Chem MRSC)</p> <p>Associate Member Institute of Environmental Sciences (AMIEEnvSc)</p> <p>Associate Member Institute of Air Quality Management (AMIAQM)</p>
<b>Ch 10 Noise and Vibration</b>	Jennifer Harmon	AWN	17 years	<p>BSc (Hons) Environmental Science, Ulster University, 1999</p> <p>Diploma Acoustics and Noise Control, Institute of Acoustics, 2002</p> <p>Jennifer is a senior acoustic consultant with AWN Consulting. She has extensive experience in the preparation of noise and vibration impact assessments for a wide range of infrastructural, industrial, commercial and residential developments across Ireland and has provided expert witness at over 20 planning hearings relating to noise impact assessment.</p>	MIOA
<b>Ch 11 Biodiversity</b>	Carl Dixon	DixonBrosnan	20+ years	<p>Bachelor of Science (BSc) in Applied Ecology from University College Cork UCC (1993)</p> <p>Masters of Science (MSc) in Ecological Monitoring from University College Cork UCC(2009)</p> <p>Carl Dixon MSc (Ecology) is a senior ecologist with over 20 years' experience in ecological and water quality assessments with particular expertise in freshwater ecology. He also has experience in mammal surveys, invasive species surveys and ecological supervision of large-scale projects. Projects in recent years include the Indaver Waste to Energy Facility Ringaskiddy, Shannon LNG Project, supervision of the Fermoy Flood Relief Scheme, Skibbereen Flood Relief Scheme, Upgrade of Mallow Waste Water Treatment Plant (WWTP) Scheme, Douglas Flood Relief Scheme and Great Island Gas Pipeline.</p>	
	Sorcha Sheehy	DixonBrosnan	12 years	<p>Bachelor of Science (BSc) in Applied Ecology from University College Cork UCC (2001)</p> <p>PhD in Bird Aircraft Interactions: Pathology, Behavioural Ecology and Aerodynamics from University College Cork UCC (2008)</p>	

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				Sorcha Sheehy is an experienced ecological consultant with over ten years' experience. She has worked on Screening/NIS's for a range of small and large-scale projects with particular expertise in assessing impacts on birds. Recent projects include bird risk assessments for Dublin and Cork Airports, Waste to Energy Facility Ringaskiddy and Water Storage Schemes for Irish Water.	
<b>Ch 12 Archaeology, Architectural and Cultural Heritage</b>	Avril Purcell	Lane Purcell Archaeology (LPA)	Over 20 years	<p>BA Archaeology and History, NUI Cork, 1992.</p> <p>MA Archaeology, NUI Cork, 1994.</p> <p>Licence eligible by National Monuments Service since 1997</p> <p>Avril Purcell is the director of LPA and is a licensed archaeologist with over twenty years of experience in research, consultancy, surveying and excavation. Avril has been involved in a large number of diverse EIAR projects throughout the country. In some cases, her involvement has been from the initial constraint study stage through pre-development investigations, resolution and construction.</p> <p>Avril has compiled the archaeological, architectural and cultural heritage assessments for numerous EIAR projects including pipelines, roads, waste-water treatment plants, recreational and industrial facilities, wind and alternative energy projects.</p>	Member of the Institute of Archaeologists of Ireland (MIAI)
	Musetta O'Leary	Lane Purcell Archaeology (LPA)	15 years	<p>BA Archaeology and Geography, NUI Cork, 1998</p> <p>MA Archaeology, NUI Cork, 2000</p> <p>Musetta has 15 years of experience in all aspects of archaeological consultancy. She has co-ordinated and written the Cultural Heritage section of a large number of diverse EIAR projects for road construction, industrial, residential and sporting developments, energy delivery and quarrying. Relevant experience includes Belvelly Port Facility, Marino Point Cultural Heritage Chapter EIAR (2019), Eli Lilly IE2b Expansion Cultural Heritage Chapter EIAR (2019).</p>	
<b>Ch 13 Landscape and Visual</b>	Dave Kirkwood	Mitchell + Associates	37 years	<p>BSc (Hons), Diploma Environmental Management, Chartered Member of the Landscape Institute (UK), Member of the Irish Landscape Institute.</p> <p>Dave is a qualified Landscape Architect and as such has been engaged in Landscape and Visual Impact Assessment for the past 30+ years for a broad range of project types and scales, in both rural and urban contexts within Ireland.</p> <p>Dave has been Managing Director of Mitchell + Associates since 2004.</p>	CMLI MILI (and Past-President of the Irish Landscape Institute)

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<b>Ch 13 Landscape and Visual (Photomontages)</b>	Bill Hastings	Arc	49 years	B.Arch UCD 1970 • 1st Honours Fellow of the Royal Institute of the Architects of Ireland RIAI accredited Grade 1 Conservation Architect Former Lecturer in Architecture, University College Dublin	Member of ICOMOS Ireland Member of the ICOMOS National Scientific Committee on Cultural Tourism
<b>Ch 14 Land and Soils Ch15 Water</b>	Gerry Baker	Arup	17 years	MSc, Sustainable Management of the Water Environment, University of Newcastle-upon-Tyne (2001) BA (Hons), Trinity College Dublin (2000) Gerry is a hydrogeologist with over 17 years' experience in Ireland and internationally in Europe and West Africa. His main areas of expertise are in groundwater supply development, groundwater modelling (conceptual, analytical and numerical), baseline characterisation of hydrogeological environments, dewatering design and implementation, karst hydrogeology, mine hydrogeology, hydrogeological risk assessment, environmental impact assessment, groundwater flooding, discharges to groundwater, water monitoring programme and implementation and oral hearing expert witness	PGeo, EurGeol Professional Member of the Institute of Geologists of Ireland (IGI) IAH Member of the International Association of Hydrogeologists (Irish Group)
<b>Ch15 Water</b>	Kevin Barry	Arup	15 years	BE, National University of Ireland, Cork MEngSc, National University of Ireland, Cork Kevin Barry is a Senior Chartered Engineer working in the Dublin office as a senior member of our water team. Kevin has over 15 years' experience in developing numerical models of river and coastal systems. Using these models he has investigated many engineering problems including fluvial and coastal flooding, dam break flooding, impact of hydraulic structures on water levels and velocities, water quality modelling and sediment transport.  Kevin has significant experience of flood risk management in Ireland and has completed EIAR chapters for various engineering projects.	Chartered member, Engineers Ireland
	Emer Kennedy	Arup	13 years	BSc (Hons) Civil Engineering, University College Dublin MSc (Hons) Civil & Environmental Engineering, Trinity College Dublin Chartered Engineer (CEng) – Engineers Ireland Certificate - Smart Choice Leadership Programme Emer is an Associate Engineer in Arup's water team. She has over 13 years' experience in the delivery of flooding and drainage infrastructure for civil	Chartered member, Engineers Ireland National Executive, Engineers Without Borders Ireland

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				engineering projects in Ireland, Australia and Sweden. Emer has been drainage design lead on several major infrastructure projects such as the M11 scheme in Wexford, the N56 in Donegal, Cherrywood Masterplan, and the Buttevant Town Scheme. Emer is also an experienced project manager in the delivery of flood risk management projects for private and public sector clients from preliminary design stage to detailed design and construction. Emer has provided technical guidance and review on a number of Flood Risk Assessment and EIAR chapters.	Corporate Fellow, Engineers Without Borders Australia Engineers Ireland Flooding Advisory Panel 2018
<b>Ch 16 Material Assets</b>	Conor Jones	Indaver	18 years	BE (Chem), UCD, 1996  Conor is the Regional Engineering Director of Indaver and has worked on most of Indaver's EIA projects from both a planning and industrial licensing perspective starting with the initial EIA for the Ringaskiddy project in 2001. Conor has been an employee of Indaver since January 1999 and was Plant Manager at Indaver's Duleek Waste to Energy plant from 2014 to 2016	
<b>Ch 17 Major Accidents and Disasters</b>	Thomas Leonard	Byrne Ó'Cléirigh	23 years	BE (Chem) UCD 1992 MEngSc UCD 1995 Chartered Engineer Thomas (Tom) Leonard is a Partner at Byrne Ó'Cléirigh with 23 years' experience of assisting industries in the area of risk assessment and environmental protection. He has a long track record of providing consultancy support and conducting risk assessments for companies across a wide range of sectors including oil & gas, pharmaceutical, waste management, food & drink and logistics companies.	Chartered Engineer  Member of Engineers Ireland (MIEI)  Member of the Fire & Safety Committee at Engineers Ireland.