

1. INTRODUCTION

1.1 Introduction

This Environmental Impact Assessment Report ('EIAR') has been prepared by McCarthy Keville O'Sullivan Ltd. (MKO) on behalf of Burkeway Homes Limited, which intends to apply to An Bord Pleanála (ABP) pursuant to the provisions of the Planning and Development (Housing) and Residential Tenancies Act 2016 for permission in respect of a strategic housing development [SHD] located in the townlands of Trusky East, Trusky West, Freeport and Ahaglugger, Bearna, Co. Galway.

The site area measures approximately 5.38 hectares and is accessed from the west via an existing residential development at Trusky East, called Cnoc Fraoigh. This connects the site to the L-1321 (Moycullen road) linking to the village of Bearna. The general area is rural in character and is surrounded by a number of residential developments, individual houses and agricultural lands. The Cnoc Fraoigh residential estate lies to the west of the site, with agricultural lands to the north and south.

1.2 The Applicant

The applicant for the proposed development, Burkeway Homes Limited is a national house building company set up in 2014 and based in Galway. Burkeway Homes Limited's senior management team has over 30 years of construction experience and has developed major commercial and residential projects in both Dublin and Galway. Burkeway Homes Limited have employed an experienced Design Team to ensure that this development will be delivered to meet all the relevant planning, environmental and sustainability requirements.

Recent Burkeway Homes Limited projects include:

- Breacán - 15 Nr. units at Letteragh Road, Galway
- Maoilin - 102 Nr. units at Ballymoneen Road, Galway
- Fánán - 101 Nr. units at Letteragh Road, Galway

1.3 Planning Background

There is a considerable planning history associated with housing development proposed on the lands which form the subject-matter of this application, and which is summarised in Chapter 2 of this EIAR.

By way of introduction, it is sufficient to state that, in February 2018, An Bord Pleanála refused permission (under ref. no. ABP-300009-17) for development consisting of, *inter alia*, construction of 113 no. houses at the development site. Permission was refused on the grounds the proposed development would not be developed at a sufficiently high density and the proposed development did not have an adequate mix of dwelling types, being predominantly semi-detached and detached housing.

Subsequently, in determining an application in respect of proposed development comprising 107 houses (2-bed, 3-bed and 4-bed) and 90 apartments (1-bed, 2-bed) and 3-bed), in November 2018, the Board decided to grant permission (under ref. no. ABP-302216-18). Judicial Review proceedings challenging the decision of the Board were instituted in January 2019 and culminated in a High Court judgment delivered on 21st June 2019 which held that it was necessary to quash the decision made by the Board to grant permission.

1.4 Legislative Context

1.4.1 Introduction

The consolidated European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the 'EIA Directive'), has been transposed into Irish planning legislation by the Planning and Development Acts 2000 to 2019 and the Planning and Development Regulations 2001 to 2019. The EIA Directive was amended by Directive 2014/52/EU which has been transposed into Irish law pursuant to the provisions of amendments made to Part X of the Planning and Development Act 2000 and and European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018), as amended.

Accordingly, this EIAR has been prepared in compliance with the EIA Directive as amended by Directive 2014/52/EU and Irish implementing legislation, including Part X of the Planning and Development Act 2000, as amended and Planning and Development Regulations 2001 (S.I. No. 600 of 2001), as amended in particular as amended by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

The European Union Directive 2011/92/EU, amended by EU Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (the 'EIA Directive'), requires Member States to ensure that a competent authority carries out an assessment of the likely significant effects of certain types of project, as listed in the Directive, prior to development consent being given for the project. The Environmental Impact Assessment (EIA) of the proposed development will be undertaken by An Bord Pleanála as the competent authority, in compliance with the provisions of EU and Irish law and guidance.

1.4.2 EIA Screening

The relevant classes/scales of development that require Environmental Impact Assessment (EIA) are set out in Parts 1 and 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended.

Section 172 of the Planning & Development Act 2000, as amended, provides the legislative basis for EIA. It states the following:

“An environmental impact assessment shall be carried out by a planning authority or the Board, as the case may be, in respect of an application for consent for proposed development where either:

- (a) *the proposed development would be of a class specified in –*
 - (i) *Part 1 of Schedule 5 of the Planning and Development Regulations 2001, and either –*
 - I. *such development would exceed any relevant quantity, area or other limit specified in that Part, or*
 - II. *no quantity, area or other limit is specified in that Part in respect of the development concerned,*
 - or*
 - (ii) *Part 2 of Schedule 5 of the Planning and Development Regulations 2001 and either –*
 - I. *such development would exceed any relevant quantity, area or other limit specified in that Part, or*
 - II. *no quantity, area or other limit is specified in that Part in respect of the development concerned,*

Accordingly, Schedule 5 of the Planning & Development Regulations 2001, as amended sets out a number of classes and scales of development that require EIA.

With regards to the proposed strategic housing development, the provisions of Part 2 of Schedule 5 require an EIA to be undertaken where it is proposed to carry out the following - “*Construction of more than 500 dwelling units*”, as per paragraph 10 (b)(i) of Part 2 of the Schedule and urban development which would involve an area greater than either 2ha (*business district*), 10 ha (built up area) or 20ha (elsewhere) as per paragraph 10(b)(iv).

The proposed residential development does not exceed the 500 unit threshold in paragraph 10(b)(i). In respect of paragraph 10(b)(iv), the site is not located in a business district and does not propose urban development of an area greater than 10 hectares. Therefore the proposed development does not equal or exceed the relevant quantity, area or other limit specified in Part 2 of Schedule 5 and is not subject to mandatory EIA.

However, section 172 of the Planning & Development Act 2000, as amended, also sets out the basis for EIA for developments which do not equal or exceed, the relevant quantity, area or other limit specified in Part 2 of Schedule 5, i.e., “sub-threshold development”. Thus, an EIA is required where sub-threshold development is likely to have significant effects on the environment and therefore should be subject to EIA. In this context, the consideration of ‘significant effect’ is not determined by reference to relevant quantity, area or other limit thresholds but also considering factors such as the nature and location of a project must also be taken into account. On this basis, it was decided to compile an EIAR in respect of the proposed strategic housing development.

Article 299A of the Planning and Development Regulations 2001, as amended, provides that, where a planning application for a “sub-threshold” strategic housing development is accompanied by an EIAR and a request for a EIA screening determination under section 7(1)(a)(i)(I) of the 2016 Act was not made – as is the position in relation to this application – then the application shall be dealt with as if the EIAR had been submitted in accordance with subsection 172(1).

The EIAR provides information on the receiving environment and assesses the likely significant effects of the project and proposes mitigation measures to avoid or reduce these effects. The function of the EIAR is to provide information to allow the competent authority to conduct the Environmental Impact Assessment (EIA) of the proposed development.

1.4.3

Content of an EIAR

Article 5 of the EIA Directive provides that, where an EIA is required, the developer shall prepare and submit an environmental impact assessment report (EIAR) previously referred to as an Environmental Impact Statement (‘EIS’). The information to be provided by the developer shall include at least:

- a) a description of the project comprising information on the site, design, size and other relevant features of the project;
- b) a description of the likely significant effects of the project on the environment;
- c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
- d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;
- e) a non-technical summary of the information referred to in points (a) to (d); and (f) any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.

In addition, article 94 of Schedule 6 to, the Planning and Development Act 2000 to 2019 sets out the information to be contained in an EIAR, with which this EIAR complies.

MKO was appointed as environmental consultant on the proposed project and commissioned to prepare this EIAR in accordance with the requirements of the EIA Directive as amended by Directive 2014/52/EU.

1.4.4 EIA Guidance

The Environmental Protection Agency (EPA) published its *'Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'* (EPA, August 2017), and these draft guidelines have been used in the compiling of this EIAR.

In preparing this EIAR regard has also been taken of the provisions of the *'Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment'*, published by the Department of Housing, Planning and Local Government (DHPLG) in August 2018 to the extent these guidelines are relevant having regard to the enactment of the revised EIA Directive.

The European Commission also published a number of guidance documents in December 2017 in relation to Environmental Impact Assessment of Projects (Directive 2011/92/EU as amended by 2014/52/EU) including *'Guidance on the preparation of the Environmental Impact Assessment Report'*. MKO has prepared the EIAR with regard to these guidelines also.

1.5 Brief Description of the Proposed Development

The proposed development will consist of:

- 1) Demolition of existing outbuildings
- 2) Construction of 121 no. residential units comprising:
 - 52 no. houses (37 no. three-beds, 15 no. four-beds)
 - 4 no. duplex units in Duplex Block D1 (2 no. two-beds (ground floor units) and 2 no. three beds (2 storey units))
 - 8 no. duplex units in Duplex Block D2 (4 no. two-beds (ground floor units) and 4 no. three beds (2 storey units))
 - 6 no. duplex units in Duplex Block D3 (3 no. two-beds (ground floor units) and 3 no. three beds (2 storey units))
 - 14 no. duplex units in Duplex Block D4 (7 no. two-beds (ground floor units) and 7 no. three beds (2 storey units))
 - 4 no. duplex units in Terrace Block T5 (2 no. two-beds (ground floor units) and 2 no. three beds (2 storey units))
 - 14 no. Apartments in Apartment Block A1 (5 no. one-beds, 9 no. two-beds)
 - 13 no. Apartments in Apartment Block A2 (4 no. one-beds, 9 no. two-beds and a Multipurpose Room)
 - 2 no. Apartments in Apartment Block A3 (2 no. two-beds)
 - 4 no. Apartments in Apartment Block A4 (4 no. two-beds)
- 3) Development of a crèche facility (224.80 sqm) associated outdoor play areas and parking
- 4) Provision of a footpath connectivity link along the L-1321
- 5) Provision of shared communal and private open space, car and bicycle parking, site landscaping and public lighting, decommissioning of the existing wastewater treatment plant and provision of all services, access from the L-1321 via the Cnoc Fraoigh development and all associated site development works.
- 6) Provision of a public linear park along the Trusky Stream

1.6 Need for the Development

There is currently a significant shortage of housing units available to service the housing market (including the rental market) in Galway City and the surrounding areas. The proposed development will contribute significantly to alleviating the shortage of housing supply in Galway and brings into use lands zoned specifically for that purpose.

In addition, the construction industry, through projects such as the proposed development, makes a significant contribution to economic development in Ireland. Notwithstanding the Covid-19 related crisis (which prevails at the time of submission of this application), there remains strong demand for housing in the Galway MASP area, for which the proposed development will be able to provide. The proposed strategic housing development will provide a significant supply of mixed tenure residential units which will contribute towards the aim of growing the population of the Galway MASP in a sustainable manner in accordance with national, regional and local planning policy.

1.7 Purpose and Scope of the EIAR

As part of the Environmental Impact Assessment process, the developer of the project must prepare and submit an Environmental Impact Assessment Report (hereafter referred to as the EIAR). This is the first step of the EIA process, as mentioned in Article 1(2)(g) of European Union Directive 2011/92/EU, as amended by Directive 2014/52/EU on assessment of the effects of certain public and private Projects on the environment (“the EIA Directive”). The EIAR is the document prepared by the developer that presents the output of the assessment. It contains information regarding the project, the likely significant effect of the project, the baseline scenario, the reasonable alternatives considered by the developer, the features and measures to mitigate adverse significant effects as well as a Non-Technical Summary and any additional information specified in Annex IV of the EIA Directive. Article 5 of the EIA Directive sets out what must be included in the EIA Report, and how to ensure that it is both of a sufficient high quality and complete. This EIAR provides a statement of the likely significant effects associated with the proposed strategic housing development.

It is important to distinguish the Environmental Impact Assessment (EIA) to be carried out by An Bord Pleanála, from the Environmental Impact Assessment Report (EIAR) accompanying the planning application. The EIA is the assessment carried out by the competent authority, which includes an examination that identifies, describes and assesses in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 11 of the Environmental Impact Assessment Directive, the direct and indirect effects of the proposed development on the following:

- a) *population and human health*
- b) *biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC*
- c) *land, soil, water, air and climate*
- d) *material assets, cultural heritage and the landscape*
- e) *the interaction between the factors referred to in points (a) to (d)*

1.8 Structure and Content of the EIAR

1.8.1 General Structure

This EIAR uses the grouped structure method to describe the existing environment, the potential impacts of the proposed development thereon and the proposed mitigation measures. Background information relating to the proposed development, consultation undertaken and a description of the proposed development are presented in separate sections. The grouped format sections describe the impacts of the proposed development in terms of human beings and population, flora and fauna, soils

and geology, water, air and climate, noise, landscape, cultural heritage and material assets such as traffic and transportation, together with the interaction of the foregoing.

The chapters of this EIAR are as follows:

- Introduction
- Background to the Proposed Development
- Consideration of Reasonable Alternatives by the developer
- Description of the Proposed Development
- Population & Human Health
- Biodiversity,
- Land, Soils and Geology
- Hydrology and Hydrogeology
- Air and Climate
- Noise and Vibration
- Landscape and Visual
- Cultural Heritage
- Material Assets – including Traffic
- Interaction of the Foregoing
- Cumulative Effects
- Schedule of Mitigation

The EIAR also includes a non-technical summary, which is a condensed and easily comprehensible version of the EIAR document. The non-technical summary is laid out in a similar format to the main EIAR document and comprises a description of the proposed development followed by the existing environment, impacts and mitigation measures presented in the grouped format.

1.8.2 Description of Likely Significant Effects and Impacts

As stated in the Draft ‘*Guidelines on the Information to be contained in Environmental Impact Assessment Reports*’ (EPA, 2017), an assessment of the likely impacts of a proposed development is a requirement of the EIA process. The statutory criteria for the presentation of the characteristics of potential impacts requires that potential significant impacts are described with reference to the extent, magnitude, complexity, probability, duration, frequency, reversibility and trans-frontier nature (if applicable) of the impact.

The classification of impacts in this EIAR follows the definitions provided in the Glossary of Impacts contained in the following guidance documents produced by the by the European Commission (EC) Environmental Protection Agency (EPA):

- ‘*Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report*’ (EC, 2017)
- ‘*Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft August 2017*’ (EPA, 2017).
- ‘*Revised Guidelines on the Information to be contained in Environmental Impact Statements – Draft September 2015*’ (EPA, 2015)
- ‘*Advice Notes for Preparing Environmental Impact Statements – Draft September 2015*’ (EPA, 2015).
- ‘*Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*’ (EPA, 2003)
- ‘*Guidelines on the Information to be contained in Environmental Impact Statements*’ (EPA, 2002)

Table 1-1 presents the glossary of impacts as published in the EPA guidance documents. Standard definitions are provided in this glossary, which permit the evaluation and classification of the quality,

significance, duration and type of impacts associated with a proposed development on the receiving environment. The use of pre-existing standardised terms for the classification of impacts ensures that the EIA employs a systematic approach, which can be replicated across all disciplines covered in the EIAR. The consistent application of terminology throughout the EIAR facilitates the assessment of the proposed development on the receiving environment.

Table 1-1 Table 1-1 Impact Classification Terminology (EPA, 2017)

Impact Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An effect capable of measurement but without significant consequences
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends
	Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment

Impact Characteristic	Term	Description
	Profound	An effect which obliterates sensitive characteristics
Extent & Context	Extent	Describe the size of the area, number of sites and the proportion of a population affected by an effect
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions
Probability	Likely	Effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented
	Unlikely	Effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented
Duration and Frequency	Momentary	Effects lasting from seconds to minutes
	Brief	Effects lasting less than a day
	Temporary	Effects lasting less than a year
	Short-term	Effects lasting one to seven years
	Medium-term	Effects lasting seven to fifteen years
	Long-term	Effects lasting fifteen to sixty years
	Permanent	Effect lasting over sixty years
	Reversible	Effects that can be undone, for example through remediation or restoration

Impact Characteristic	Term	Description
	Frequency	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Type	Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	‘Do Nothing’	The environment as it would be in the future should the subject project not be carried out
	Worst Case’	The effects arising from a project in the case where mitigation measures substantially fail
	Indeterminable	When the full consequences of a change in the environment cannot be described
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
	Residual	Degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic	Where the resultant effect is of greater significance than the sum of its constituents

Each impact is described in terms of its quality, significance, extent, duration and frequency, and type, where possible. A ‘Do-Nothing’ impact is also predicted in respect of each environmental theme in the EIAR. Residual impacts are also presented following any impact for which mitigation measures are prescribed. The remaining impact types are presented as required or applicable throughout the EIAR.

Any potential interactions between the various aspects of the environment assessed throughout this EIAR are presented in Chapter 13: Interaction of the Foregoing.

1.9 Project Team

The companies and staff listed in **Error! Reference source not found.** were responsible for completion of the EIAR in respect of the proposed development. Further details regarding project team members are provided below.

The EIAR project team comprises a multidisciplinary team of experts with extensive experience in the assessment of projects and in their relevant area of expertise. The qualifications and experience of the principal staff from each company involved in the preparation of this EIAR are summarised in Section 1.9.1 below. Each chapter of this EIAR has been prepared by a competent expert in the subject matter. Further details on project team expertise are provided in the Statement of Authority at the beginning of each impact assessment chapter.

Table 1-2 below details the companies and staff that were responsible for completion of the EIAR:

Table 1-2 Companies and Staff Responsible for EIAR Completion

Consultants	Principal Staff Involved in Project	EIAR Input
MKO Tuam Road, Galway, H91 VW84	Michael Watson Eoin Gilson Ciara McGuinness Owen Cahill Pat Roberts John Hynes Sarah Mullen Joanna Mole Audrey Williams Joseph O'Brien	Project Managers, Scoping and Consultation, Preparation of Natura Impact Statement, EIAR Report Sections: 1. Introduction 2. Background to the Proposed Development 3. Reasonable Alternatives 4. Description of the Proposed Development 5. Population & Human Health 6. Biodiversity, Flora & Fauna. 7. Land, Soils & Geology 8. Hydrology & Hydrogeology 9. Air & Climate 11. Landscape & Visual 14. Interaction of the Foregoing 15. Cumulative Effects 16. Schedule of Mitigation
Atkins Atkins House, 150 Airside Business Park, Swords, Co. Dublin.	Chris Fay	Preparation of EIAR Section 13. Material Assets - Traffic and Transport
Damian Brosnan Acoustics	Damian Brosnan	Baseline Noise Survey and preparation of Report Section 10: Noise and Vibration
Dominic Delaney	Dominic Delaney - Consultant Archaeologist	Preparation of Section 12: Cultural Heritage

Consultants	Principal Staff Involved in Project	ELAR Input
O'Connor Sutton Cronin & Associates 2nd Floor, Technology House Galway Technology Park Parkmore Galway	Andrew McDermot	Flood Risk Assessment Engineering Report & Drainage Design

1.9.1 Project Team Members

1.9.1.1 MKO

Michael Watson, MA; MIEMA, CEng, PGeo

Michael Watson has over 19 years' experience in the environmental sector. Following the completion of his Master's Degree in Environmental Resource Management, Geog from National University of Ireland, Maynooth he worked for the Geological Survey of Ireland and then a prominent private environmental & hydrogeological consultancy. Michael's professional experience includes managing Environmental Impact Assessments on behalf of clients in the renewable energy, waste management, commercial and industrial sectors nationally. These projects have required liaising with the relevant local authorities, Environmental Protection Agency (EPA) and statutory consultees as well as coordinating the project teams and sub-contractors. Michael has significant experience in the EPA Industrial Emissions, IPPC and Waste licensing regimes managing licence applications and subsequent regulatory compliance on behalf of clients in the waste and industrial sectors. Michael also has a Bachelor of Arts Degree in Geography and Economics from NUI Maynooth, is a Member of IEMA, a Chartered Environmentalist and Professional Geologist.

Ciara McGuinness BA (Hons), M.Sc.

Ciara McGuinness is a Project Planner with McCarthy Keville O'Sullivan Ltd. and has over 5 years of experience. Ciara holds a BA (Hons) degree in Geography, Planning and Environmental Policy, and an MSc (Hons) degree in Environmental Policy, both of which she received from University College Dublin. In addition, she holds a project management distinction diploma from Dublin Business School. Prior to taking up her position with McCarthy Keville O'Sullivan in October 2016, Ciara worked as a consultant planner with LUC, a private consultancy based in London. Ciara has specialist knowledge in development management and consultancy, regeneration, master planning, community engagement and urban design. Since joining MKO Ciara has been involved as a Planning Consultant on a significant range of energy infrastructure, commercial, retail and residential projects. Within MKO Ciara plays a large role in preparing high quality project content and project managing large scale projects. Ciara is also a Corporate Member of the Irish Planning Institute (IPI)..

Owen Cahill B.Sc., M.Sc.

Owen is an Environmental Engineer with McCarthy O'Sullivan Ltd. with over 10 years of experience in the environmental management and construction industries. Owen holds BSc. (Hons) and MSc. in Construction Management and a master's in environmental engineering. Prior to taking up his position with MKO in October 2013, Owen worked as an Environmental Officer with Kepak and prior to which he held a post with Pentland Macdonald Contaminated Land & Water Specialist in Northern Ireland. Prior to working in planning and environmental consultancy, Owen was employed within the construction industry where he gained significant experience on a variety of civil, residential and commercial projects. Owen's wide ranging multi sector experience has provided him with specialist knowledge and understanding of the challenges in the planning and delivery of developments with the

minimum environmental impact and with practicality and constructability in mind. Owen's key strengths and areas of expertise are in project management, environmental impact assessment, wind energy & solar energy construction & environmental management planning and waste permit management. Since joining MKO Owen has been involved as a Project Manager on a range of energy infrastructure, commercial, residential, waste facility and quarry projects as well as managing the licensing requirements of a number of EPA licensed facilities. Within MKO Owen plays a large role in the management and confidence building of junior members of staff and works as part of a large multi-disciplinary team to produce EIS Reports. Owen has project managed the Environmental Impact Assessment of a range of development projects across the Ireland and holds Affiliate Membership with the Institute of Environmental Management & Assessment and is currently awaiting interview and assessment to become a Full Member and Chartered Environmentalist.

Pat Roberts B.Sc. (Env.)

Pat Roberts is a Senior Ecologist and director of the Ecology team with McCarthy O'Sullivan Ltd. with over 12 years post graduate experience of providing ecological services in relation to a wide range of developments at the planning, construction and monitoring stages. Pat holds B.Sc.(Hons) in Environmental Science. Pat has extensive experience of providing ecological consultancy on large scale industrial and civil engineering projects. He is highly experienced in the completion of ecological baseline surveys and impact assessment at the planning stage. He has worked closely with construction personnel at the set-up stage of numerous construction sites to implement and monitor any prescribed best practice measures. He has designed numerous Environmental Operating Plans and prepared many environmental method statements in close conjunction with project teams and contractors. He has worked extensively on the identification, control and management of invasive species on numerous construction sites. Prior to taking up his position with MKO in June 2005, Pat worked in Ireland, USA and UK as a Tree Surgeon and as a nature conservation warden with the National Trust (UK) and the US National Park Service. Pat's key strengths include his depth of knowledge and experience of a wide range of ecological and biodiversity topics and also in his ability to understand the requirements of the client in a wide range of situations. He currently manages the ecological team within MKO and ensures that the outputs from that team are of a very high standard and meet the requirements of the clients and relevant legislation and guidelines. He is a full member of the Chartered Institute of Ecologists and Environmental Managers (CIEEM),

John Hynes M.Sc. (Ecology), B.Sc.

John Hynes is a Senior Ecologist with McCarthy O'Sullivan Ltd. with over 5 years of experience in both private practice and local authorities. John holds a B.Sc. in Environmental Science and a M.Sc. in Applied Ecology. Prior to taking up his position with MKO in March 2014, John worked as an Ecologist with Ryan Hanley Consulting Ltd. and Galway County Council. John has specialist knowledge in Flora and Fauna field surveys, Geographic Information Systems, data analysis, Appropriate Assessment, Ecological Impact Assessment and Environmental Impact Assessment. John's key strengths and areas of expertise are in project management, GIS and impact assessment. Since joining MKO John has been involved as a Senior Ecologist on a significant range of energy infrastructure, commercial, national roads and private/public development projects. Within MKO John plays a large role in the management and confidence building of junior members of staff and works as part of a large multi-disciplinary team to produce EIS Reports. John has project managed a range of strategy and development projects across the Ireland and holds CIEEM membership.

Eoin Gilson B.Sc., M.Sc.

Eoin is an Environmental Scientist with MKO who took up his position in October 2018. Eoin holds a BSc (Hons) in Microbiology and a MSc (Hons) in Applied Environmental Science. Eoin has specialist knowledge in EIA, Project Management, environmental field surveys, data analysis and renewable energy systems. Eoin's key strengths and areas of expertise are in data management, report writing and environmental monitoring and management. On joining MKO Eoin has been involved on a range of renewable energy infrastructure projects, working as part of a large multi-disciplinary team to produce

EIA Reports. Eoin holds a graduate membership with the Institute of Environmental Management and Assessment.

Joanna Mole BSc PGDipLA MSc CMLI

Joanna Mole is a Landscape and Visual Impact Assessment Specialist and Chartered Landscape Architect with McCarthy O'Sullivan Ltd. with over 15 years of experience in both private practice and local authorities. Joanna holds a BSc (Hons) in Landscape Design & Plant Science from Sheffield University, a Postgraduate Diploma in Landscape Architecture from Leeds Beckett University, and a MSc in Renewable Energy Systems Technology from Loughborough University. Prior to taking up her position with MKO in October 2017, Joanna worked as a Landscape Architect with Kav-Banof in Israel and held previous posts with CSR in Cork, LMK in Limerick, Geo Architects in Israel and Groundwork Bridgend in South Wales. Joanna is a Chartered Landscape Architect with specialist knowledge in Landscape and Visual Impact assessments for projects ranging from individual houses to large windfarms, cycle route design and landscape contract management. Since joining MKO Joanna has been involved in projects such as energy infrastructure, extraction industry and residential projects. Joanna holds chartered membership of the British Landscape Institute since 1998 and has been an examiner for British Landscape Institute professional practice exam.

Audrey Williams, BLA

Audrey Williams is a Landscape Architect and Landscape and Visual Impact Assessment Specialist with McCarthy Keville O'Sullivan Ltd. with two years professional working experience in both private and educational teaching practices from Canada and Sweden. Audrey holds a Bachelor of Landscape Architecture (BLA) from Canada. Prior to taking up her position with McCarthy Keville O'Sullivan Ltd. in January 2020, Audrey held previous positions as a landscape architecture research assistant at the Swedish University of Agriculture Sciences, as well as a landscape architecture technician for HKLA in Canada. Since joining MKO, Audrey has been involved in a range of projects including wind energy, extraction industry, restoration drawings, landscape capacity assessments and landscape concept designs. Audrey also has several years of experience with AutoCAD, Adobe Suite, and Sketchup to comply with her graphics and design abilities.

Joseph O'Brien

Joseph O'Brien holds the position of CAD Technician. Joseph holds a BA Honours Level 8 Modelmaking, Design and Digital Effect, Institute of Art Design and Technology (IADT), Dun Laoghaire & City & Guilds Level 3 2D & 3D AutoCAD certificates. Joseph's role entails various wind and solar farm projects which require various skills such as mapping, aerial registration and detailed design drawings for projects. Prior to joining us, Joseph worked as a free-lance Modelmaker and CAD Technician. His previous experience included designing various models and props through CAD and then making them for various conventions such as Dublin Comic Con and Arcade Con.

1.9.1.2 **Damian Brosnan Acoustics**

Damian Brosnan

Damian Brosnan has been working in acoustics since 1996. He holds a Postgraduate Diploma in Acoustics & Noise Control from the Institute of Acoustics, and an MSc in Applied Acoustics from the University of Derby. Damian is a member of the Institute of Acoustics (MIOA), and is secretary of their Irish branch. He is also a member of Engineers Ireland, and a member of ACASITI, a recently formed association of Irish professional acoustic consultants. Damian has worked on several hundred noise projects to date, including a number of large scale residential and commercial developments.

1.9.1.3 **Atkins – Traffic**

Chris Fay

Chris Fay, BEng PGradDipEng, CEng MIEI, is a Chartered Engineer specialising in urban road design and transportation planning with 13 years' experience in this field. He holds a Bachelor of Engineering in Civil Engineering and a Post Graduate Diploma in Highway Engineering. Throughout his career he has provided strategic and technical roads and transportation advice on numerous, residential, commercial and mixed-use developments of varying scale and complexity. Most recently he has successfully led on the traffic, transport and travel planning assessments of Charlestown Shopping Centre, Woodbrook SHD and Fassaroe, Mixed Use Development.

1.9.1.4 **Dominic Delaney – Consultant Archaeologist**

Dominic Delaney

Dominic Delany BA MIAI graduated from University College Galway in 1986 with a BA (honours) degree in archaeology and history. He is licensed to carry out archaeological excavations in Ireland since 1989 and has over 30 years of experience in the provision of archaeology and cultural heritage services to public and private sector clients. Dominic Delany & Associates was established in 2002 and the company has demonstrated its ability to provide mitigation to developments through management and coordination of projects from pre-planning assessment stage to archaeological resolution of sites. Dominic Delany has undertaken archaeological and cultural assessments and carried out monitoring programmes for a number of wind farm developments in the general area including the built Leitir Peic, Cnoc an Locha and Leitir Gungaid wind farms located between 5km and 10km northwest of the Proposed Development.

1.9.1.5 **O'Connor Sutton Cronin & Associates**

Andrew Mc Dermot, MSc(Biomedical), BSc(Eng) Dip Eng Tech, Dip Eng, C.Eng, MIEI

Andrew McDermot is a Chartered Engineer with 31 years post graduate experience in Civil and Structural Engineering Consultancy based in the UK and Ireland. He is a Director of O'Connor Sutton Cronin and Associates (Galway) Ltd with 15 years of experience at Director Level. He has managed projects in the private and public sectors up to an individual project construction value of €30m which include many 3rd Level University and College buildings for the National University of Ireland, IT Sligo, IT Letterkenny and Athlone IT. Andrew has managed projects for numerous local authorities and state agencies such as Galway City and County Councils, Mayo County Council, Longford County Council, Clare County Council, HSE, IDA and others. His private sector experience includes housing developments in excess of 400 units, hotels, restoration of historic estates, retail parks, Cathedrals, offices, apartment blocks, marine works, nursing homes amongst others. Andrew has been awarded a Design Excellence Award by the Association of Consulting Engineers of Ireland in recognition of excellence in Design.

1.10 **Preparation**

MKO is responsible for the preparation of this EIAR. No difficulties, such as technical deficiencies, lack of information or knowledge, were encountered in compiling any specific information contained in the EIAR.