

1. INTRODUCTION

1.1 Introduction

This Environmental Impact Assessment Report ('EIR') has been prepared by McCarthy Keville O'Sullivan Ltd. (MKO) on behalf of Glenveagh Properties PLC, which intends to apply to An Bord Pleanála (ABP) under the *Planning and Development Act 2000* (as amended by the *Residential Tenancies Act 2016*) for a strategic housing scheme that forms part of mixed use development located in the townland of Ragoon, Co. Galway.

The proposed site is approximately 2.8 hectares in extent and is situated within the Gateway Development, located in the east of Knocknacarra, County Galway which lies approximately 3km west of Galway City. The proposed scheme lies within Gateway Development and will consist of a mix of residential apartment units with a ground floor retail component. Gateway Phase 1, which comprises solely a large store retail offer with Dunnes Stores, Next and B&Q among the anchor tenants with its associated car parking, has been already been completed and lies to the immediate west of the proposed development. Gateway Phase 2 comprising contiguous lands to the immediate north of Phase 1 is currently under construction.

To the south and east the site is bounded by the Western Distributor and Gort Na Bró roads respectively with an existing pedestrian link footpath and Gaelscoil Mhic Amlaigh at the boundary to the north. To the south the site neighbours an existing Aldi supermarket where an approx 2.0m high blockwork wall forms the boundary.

The development site is bisected by an off shoot of the Gort Na Bró road, which effectively splits the site north and south. On either side this link road, a number of existing trees are situated, the trees, most likely planted as part of the road's construction works.

Currently the southern part of the site is in use as a site compound for construction at Phase 2 and as a result is enclosed by hoarding and has been largely cleared for site offices, car parking and materials storage. The remaining northern part of the site is as yet uncleared and vegetation appears as mainly scrub.

1.2 The Applicant

The applicant for the proposed development is Glenveagh Living Ltd. (Glenveagh Living) a division of Glenveagh Properties, PLC. Formed in 2017, Glenveagh Properties PLC has assembled a compelling 11,000+ unit landbank for building to capitalise on the favourable market backdrop which exists within the Irish residential sector. With a focus on strategically located developments in the Greater Dublin Area, Cork, Limerick and Galway, the Group comprises two complementary divisions, Glenveagh Homes and Glenveagh Living.

Glenveagh Homes' delivers high quality starter homes to its private customers with selective developments of mid-size and executive houses and apartments in areas of high demand. The business has commenced construction on 12 sites, with 800 units under construction during 2018. Glenveagh Homes has assembled a pipeline of 9,520 units with a 2,000 unit per annum output target by 2023.

Glenveagh Living delivers houses and apartments for the public sector and institutional investors. The Partnerships business focusses on mixed-tenure and joint venture opportunities with the public sector in Ireland. The PRS business delivers large-scale private rental product for institutional investors and currently possesses a pipeline of 1,850 units.

Glenveagh Living have employed an experienced Design Team to ensure that this development will be delivered to meet all the relevant planning, environmental and sustainability requirements.

1.3 Legislative Context

European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the ‘EIA Directive’), is currently transposed into Irish planning legislation by the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended). The EIA Directive was amended by Directive 2014/52/EU which has been transposed into Irish law with the recent European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

Accordingly, this EIAR complies with the EIA Directive as amended by Directive 2014/52/EU. To the extent relevant and necessary, regard has been had to the existing provisions of the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2018 insofar as they transpose the EIA Directive.

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’s, prior to development consent being given for the project. The Environmental Impact Assessment (EIA) of the proposed development will be undertaken by An Bord Pleánala as the competent authority.

Article 5 of the EIA Directive as amended by Directive 2014/52/EU provides 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.

MKO was appointed as environmental consultants 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 EIA Screening

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

Section 172 of the Planning & Development Act 2000, as amended, provides the legislative basis for mandatory 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,*

Further to the above, 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 development, the provisions of Schedule 5, Part 2, Item 10 (b) (iv) require an EIA to be undertaken where it is proposed to carry out the following:

‘Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of built up areas and 20 hectares elsewhere.’

The proposed residential development is a project which falls under Schedule 5 and has been screened in for EIA given its nature, size (c2.8 hectares) and location in a Business District i.e. the Knocknacarra District Centre.

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.

1.4.1 EIAR Guidance

The Environmental Protection Agency (EPA) recently published its *‘Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports’* (EPA, August 2017), which are intended to guide practitioners preparing an EIAR during the transition to new Regulations transposing the revised EIA Directive. 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 *‘Advice Notes on Current Practice in the Preparation of Environmental Impact Statements’* (EPA, 2003) and the *‘Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment’*, published by the Department of the Environment, Community and Local Government (DECLG) in March 2013 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 Screening’, ‘Guidance on Scoping’ and ‘Guidance on the preparation of the Environmental Impact Assessment Report’. MKO has carried out the EIA process and prepared the EIAR with regard to these draft guidelines also.

1.5

Brief Description of the Development

The proposed development will consist of the following:

1. *Construction of 332 no. residential units:*
 - *93 no. 1 bed apartments*
 - *219 no. 2 bed apartments*
 - *20 no. 3 bed apartments*
2. *Provision of 2,667 sq.m of commercial floorspace.*
3. *Provision of 93 sq.m of community use facilities*
4. *Provision of 470 sq.m of tenant amenity accommodation including shared workspaces, shared dining and lounge facilities*
5. *Provision of 174sq.m creche facility including an external secure play area.*
6. *Provision of 85 no. car parking spaces and provision of realigned road between Gort na Bró and Gateway Retail Park Road.*
7. *Change of use of underground void to 181 bay underground car park*
8. *Provision of shared communal and private open space, car parking, bicycle parking, bin storage, public lighting, site landscaping, services, signage, substation and all associated site development works.*

In addition to the above it is proposed to realign an existing link road between Gort na Bró and the Galway Retail Park and separately to upgrade the new junction between the application site and Gort na Bró. The road realignment is required to facilitate the proposed N6 Ring Road which is currently with An Bord Pleanála for their consideration.

All elements of the proposed project, including parking and any works required to roads and junctions to accommodate the project, have been assessed as part of this EIAR.

1.6

Need for the Development

There is currently a significant shortage of housing units available for sale and occupancy in the area surrounding Galway City. The rapidly increasing price of housing is a result of the shortage in supply, and many people will soon find themselves unable to afford a home. This problem is also aggravated by a lack of housing units available for the rental market. 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 such as the subject development, make a significant contribution to economic development in Ireland. The recent upturn in the economy and thus the construction industry has led to an increase in demand for housing in the surrounding areas of Galway city, which the proposed development will be able to provide for.

1.7

Purpose and Scope of the EIAR

The purpose of this EIAR is to document the current state of the environment in the vicinity of the proposed development site and to quantify the likely significant effects of the proposed development on the environment, in accordance with the requirements of the EIA Directive. The compilation of this document served to highlight any areas where mitigation measures may be necessary in order to protect the surrounding environment from the possibility of any negative impacts arising from the proposed development.

It is important to distinguish the Environmental Impact Assessment (EIA) to be carried out by Galway City Council, 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)*

The EIAR submitted by the applicant provides the relevant environmental information to enable the EIA to be carried out by the competent authority. The information to be contained in the EIAR is prescribed by statutory regulation, as described in Section 1.3 above.

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, scoping and 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, 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
- > Description of the Proposed Development
- > Human Beings. Population & Human Health
- > Biodiversity
- > Land, Soils and Geology
- > Water
- > Air and Climate
- > Noise and Vibration
- > Landscape and Visual
- > Archaeological, Architectural and Cultural Heritage
- > Material Assets – including Traffic
- > Interaction of the Foregoing

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

An assessment of the likely impacts of a proposed development is a statutory 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 Environmental Protection Agency (EPA):

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft August 2017 (EPA 2017).
- ‘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).
- 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).

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 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

Impact Characteristic	Term	Description
		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
	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

Impact Characteristic	Term	Description
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
	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

Impact Characteristic	Term	Description
Type	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, duration 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.

1.9 Project Team

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 Thomas Blackwell Eoin Gilson Meabhann Crowe Owen Cahill Pat Roberts John Hynes Sarah Mullen Joanna Mole Joseph O’Brien Sean McCarthy Clíodhna Bourke	Project Managers, Scoping and Consultation, Preparation of Natura Impact Statement, EIAR Report Sections: 1. Introduction 2. Background to the Proposed Development 3. Description of the Proposed Development 4. Population & Human Health 5. Biodiversity. Flora & Fauna. 6. Land, Soils & Geology 7. Water 8. Air & Climate 10. Landscape & Visual 13. Interaction of the Foregoing

Consultants	Principal Staff Involved in Project	EIAR Input
Atkins 1st Floor Technology House, Parkmore Technology Park, Galway	Sharon Connolly Kasia Garvey	Preparation of EIAR Section 12. Material Assets - Traffic and Transport
AWN Consulting Ltd. IDA Business & Technology Park, Clonshaugh, Dublin 17	Damian Kelly Aoife Kelly	Baseline Noise Survey and preparation of Report Section 9: Noise and Vibration
Tobar Archaeological Services Saleen, Midleton, Co. Cork	Miriam Carroll Annette Quinn	Archaeological Impact Assessment and preparation of Section 11: Cultural Heritage

1.9.1 Project Team Members

1.9.1.1 MKO Team

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 Degree in Geography and Economics from NUI Maynooth, is a Member of IEMA, a Chartered Environmentalist and Professional Geologist.

Thomas Blackwell – P.B.A., M.Sc., PWS

Thomas is a Senior Environmentalist with MKO with over 15 years of progressive experience in environmental consulting. Thomas holds a BA (Hons) in Geography from Trinity College Dublin and a M.Sc. in Environmental Resource Management from University College Dublin. Prior to taking up his position with MKO in August 2019, Thomas worked as a Senior Environmental Scientist with HDR, Inc. in the United States and held previous posts with private consulting firms in both the USA and Ireland. Thomas is a registered Professional Wetland Scientist with the Society of Wetland Scientists with specialist knowledge in wetland assessment and delineation, mitigation planning and design, stream geomorphic assessment, and stream and wetland restoration design. Thomas' professional experience includes managing Environmental Impact Assessments, environmental permitting, environmental due diligence and compliance, and general environmental assessment on behalf of clients in the solar farm, mining, solid waste management, residential and commercial development, and public sectors. Thomas' key strengths and areas of expertise are in project management and strategy development, environmental permitting and assessment for renewable energy projects, fluvial geomorphology and stream restoration design. Since joining MKO, Thomas has been involved as an Environmental Consultant on a range of energy infrastructure, and residential projects.

Eoin Gilson – Environmental Scientist B.Sc., M.Sc.

Eoin is a Graduate Environmental Scientist with McCarthy O’Sullivan Ltd. 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 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.

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 a Graduate 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 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.

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.

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 **AWN Consulting Ltd.** Damian Kelly, Director

Damian Kelly holds a BSc from DCU and an MSc from QUB. He over fifteen years of experience as an acoustic consultant and is a member of the Institute of Acoustics and a sitting member of the Irish Branch Committee. AWN Consulting’s acoustics team comprises twelve suitably qualified engineers with a total of over 140 man years spent working in the area, making it the largest and most experienced group of its type in Ireland, uniquely positioned to undertake a wide variety of projects.

1.9.1.3 **Atkins – Traffic** Sharon Connolly CEng, BEng (Hons), HNC, NCEA Regional Manager Roads and Transportation

Sharon Garvey is a chartered civil engineer with over 30 years working experience in planning, management and delivery of various roads / highways projects in the UK, Qatar and Ireland. Sharon gained vast road design experience in her career and has taken schemes of all sizes through from constraints to construction. She has worked in senior management roles in Ireland and Qatar supervising entire design teams and Consultants. Sharon was Head of Transportation in Galway city Council and was responsible for the production of the Galway Transport Strategy and was on the steering committee for the N6 GCRR. From her extensive experience in the Galway environs, Sharon is familiar with personal involved within the GCC, NTA, TII and N6 GCRR consultants. Recently she has completed Project Appraisal Report for Athenry Northern Ring Road, she has project managed all inputs on the design side for the N5 Westport to Turlough inclusive of design teams based throughout Ireland, UK and India

Kasia Garvey, MSc. Eng. Transport Senior Engineer

Kasia has over 10 years’ experience in planning and detail design for numerous large and small scale infrastructure projects throughout Ireland and Australia. Her experience includes design and

management of projects such as Channel 7 subdivision in Perth CBD and the temporary bus station design for Perth’s City Busport Alliance project (project value \$249M). She was also a coordinator for design and management of Midland Health Campus Civil Component – Design and Construction – Client Brookfield Multiplex (project value \$430M). Prior to living in Australia, she has worked in Ireland as a Design Engineer on Tenders and D&B for M6, M18 and M25 motorways. She has prepared multiple Traffic Assessment Reports for schools, mixed use developments, and industrial developments. Her most recent experience involved preparation of Tender documents for the Tuam Rd Parkmore junction upgrade works including the traffic signalisation and gateway treatment on Tuam Road.

1.9.1.4 **Tobar Archaeological Services** Miriam Carroll and Annette Quinn

Miriam Carroll and Annette Quinn are the directors of Tobar Archaeological Services and both graduated from University College Cork in 1998 with a Masters degree in Methods and Techniques in Irish Archaeology. Both directors are licensed by the Department of Culture, Heritage and the Gaeltacht to carry out excavations and are members of the Institute of Archaeologists of Ireland. Annette Quinn and Miriam Carroll have been working in the field of archaeology since 1994 and have undertaken numerous projects for both the private and public sectors including excavations, site assessments (EIAR) and surveys.

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.