Planning and Environmental Consultants

Environmental Impact Assessment Report

Cornamagh, Clonbrusk & Coosan, Athlone, Co Westmeath
Volume 1: Non-Technical Summary and Main Report

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NON-TECHNICAL SUMMARY

1. INTRODUCTION

This Environmental Impact Assessment Report (EIAR) has been prepared by McCarthy Keville O'Sullivan Ltd. (MKO) on behalf of Castlestar (Athlone) Limited, 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 located in the townlands of Cornamagh and Clonbrusk, Athlone, Co. Westmeath. The application is being made under the Strategic Housing Provisions of the Planning and Development (Housing) and Residential Tenancies Act, 2016.

The site area comprises 15.615ha of land located within the townlands of Cornamagh and Clonbrusk, Athlone Co. Westmeath (Figure 1-1). The proposed site is located within the northern suburbs of Athlone, some 2km from the town centre. It is located on the Coosan Road, which acts as a local distributor road linking the N55 (Athlone to Ballymahon/Cavan road) in the east and the Hillquarter/Castlequarter Road (L1482) in the west.

The applicants, Castlestar [Athlone] Limited is a member of the Réalta Group which was established in 2007 and has successfully delivered a number of similar developments in recent years in Dublin, Galway, Kildare, Meath and Tipperary. Castlestar (Athlone) 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.

Need for the Development

There is currently a significant shortage of housing units available for sale and occupancy in the area surrounding Athlone. 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 also. The proposed development will contribute significantly to alleviating the shortage of housing supply in Athlone 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 Athlone area, which the proposed development will be able to provide for.

Purpose and Structure of this 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 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:

1. *population and human health*
2. *biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC*
3. *land, soil, water, air and climate*

4. *material assets, cultural heritage and the landscape*
5. *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.

2. BACKGROUND TO THE PROPOSED DEVELOPMENT

The Background to the Proposed Development chapter presents information on the strategic planning context for the proposed development, the site selection and design process, a description of the proposed development site and its planning history, the assessment of alternatives, scoping and consultation, and the cumulative impact assessment process.

The proposed site is predominantly being used as agricultural/greenfield land. The site in question has proposed Low to Medium Density Residential and Open Space zoned lands under the Athlone Town Development Plan 2014-2020. An existing access dirt road is located between the two existing residential estates of Churchfields and Church Hills which are situated adjacent to the lands in question.

A review of the Westmeath County Council online map-based planning search indicates that there have been a number of planning applications on the subject lands, with the most notably development being outlined.

A scoping letter providing details of the application site and the proposed development, was prepared by McCarthy Keville O'Sullivan Ltd. and circulated on 4th February 2019 to statutory agencies, NGOs and other relevant parties.

This EIAR also considers the potential for cumulative effects from the proposed development with other key existing, permitted or proposed projects.

3. DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development will consist of the following:

1) Construction of 426 no. residential units comprising:
   - 237 no. houses (4 no. two-beds, 207 no. three-beds, 26 no. four-beds)
   - 15 no. apartments in Block A (4 no. one-beds, 10 no. two-beds, 1 no. three-beds)
   - 20 no. Apartments in Block B (5 no. one-beds, 15 no. two-beds)
   - 18 no. Apartments in Block C (4 no. one-beds, 14 no. two-beds)
   - 18 no. Apartments in Block D (4 no. one-beds, 14 no. two-beds)
   - 15 no. Apartments in Block E (4 no. one-beds, 10 no. two-beds, 1 no. three beds)
   - 16 no. Duplex Apartments in Block F (8 no. two-beds, 8 no. three-beds)
   - 11 no. Apartments in Block G (3 no. one-bed, 8 no. two-beds)
   - 16 no. Duplex Apartments in Block H (8 no. one-beds, 8 no. three-beds)
   - 12 no. Apartment Units in Block J (4 no. one-beds, 8 no. two-beds)
   - 12 no. Apartments in Block K (4 no. two-beds, 8 no. three-beds)
   - 14 no. Duplex Apartments in Block K1 (7 no. two-beds, 7 no. three-beds)
   - 12 no. Apartments in Block L (4 no. one-beds, 8 no. two-beds)
   - 10 no. Duplex Apartments in Block L1 (5 no. two-beds, 5 no. three-beds)

2) Development of a creche facility (545 sqm), associated outdoor play areas and parking

3) Construction of a 430m section of a new distributor road linking Coosan and Cornamaddy

4) Provision of shared communal and private open space, car and bicycle parking, site landscaping and public lighting, services, access with the Coosan Road and new distributor road, and all associated site development works.

To the south and west of the development site are existing housing developments. A sportsground is located to the east of the site, while agricultural land generally lies to the north. There are no existing buildings or structures on the development site.

It is anticipated that the development will be completed over 4 separate phases and the access and egress routes will change for the various phases. As some of the houses will be occupied during the later phases, Traffic Management procedures will be implemented to ensure the safety of the users of the access routes, for both the residential access and the construction access. The construction phase of the proposed development is expected to last approximately 3.5 years in total.

In general, the hours in which vehicles will arrive and depart will coincide with the expected site working hours of 7.00am to 7.00pm in the evening from Monday to Friday, and 7:00am to 2:00pm on Saturday.

Before completion of the construction phase of the proposed development, landscaping works will be carried out to improve the visual amenity of the site. These landscaping works will follow the layout of the landscape plan provided in the Landscape Master Plan.

Routine inspections of construction activities will be carried out on a daily and weekly basis by the Senior Project Manager, Senior Engineers and Foremen to ensure all controls to prevent environmental impact, relevant to the construction activities taking place at the time, are in place.

4. POPULATION & HUMAN HEALTH

One of the principle concerns in the development process is that people, as individuals or communities, should experience no diminution in their quality of life from the direct or indirect impacts arising from the construction and operation of a development.

Information regarding human beings and general socio-economic data were sourced from the Central Statistics Office (CSO), the Westmeath County Development Plan 2014 – 2020, Fáilte Ireland and any other literature pertinent to the area. The study included an examination of the population and employment characteristics of the area. This information was sourced from the Census of Ireland 2016, which is the most recent census for which a complete dataset is available, also the Census of Ireland 2011, the Census of Agriculture 2000 and 2010 and from the CSO website, www.cso.ie.

Athlone town, were the proposed development is located has a host of amenities and community facilities, including GAA, Rugby and other sports clubs, youth clubs and recreational areas. The closest church to the proposed development site is 200m to the southwest.

There are a wide range of services available in the area. Retail and personal services are centred in Athlone town centre, and there are further shops and businesses located in the surrounding area such as the Avondale Neighbourhood Centre. Westmeath County Council has a public library located in the town centre.

The area around the proposed development has many opportunities for walking and cycling. Lough Ree which is less than 2 kilometres away has many walking trails and camping facilities. The old rail trail which starts approximately 2.2 kilometres from the proposed development is a 40 kilometre stretch of greenway which runs from Athlone to Mullingar.

The closest primary schools are Athlone Mixed National School to the south west and Coosan National School to the north west, both located in Athlone, approximately 800m and 860m from the proposed development site respectively. There are also a number of preschools in the near vicinity, with Treasures Island pre-school to the south west and Busy Kids Childcare Athlone to the south east approximately 500m and 430m from the proposed development site respectively. The closest secondary school to the proposed site is Mariast College, which lies approximately 1.2 kilometres south of the site.

The third-level institution, the Athlone Institute of Technology, is located approximately 2 kilometres to the south east of the proposed development site.

The closest significant tourist attraction to the proposed residential site is Athlone Castle, which is located approximately 1.5km to the south west of the site. The majority of listed tourist attractions on the Discover Ireland and Irish Tourists websites are located in Athlone town, on Lough Ree and the surrounding areas.

5. BIODIVERSITY, FLORA & FAUNA

Multidisciplinary ecological walkover surveys of the development site were undertaken on the 16th November 2018 and 14th of May 2019. Habitats within the site were classified based on vegetation present and management history. During the multi-disciplinary ecological walkover surveys, the potential for the study area to support protected birds, mammals, amphibians and additional fauna was assessed.

The proposed development site is dominated by agricultural grassland grazed by horses comprising predominantly of Dry meadows and grassy verges (GS2) and some Dry calcareous and neutral grassland (GS1). The fields within the site are divided by Hedgerows (WL1) and Treelines (WL2). Habitats recorded on site were assessed as being of no greater than local importance (higher value). No habitats listed in Annex I of the EU Habitats Directive were recorded within the site boundary and no protected plant species were recorded, as described in Section 5.4.1.

The proposed development has been designed in order to retain existing mature treelines and hedgerows features both within the site and along the site boundary and minimise the loss of such linear landscape features. This will retain connectivity to the wider landscape for species such as commuting and foraging bats and birds. In addition, the Landscape Master Plan for the site provides for supplementary planting of native tree and shrub species that will create and enhance hedgerows and treelines. It also provides for the creation of wildflower meadows and wetlands, which will enhance the overall biodiversity within the site.

No significant impacts on surface water quality are expected due to site excavation work. There is limited hydraulic connectivity between the site and watercourses and mitigation measures will be employed on a precautionary basis. No third schedule invasive species were recorded on site, nor was any evidence of protected fauna and flora recorded. No impacts upon receptors of ecological significance are anticipated during the operational phase of the proposed development.

Effects upon flora and fauna as a result of removal of loss of hedgerows and treelines during the construction phase of development were determined to be negative, after replanting there will be a permanent residual loss of 280m of hedgerow habitat, with no net loss of tree line. The enhancement of the perimeter hedgerows and tree lines will improve habitat connectivity around the site.

Effects upon nationally designated sites as a result of the proposed development are not anticipated, given that impacts to groundwater will be prevented, or mitigated where necessary, during the construction of the proposed development. Like any construction project, measures will be in place to prevent and mitigate any effect upon groundwater and these have been detailed in the hydrology chapter of this EIAR.

Potential impacts on European Designated Sites (SACs and SPAs) are assessed within a separate Screening for Appropriate Assessment report and Natura Impact Statement. The NIS states that: “it can be objectively concluded that the Proposed Development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site”.

6. LAND, SOILS AND GEOLOGY

The elevation of the site ranges between approximately 38.25 and 49.9m OD (metres above Ordnance Datum). The overall local topography generally slopes towards the surface watercourse, which runs across the site in a southeast to the northwest direction. The dominant land use on the bordering land is residential housing to the south and west, recreational use to the east and agricultural to the north.

The site is underlain by massive unbedded lime-mudstone. The Athlone Gravels groundwater body which underlies the site is classified by the GSI (www.gsi.ie) as a Locally Important Aquifer, which is Moderately Productive only in Local Zones.

The site is dominated by limestone sands and gravels (GLs) and cutover peat (cut). The area to the south and west of the proposed site is dominated by made ground while areas to the north and east are dominated by limestone sands and gravels and cutover peat.

There are no known areas of soil or ground contamination on the site. During the site walkovers, no areas of particular contamination concern were identified. There are no recorded Geological Heritage sites within the proposed development area.

An assessment of the construction and operational phases of the development have been completed, along with a cumulative assessment for the development. An assessment of the potential health effects in relation to soils and geology has also been undertaken. Based on the above, and with implementation of the outlined mitigation measures, no significant impacts on human health and the soils and geology environment are predicted to occur.

7. HYDROLOGY AND HYDROGEOLOGY

The hydrology and hydrogeology aspects of the site has been characterised using desk study information and detailed site walkover. Any potential sources of flooding, likely routes of floodwaters and key features of the site were assessed to inform a Site Specific Flood Risk Assessment completed for the development.

The Proposed Development site contains an open ditch along the eastern and northern boundaries, with another traversing diagonally across the site. It is likely that much of the rainfall that falls on the site drains through the soils and percolates to ground or discharges to the local drainage ditches. An unnamed Stream (Code: IE_SH_26S021660) drains the land along a section of the western boundary of the site and flows in a northern direction to Coosan Lough.

A detailed flood risk assessment has been completed and there are no recurring flood incidents within the study area boundary according to the OPW's flood mapping. Mitigation measures are proposed to deal with any potential flooding of the constructed development.

The Athlone Gravels groundwater body which underlies the site is classified by the GSI (www.gsi.ie) as a Locally Important Aquifer, which is Moderately Productive only in Local Zones. This gravel is thought to be approximately 10-20 metres deep in the area. The vulnerability rating of the aquifer within the overall site is classified as "High to Low".

Due to the high permeability nature of the sand/gravel aquifer underlying the site, there is a higher potential for groundwater recharge, dispersion and movement within the aquifer and aquifer vulnerability has been considered in the mitigation measures for the site.

There are no groundwater protection zones mapped within the proposed development site or study area. There are no mapped private well locations (GSI database to accuracy of <50m) within 2km, which were obtained from the GSI well database (www.gsi.ie).

Only a small number of groundwater wells would be expected in the area, given the urban setting and the high availability of water networks in the area. Notwithstanding this, an assessment of groundwater resources relative to the proposed development is completed below.

The primary risk to groundwater at the site would be from hydrocarbon spillage and leakages but this is not unique and applies to any construction site. These are common potential impacts on all construction sites (such as road works and industrial sites) and well established and proven mitigation measures will be employed onsite. All potential contamination sources are to be carefully managed at the site during the construction and operational phases of the development and mitigation measures are proposed below to deal with these potential minor impacts.

Comprehensive surface water mitigation and controls are outlined to ensure protection of all downstream receiving waters during construction and operational phases of the development. Mitigation measures will ensure that surface runoff from the developed areas of the site will be of a high quality and will therefore not impact on the quality of downstream surface water bodies. Any introduced drainage works at the development site will mimic the existing hydrological regime, and discharge will be to ground via soakaways and wetlands, thereby avoiding changes to surface water flow volumes leaving the site.

Overall the proposal presents no significant potential for impacts to surface water and groundwater quality provided the proposed mitigation measures are implemented.

8. AIR AND CLIMATE

Due to the nature of the development, the general character of the surrounding environment and publicly available information on air quality and air quality sampling, was deemed to be unnecessary for the EIAR.

The Environmental Protection Agency (EPA) has designated four Air Quality Zones for Ireland:

- Zone A: Dublin City and environs
- Zone B: Cork City and environs
- Zone C: 16 urban areas with population greater than 15,000
- Zone D: Remainder of the country.

These zones were defined to meet the criteria for air quality monitoring, assessment and management described in the Framework Directive and Daughter Directives. The site of the proposed development lies within Zone C, which represents urban areas with a population of greater than 15,000.

The most up to date ambient air quality monitoring carried out closest to the proposed development site is at Mullingar, Co, Westmeath, located approximately 40 kilometres north east of the proposed development site. This monitoring location also lies within Zone C. The air quality in the vicinity of the proposed development site is likely to be quite similar in nature and composition. For the purposes of this assessment, air quality monitoring data from the station at Mullingar, Co, Westmeath is used.

Dust is a common emission from construction sites and requires management. The potential for dust emissions from the construction phase of the proposed development exist but the residual effects will be imperceptible given the proposed mitigation measures.

9. NOISE AND VIBRATION

The site is irregular in shape and may be divided into two blocks. The smaller block at the southern end of the site is triangular in shape, with its eastern apex meeting a bar/restaurant. Several playing pitches lie north of the bar, and these form part of the boundary of the triangle. The western side of the triangle adjoins Churchfields residential estate. Close to the southeast corner of this estate, a detached dwelling lies immediately outside the boundary.

The main block lies north of Churchfields. The southern boundary of this block adjoins Churchfields, with part of the boundary meeting the triangular block. The southern half of the eastern boundary adjoins the playing pitches mentioned above, while the northern half of this boundary adjoins land in agricultural use. The northern boundary also adjoins agricultural land. The western boundary of the block meets Church Hills residential estate, from which it is separated by a solid wall.

The soundscape in the vicinity of receptors surrounding the proposed development site was characterized through an unattended noise survey undertaken on Thursday 14.02.19. Monitoring was carried out at three stations. As proposed construction activities will be undertaken during daytime only, the survey was confined to daytime hours. Recorded data indicate that local and distant road traffic dominates the soundscape.

The proposed development will consist of residential accommodation units, and car parking. It is worth noting here, at the outset, that the closest receptors to most onsite sources will consist of the proposed onsite residential units. Onsite noise sources will be controlled so as to minimize noise impacts at these. This in turn will benefit receptors offsite, outside the boundaries.

Predictive modelling indicates that noise levels at the nearest receptors attributable to construction operations will not exceed acceptable noise limits with the exception of one receptor: a detached dwelling outside the southwest corner of the site, close to Coosan Road. Specific mitigation is warranted here. A temporary screen will be provided along the western boundary of the site at this location for this portion of the construction phase.

10. LANDSCAPE AND VISUAL

The Landscape & Visual assessment is based on desk study of the study area, field surveys of the site and surrounds and the use of photographs and photomontages from representative viewpoints of the site. The landscape of the area is described in terms of its existing character, which includes a description of the physical and visual character, landscape values and the landscape's sensitivity to change. The potential impacts in both landscape and visual terms are then assessed, including cumulative impact.

The surrounding topography in the areas of Coosan is relatively low-lying, and close to the Shannon, with the levels ranging from 30-40 metres OD. The land rises slightly to the north of the site and the north east, towards the N55, while the N6 corridor to the south of Coosan is at a lower level to the surrounds.

The topography of the site is characterised by a number undulating fields. The southernmost field of the site is at a higher level than the Coosan Road which runs to the south, and the residential estates off it. There is a considerably higher point in the centre of the field.

The landcover in the site is currently semi-natural grassland, the majority of which is categorised as dry meadows/grassy verges and some of which is calcareous grassland. The land was partly in use for grazing at the time of the site visit. The site consists of four large fields, divided by hedgerows with mature trees. There are scattered large trees along the Coosan road, with open sections where there is no vegetation, allowing views out to the surroundings.

There are no elements of built form or cultural heritage on the site. There are several (redundant) electricity pylons which traverse the site. A mast is visible adjacent to the Athlone RFC grounds. The RFC grounds to the east include a clubhouse as well as a stand.

The area to the west of the site, as well as to the south of the site, across the Coosan Road, is occupied by a number of residential developments. These areas consists of residential developments accessed by a number of internal roads, which connect to the Coosan Road as well as the Coosan Point Road. The majority of these buildings are semi-detached, and most are two storey with some three storey buildings. Occasional detached dwellings with gardens are located along both sides of the Coosan Road.

As part of the assessment, 10 viewpoint photos were taken so as to represent a variety of views of the site. These include a number of close up views of the proposed development, as well as some more distant

views. While there is a high proportion of views from the Coosan road to the south, which reflects the residential receptors of high sensitivity, there are also views form the southeast, southwest and north. The most sensitive receptors in the vicinity of the proposed development are residential receptors, and therefore the photomontages include a number of views close to houses and housing estates which may have views of the proposed development. Other potential views include views from the Coosan Road and the Cornamagh Road to the north as well as the Athlone RFC and the N55 Ballymahon road to the east.

A Landscape Masterplan has been prepared and illustrates a variety of design proposals which avoid (for example by proposing vegetation retention where possible), and proposes remedy/ offset measures such as extensive tree, native hedgerow and shrub planting and the re-establishment of an area of semi natural grassland/wildflower meadow with the stored calcareous grassland topsoil. A number of enhancement measures including the proposed wetland areas.

Landscape Effects

Overall, the proposed development, during the construction phase, will have a localised Significant, but temporary negative effect on the landscape. The effect on the landscape is localised and will not affect the wider landscape character area.

It is expected that immediately post-construction, the landscape effects in the site and immediate vicinity are likely to be Moderate, negative effects. However once mitigation measures have established in the medium – long term, and the landscape measures become established, landscape effects are expected to improve in quality. While some of the landscape effects remain negative, the proposed landscape measures and offsetting measures will have a neutral to Beneficial effect as the development will be better assimilated into the landscape once the vegetation establishes. The residual effects on the wider landscape character are considered Slight and neutral. Therefore based on the assessment above there are no significant effects at the level of the wider landscape character area.

Visual Effects

A series of photomontages have been taken from the viewpoints identified in this report. These montages represent views from sensitive visual receptors in the immediate vicinity, including the residences along and adjacent to Coosan Road, viewers in the estates to the west, viewers on the local road to the north, along with views from the N55 Ballymahon road and from the Athlone RFC grounds immediately east of the site. These represent viewers from Low to High sensitivity.

Overall, the quality of the visual effect is considered neutral. While the removal of views to grassland and mature trees is generally considered an adverse effect form certain viewpoints, especially from residential views close to the site, the proposed development creates a high quality streetscape, which is slightly set back from the Coosan Road to allow planting to the front of the buildings. The facades have been slightly broken up to provide animation and some of the upper storeys are set back. While the four storey buildings are slightly higher than what exists, the space between these and the existing dwellings allows these to be absorbed into the streetscape. Whilst some views are now restricted, they are replaced with a high quality streetscape. Vegetation has been retained where possible, such as in the southwest corner, and supplemented to soften the overall visual effect. The landscape plan indicates considerable areas of tree and hedgerow and meadow style planting within the scheme, which is considered a benefit to the wider area.

11. ARCHAEOLOGICAL & CULTURAL HERITAGE

There are no protected structures on or immediately adjacent to the site. The nearest is located 230m to west (Our Lady Queen of Peace, Roman Catholic church, built 1973).

There are 5 no. recorded monuments within 1 km of the proposed development site, all of which are scheduled for inclusion in the next revision of the RMP. The closest RMP WM029-002---, (standing stone pair), in Clonbrusk. It is located to the west of the site. However, it is in the landscaped garden of a private house and is not visible in the trees and shrubs which surround its location.

The proposed development will have no adverse direct or indirect impact on the known, upstanding Cultural Heritage of the wider area given the distance to the nearest recorded monuments and protected structures.

The significance of the indirect impact of the proposed development on the archaeological heritage is rated as not significant, given the distances to the nearest recorded monuments and protected structures. The closest Recorded Monument WM029-002---, (standing stone-pair), while adjacent to the proposed entrance, is in the landscaped garden of a private house, and is not visible from the road, as its location is covered in trees and shrubs. Due to the scale of the development, there is a possibility that previously unrecorded features or monuments lie subsurface on the subject site, however given the site walkover and relatively benign archaeological nature of the site it is unlikely that any features exist on the site.

12. MATERIAL ASSETS

The receiving environment is urban in nature. The main transportation arteries in the study area are New Two Mile Round, Coosan Road, Ballymahon Road and the N6. Outside of the study area, development generated traffic will dissipate and so is expected to have a negligible impact on the operation of the wider network. While there is expected to be substantial variation in the type of traffic travelling on the links locally, during the peak travel hours they would be expected to mainly carry commuter traffic.

It is proposed to access the development via a new entrance on New Two Mile Round opposite the Glen Park entrance creating a 4 arm crossroads. The development has also allowed for the future strategic Cornamaddy- Coosan Link Road which is currently proposed to run along the northern boundary of the site as per the Core Strategy Map of the Athlone Town Development Plan which will increase overall accessibility to the site and spread the traffic associated with the development on a wider basis, thereby limiting the potential impact in any one location.

However, it must be stressed that this future roads project from the Coosan Point Road to the L8048 northwest of the roundabout on the N55 at Cornamaddy, is not part of the proposed development and subject to its own separate planning and design process. As a result, this assessment has only considered the existing roads infrastructure which is considered to represent the worst-case scenario in this instance.

Relative to the operation stage, the construction period will be temporary in nature. The increase in traffic volumes as a result of construction vehicles visiting the site is not considered to be excessive and will be spread out over the duration of the construction phase of the development.

The residential elements of the development are expected to be the primary trip generator in the operational phase and form the basis of the development trip generation estimates. Modelling has been carried out on the road network in the area which shows that the main road links in the area will operate within capacity in the design year of 2038. The development entrance was modelled as both a signalised junction and as a priority cross roads junction. The analysis results show that the junction could operate well within capacity as a priority junction in future years. A signalised pedestrian crossing could be provided at this junction as an alternative to a fully signalised junction that would cater for vulnerable road users wishing to cross the Coosan Road.

There are a number of services located in the area surrounding the site including electricity, gas, water, sewage and telecommunications networks. An electricity line runs through the site and it is planned to reroute this subject to ESBN recommendations. Best practices will be implemented to ensure that there are no impacts on these services, and to ensure safety of the site workers. Increased public access to the site facilities and amenities benefit both the local community and wider town. Site specific Waste Management Plans will be in operation through the construction and operational phases.

Based on this assessment it is considered that the traffic generated by the proposed development will be accommodated on the local highway network in the vicinity of the site. There will be no significant impacts on electricity, gas, water, sewage and telecommunications networks as a result of the proposed development. There will be a significant positive impact on land use.

13. INTERACTION OF THE FOREGOING

The preceding Chapters 4 to 12 of this EIAR identify the potential environmental impacts that may have occur as a result of the proposed development in terms of Population and Human Health, Biodiversity, Flora and Fauna, Land, Geology and Soils, Hydrology and Hydrogeology, Air and Climate, Noise and Vibration, Landscape and Visual, Archaeological and Cultural Heritage and Material Assets. All of the potential significant effects of the proposed development and the measures proposed to mitigate them have been outlined in the preceding sections of this report. However, for any development with the potential for significant environmental effects there is also the potential for interaction amongst these potential significant effects. The result of interactive effects may exacerbate the magnitude of the effects or ameliorate them, or have a neutral effect.

Interactions have been identified between effects on Population and Human Health and effects on Noise and Vibration, Air and Climate, Hydrology and Hydrogeology and Landscape. Interactions have been identified between effects on Biodiversity, Flora and Fauna with effects on Soils and Geology, Hydrology and Hydrogeology, Noise and Vibration. Interactions have been identified between effects on Soils and Geology with effects on Hydrology and Hydrogeology. Interactions have been identified between effects on Air and Climate with effects on Material Assets.

Where any potential interactive effects have been identified, appropriate mitigation is included in the relevant sections (Sections 4-12) of the EIAR.

In general, there are no significant negative effects associated with the proposed development or potential interactions. The development has been designed to ensure it is in keeping with its surrounds, has limited potential for environmental emissions and will have a generally positive effect for the local community and Athlone Town.

APPENDIX 1

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