

4 POPULATION & HUMAN HEALTH

4.1 Introduction

This section of the Environmental Impact Assessment Report (EIA) describes the potential impacts of the proposed development on human beings, population and human health and has been completed in accordance with the guidance set out by the Environmental Protection Agency (EPA) in particular the *'Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'* (EPA, August 2017). The full description of the proposed development is provided in Chapter 3 of this EIA.

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. Ultimately, all the impacts of a development impinge on human beings, directly and indirectly, positively and negatively. The key issues examined in this section of the EIA include population, human health, employment and economic activity, land-use, tourism, noise and health and safety.

4.2 Statement of Authority

This section of the EIA has been prepared by Órla Murphy and reviewed by John Staunton and Michael Watson, all MKO. Órla is an Environmental Scientist with over 2 years' experience in private practice in both Scotland and Ireland; where she has completed numerous EIAs and has experience composing a variety of EIA chapters; relating to residential development. She holds a BSc (Hons) in Geography and a MSc. in Environmental Protection and Management.

John Staunton is a Project Environmental Scientist and Michael Watson is a Project Director with MKO; with over 9 and 17 years of experience in the environmental sector respectively. Their environmental experiences involves report writing of Environmental Reports (ER), Environmental Impact Statements/Environmental Impact Assessment Reports (EIS/EIA) & Strategic Environmental Assessments (SEA) as well as project management of a variety of small and large scale jobs, including residential development projects.

4.3 Methodology

Information regarding human beings and general socio-economic data were sourced from the Central Statistics Office (CSO), the Galway County Development Plan 2015 – 2021, 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 2006 and 2011, the Census of Agriculture 2000 and 2010 and from the CSO website, www.cso.ie.

Census information is divided into State, Provincial, County, Major Town and District Electoral Division (DED or ED) level, but may not be available for all levels. For the purposes of this section of the EIA, ED level data was used wherever possible. The information at this level was analysed and compared to the same information at

national and county level. This method provides an average or standard with which the Human Beings Study Area information can be compared.

In order to make inferences about the population and other statistics in the vicinity of the subject site, the Human Beings Study Area for the Human Beings section of the EIAR was defined in terms of the Electoral Divisions. The proposed residential development lies primarily within Clarinbridge ED, as shown in Figure 4.1. The following ED has also been included in the Human Beings Study Area for the Human Beings impact assessment due to their proximity to the site:

- Oranmore ED

The Human Beings Study Area is shown in Figure 4.1. The Human Beings Study Area has a combined population of 7,844 persons and comprises a total land area of 5125 hectares or 51.25 square kilometres (Source: CSO Census of the Population 2016).

4.4 Receiving Environment

4.4.1 General Site Description

The site of the subject development is located in the townlands of Moneyduff and Oranhill, County Galway, approximately 590m south east of the town core of Oranmore and approximately 8km from Galway City Centre.

The proposed development site, which has an area of circa 8.7 ha, consists of a green field of previous agricultural use, with evidence of previous site clearance and levelling apparent. Access to the site will be gained from the existing roundabout constructed on the N67 road, the north-south road and the proposed roundabout where the two proposed roads meet.

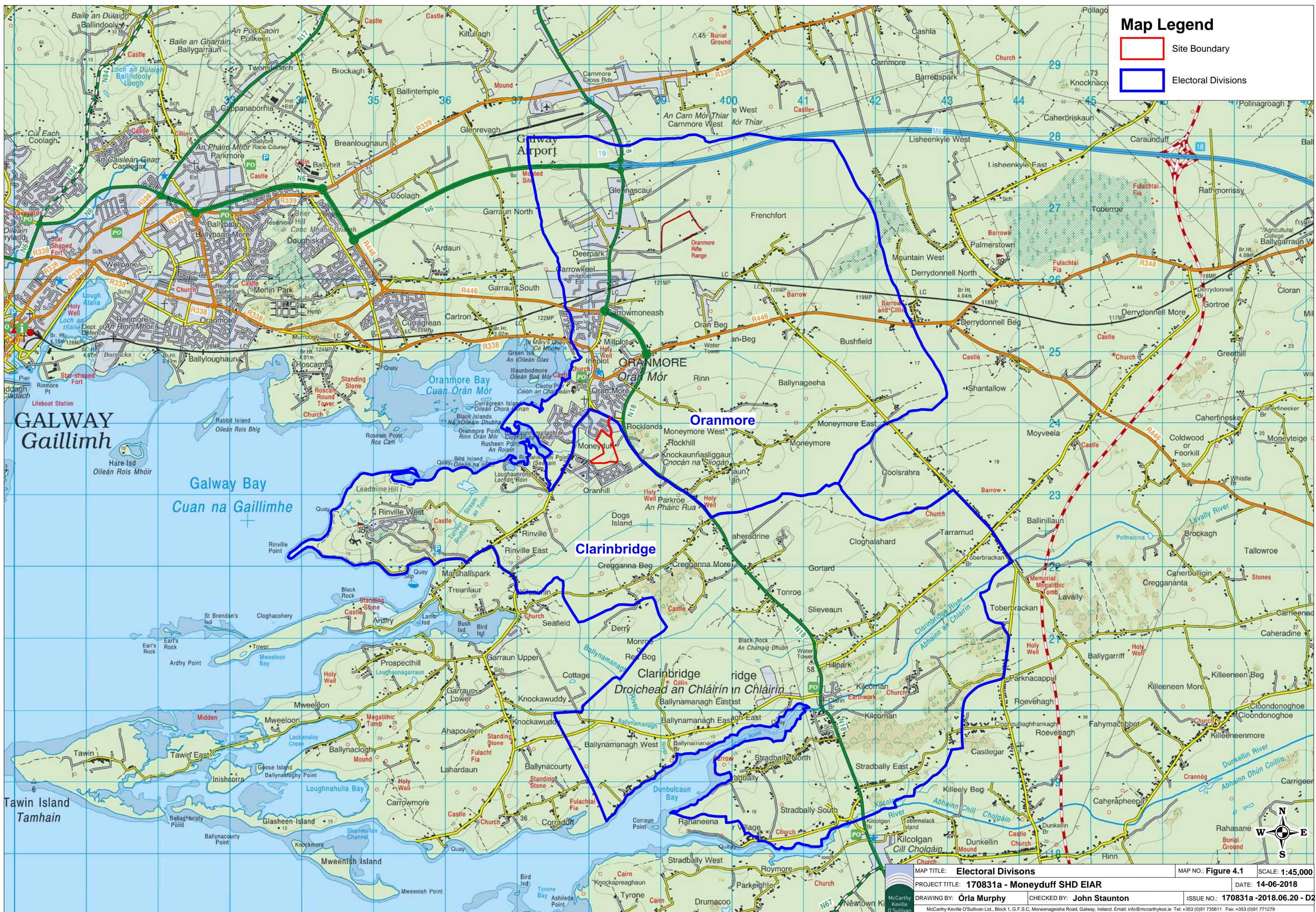
The proposed development is described in Chapter 3 but generally will consist of the following:

- 1) Construction of 212 no. residential units comprising:
 - 34 no. House Type A (four-bed semi-detached unit)
 - 54 no. House Type B (three-bed semi-detached unit)
 - 16 no. House Type C (four-bed detached)
 - 16 no. House Type D (three-bed terraced unit)
 - 24 no. House Type E (three-bed semi-detached unit with attic conversion)
 - 50 no. House Type G (25 no. two-bed ground floor duplexes and 25 no. two-bed plus study first/second floor duplexes)
 - 6 no. House Type H (two-bed duplex apartments)
 - 12 no. house Type J (two-bed terrace)
- 2) Development of a crèche facility (374 sqm) and associated outdoor play areas and car parking.
- 3) Provision of new vehicular and pedestrian site access from the North-South Oranmore Distributor Road (the route of which was permitted under An Bord Pleanála Reference PL 07.237219, which was extended under Pl Ref 15/1334).
- 4) Provision of shared communal and private open space, site landscaping, car parking, site services and all associated site development works.

There are numerous existing housing developments (ranging from single houses to multiple) located within 500m of the proposed development site. Other permitted and proposed housing development are also located in the area surrounding the site, with

Map Legend

- Site Boundary
- Electoral Divisions



GALWAY
Gaillimh

Galway Bay
Cuan na Gaillimhe

Clarinbridge

Oranmore

MAP TITLE: **Electoral Divisions** MAP NO.: **Figure 4.1** SCALE: **1:45,000**

PROJECT TITLE: **170831a - Moneyduff SHD IEAR** DATE: **14-06-2018**

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the most significant described in Section 2.5.2 of this EIAR. The closest existing occupied dwelling is located approximately 30m from the northern site boundary.

The primary land-use in the area surrounding the site comprises residential and commercial land-use, with agriculture also featuring. The site of the proposed development is currently not used for any significant agricultural activities, though there is some evidence of horse grazing.

4.4.2 Population

4.4.2.1 Population Trends

In the four years between the 2006 and the 2011 Census, the population of Ireland increased by 8.2 per cent, while the period from 2011 to 2016 saw a 3.8% increase.

Between 2006 and 2011, the population of Co. Galway grew by 8.2% to 250,653 persons, while a further growth of 3.0% occurred during 2011 to 2016, where a population of 258,058 was recorded. Other population statistics for the State, Co. Galway and the within the 2 no. EDs have been obtained from the Central Statistics Office (CSO) and are presented in Table 4.1.

Table 4.1 Population Statistics 2006 – 2016 (Source: CSO)

Area	Population			% Population Change	
	2006	2011	2016	2006-2011	2011-2016
State	4,239,848	4,588,252	4,761,865	8.2	3.8
Co. Galway	231,670	250,653	258,058	8.2	3.0
Study Area	4,895	7,596	7,844	55.2	3.3

The data presented in Table 4.1 shows that the population of the 2 no. EDs within the Human Beings study area increased by 55.2% between 2006 and 2011, and increased again by 3.3% between 2011 and 2016. This rate of population growth is much higher than that recorded at State and County level for the period between 2006 – 2011, where it then stabilises and is represents a slighter slower increase, similar to that at State and County level during 2011–2016. When the population data is examined in closer detail, it shows that the rate of population change within the 2 no. EDs has been unevenly divided between the EDs. The highest rate of population increase was between 2006 and 2011 and occurred within Clarinbridge ED, which experienced a 138.4% population increase. In comparison, the population of Clarinbridge ED increased by 8.4% during 2011-2016, whereas it decreased within Oranmore ED by 0.6%, showing the population during this time period has stabilised.

Of the two EDs that make up the study area around the proposed residential development site for this assessment, the highest population was recorded in Oranmore ED, with 4,297 persons recorded during the 2016 Census.

4.4.2.2 Population Density

The population densities recorded within the State, County Galway and the Human Beings Study Area during 2006, 2011 and 2016 Census are shown in Table 4.2.

Table 4.2 Population Density in 2006, 2011 and 2016 (Source: CSO)

Area	Population Density (Persons per square kilometre)		
	2006	2011	2016
State	60.60	65.57	68.06
County Galway	38.61	41.77	43.00
Study Area	205.48	307.03	315.30

The population density of the Human Beings Study Area recorded during the 2016 Census was 315.30 persons per square kilometre. This figure is significantly higher than the national figure of 68.06 persons per square kilometre and the figure of 43 persons per square kilometre recorded for County Galway.

The population densities recorded across the Human Beings Study Area EDs are very similar in comparison to the figures for the State and County. The population density of Oranmore ED, which contains the settlement of Oranmore, for example, is 192.86 persons per square kilometre. Clarinbridge ED, where the subject site is located, has a slighter lower population density of 122.44 persons per square kilometre.

These figures are demonstrative of the higher population levels within the established settlements of this part of Galway where residential and commercial landuse is dominant.

4.4.2.3 Household Statistics

The number of households and average household size recorded within the Republic of Ireland, County Galway and the Study Area during the 2011 and 2016 Census is shown in Table 4.3.

Table 4.3 Number of Households and Average Household Size 2011 – 2016 (Source: CSO)

Area	2011		2016	
	No. of Households	Avg. Size (persons)	No. of Households	Avg. Size (persons)
Republic of Ireland	1,654,208	2.8	1,697,665	2.8
County Galway	60,952	2.8	63,040	2.8
Study Area	2,706	2.7	2,772	2.8

In general, the figures in Table 4.3 show that while the number of households within the Republic of Ireland and County Galway has increased slightly, the average number of people per household has stayed the same, i.e. there are more households and the same amount of people per house. Although, within the Study Area, the average number of people per household has risen from 2.7 to 2.8, with Clarinbridge being the highest, having an average household size of 2.8 and 2.9 in 2011 and 2016 respectively.

4.4.3 Employment

4.4.3.1 Employment by Socio-Economic Group

Socio-economic grouping divides the population into categories depending on the level of skill or educational attainment required. The 'Higher Professional' category includes scientists, engineers, solicitors, town planners and psychologists. The 'Lower

Professional' category includes teachers, lab technicians, nurses, journalists, actors and driving instructors. Skilled occupations are divided into manual skilled, such as bricklayers and building contractors; semi-skilled, e.g. roofers and gardeners; and unskilled, which includes construction labourers, refuse collectors and window cleaners. Figure 4.2 shows the percentages of those employed in each socio-economic group in the State, County Galway and the Human Beings Study Area during 2016.

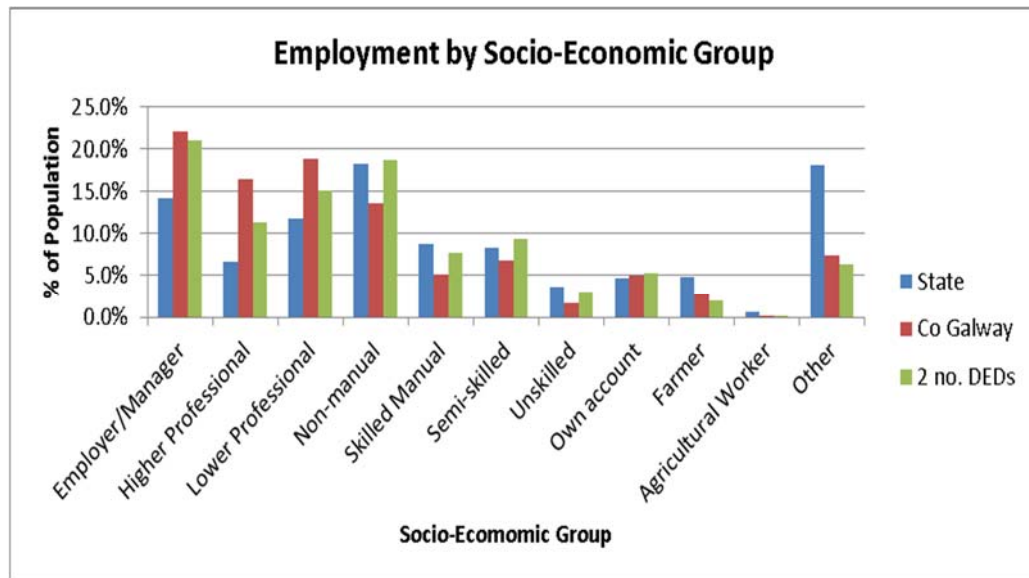


Figure 4.2 Employment by Socio-Economic Group in 2016 (Source: CSO)

The highest levels of employment within the Human Beings Study Area were recorded in the Employer/Manager category. The levels of employment within the Employers and Managers, Higher Professional, Lower Professional, Non-Manual, Skilled Manual, Semi-skilled and Own account in the Human Beings Study Area were higher than those recorded for the State, while those recorded within the Unskilled, Farmer, Agricultural Workers and Other categories were lower. In comparison to County Galway, results were similar except within for example, Higher Profession, Lower Professional and Non-manual where the biggest differences of 5%, 3.7% and 4.1% are evident respectively.

The CSO figures for socio-economic grouping have a limitation of including the entire population, rather than just those who are in the labour force. It is likely that this is what gives rise to the high proportion of the population shown to be in the 'Other' category in Figure 4.2.

4.4.4 Land-use

The total area of farmland within the 2 DEDs around the main residential site measures approximately 3,002 hectares, comprising 59% of the Study Area, according to the CSO Census of Agriculture 2010. There are 119 farms located within the 2 DEDs, with an average farm size of 25.2 hectares. This is slightly lower than the 25.8 hectare average farm size for Co. Galway. Within the DED Study Area, farming employs 227 people, and the majority of farms are family-owned and run. Table 4.4 shows the breakdown of farmed lands within the 2 DEDs. Pasture accounts for the largest proportion of farmland, followed by silage.

Table 4.4 Farm Size and Classification within the area of the proposed wind farm in 2000 (Source: CSO)

Characteristic	Value
Size of 2 DEDs	5,125 hectares
Total Area Farmed within 2 DEDs	3,002 hectares
Farmland as % of 2 DEDs	59%
Breakdown of Farmed Land	Area (hectares)
Total Pasture	1,720 ha
Total Silage	806 ha
Grazing	144 ha
Total Hay	201 ha
Total Potatoes	0 ha
Total Cereals	48 ha
Total Crops	59 ha

4.4.5 Tourism

4.4.5.1 Tourist Numbers and Revenue

Tourism is one of the major contributors to the national economy and is a significant source of full time and seasonal employment. During 2016, total tourism revenue generated in Ireland was approximately €8.3 billion. Overseas tourist visits to Ireland in 2016 grew by 8.8% to 8.74 million (‘*Tourism Facts 2016*’, Fáilte Ireland, August 2017).

Ireland is divided into seven tourism regions. Table 4.5 shows the total revenue and breakdown of overseas tourist numbers to each region in Ireland during 2016 (‘*Tourism Facts 2016*’, Fáilte Ireland, August 2017). Preliminary results for Tourism in 2017 (‘*Tourism Facts 2017*’, Fáilte Ireland, May 2018), have been released and have also been included.

Table 4.5 Overseas Tourists Revenue and Numbers 2016 (Source: Fáilte Ireland)

Region	Total Revenue (€m)	Total Revenue (€m) 2017 Preliminary	Total Number of Overseas Tourists (000s)	Total Number of Overseas Tourists (000s) 2017 Preliminary
Dublin	€1,975 m	€1,984 m	5,687	5,925
Mid-East	€251 m	€205 m	626	630
Midland	€72 m	€85 m	226	218
South-East	€273 m	€272 m	946	954
South-West	€849 m	€963 m	2,079	2,430
Mid-West	€390 m	€445 m	1,215	1,390
West	€543 m	€692 m	1,675	1,908
Border	€286 m	€276 m	815	752
Total	€4,639 m	€5,192 m	13,269	14,207

The West region, in which the proposed residential site is located, comprises Counties Galway, Mayo and Roscommon. This Region benefited from approximately 13% of the total number of overseas tourists to the country and approximately 12% of the associated tourism income generated in Ireland in 2016. This is set to increase in 2017, where over 13% of both total number of overseas tourists to the country and associated tourism income generated in Ireland were generated in the West region.

4.4.5.2 Tourist Attractions

The closest significant tourist attraction to the proposed residential site is Oranmore Castle, which is located approximately 850m to the northwest of the site. The majority of listed tourist attractions on the Discover Ireland and Irish Tourists websites are located in Galway City, Athenry, Loughrea and Kinvarra areas. These include but are not limited to the following:

- Athenry Arts and Heritage Centre
- Athenry Castle
- Loughrea Cathedral, Loughrea
- Galway City Museum
- Galway Arts Centre
- Lynchs Castle
- Galway Cathedral
- James Mitchell Museum
- Dunguaire Castle
- Coole Park

4.4.6 Local Amenities

4.4.6.1 Education

The closest primary schools are Scoil Na Ngasur and Scoil Mhuire, both located in Oranmore, approximately 380m and 650m northwest of the proposed development site respectively. There is also an Irish speaking primary school; Gaelscoil De Hid, located approximately 650m north of the proposed development site. The closest secondary school to the proposed site is Calasanctius College, which lies approximately 700 metres northwest of the site.

The third-level institution of NUI Galway is located approximately 8.9 kilometres to the west of the proposed development site.

4.4.6.2 Access and Public Transport

Within the site and surrounding vicinity, there are many local transport links and amenities which are available to all residents in the local area.

- Oranmore train station is located approximately 1.5 km north west of the town centre of Oranmore, a 33 minute walk / 9 minute cycle from the proposed residential development. The station provides train services to Galway, Dublin and Cork and intervening stations.
- Bus departures from Oranmore are from two stops - one a 10 minute walk / 3 minute cycle, and another a 23 minute walk / 7 minute cycle from the proposed residential development. Bus services from the nearer stop are an hourly service to GMIT, Galway, NUIG and Westside and intervening stops, and services from the further stop include - Galway, NUIG, GMIT, Dublin, Dublin Airport, Cork (via Limerick), Ennis (via Co Clare), and intervening stops.

Within the proposed development site, the provision and maintenance of pedestrian and cycle infrastructure is intended, ensuring connectivity with adjoining routes and off-site networks. High quality secure bicycle parking facilities for both short term and long term bicycle parking requirements will also be provided.

4.4.6.3 Amenities and Community Facilities

Most of the amenities and community facilities, including GAA and other sports clubs, youth clubs and recreational areas, available in the area are in surrounding the village of Oranmore, as well as in nearby Clarinbridge and Carnmore. The church located closest to the proposed development site is 440m north-northwest in the village of Oranmore.

There are a wide range of services available in the area. Retail and personal services are centred in Oranmore, and there are further shops and businesses located in nearby Galway City Centre. Galway County Council has a branch library in Oranmore.

The varied environment of this area of Co. Galway provides many opportunities for walking and cycling. The Oranmore Slí is a circular walking route 4.8 kilometres long, south west of the centre of Oranmore. It travels along the Maree Road, approximately 280 metres east of the development site.

4.5 Human Health

The consideration of potential impacts on human health are examined separately in the Air & Climate, Noise & Vibration, Geology and Soils, Hydrology & Hydrogeology and Traffic Sections of the EIAR. These chapters should be consulted for detailed information on potential impacts, however a brief summary of the key information is provided in Section 4.6 below. Potential issues relating to health and safety, and amenity concerns are also discussed below.

4.6 Likely and Significant Impacts and Associated Mitigation Measures

4.6.1 Do-Nothing Impact

If the proposed residential development were not to proceed, there would be no change to the existing environment. The potential for additional investment and employment in the area in relation to the construction and operation of the proposed residential site would be lost. It is considered that the 'Do Nothing' impact would be permanent, negative and slight as the proposed development site is zoned for residential development and will contribute to the much needed housing stock of Co. Galway.

4.6.2 Construction Phase

4.6.2.1 Health and Safety

During the construction phase, the operation of machinery, increased construction traffic and risk to health from onsite spillages, dust and noise; pose a potential health and safety risk to the employees of the proposed development.

The presence and operation of heavy machinery and traffic entering and leaving the subject site also poses a potential risk to members of the public that make use of the surrounding access roads.

These are considered to be short term potential significant negative impacts.

Mitigation

- A site-specific Health and Safety Plan will be in place for the proposed facility. All site staff will be made aware of and adhere to the company Health and Safety Plan.
- Only appropriately qualified and trained personnel will be permitted to operate machinery onsite.
- Appropriate barriers and signage will be used.
- The proposed development site will not be accessible to members of the public.
- The site will also be secure to prevent the risk of trespass through signage and provision of barriers.

Residual Impact

Medium-term Imperceptible Negative Impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.2 Employment and Investment

There will be an improvement in employment in the area of the proposed development, as it is anticipated that there will be an increase in job opportunities for those working within the construction sector, building services and supplies, as well as in local businesses. Those to be employed at the proposed site will be from the local area so any increased revenue from this employment returns directly to the local community.

Residual Impact

Short-term Positive impact.

Significance of Effects

Based on the assessment above there will be no significant negative effects.

4.6.2.3 Population

During the construction phase of the proposed development, there will be no negative impact on population, as it is predicted that the majority of staff and construction workers on site will be from the local community.

Residual Impact

No negative impact

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.4 Tourism

During the construction phase of the proposed development, there will be no negative impact on tourism, as there are no tourist attractions in the vicinity of the subject site.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.5 Land-use

The construction phase involves a change in land use of the site from a previous agricultural site, which has no current activity, to use as a temporary construction site. These activities will result in a permanent change in land-use to one of residential and commercial use. This is considered to be a permanent positive impact on an area of land that had no current use.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.6 Economic Activity

During the construction phase of the proposed residential development, increased employment is likely to result in an improvement in economic activity in the local area of the proposed development site, particularly within the construction sector, building services and supplies, as well as in local businesses. The increase in employment of construction workers within the local or regional area, will have a medium to long term Positive impact on the economy.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.7 Noise

There will be an increase in noise levels in the vicinity of the proposed development site during the construction phase, as a result of heavy vehicles and building operations. The potential noise impacts that will occur during the construction phase of the proposed development are further described in Section 9 of this EIAR.

Mitigation

Noise emissions arising from construction phase operations at the proposed development site will not exceed the identified 65 dB LAeq 1 h criterion at receptors, with a single exception: use of tracked excavators over approximately 15 t in size in immediate proximity to the boundaries adjoining Beech Park and Coill Clocha is likely to give rise to levels which marginally exceed the criterion. This will be avoided through use of excavators which do not exceed 15 t approximately, depending on plant power output and condition.

Best practice measures for noise control will be adhered to onsite during the construction phase of the proposed development in order to mitigate the slight negative impact associated with this phase of the development. The measures include:

- Construction operations will in general be confined to the period Monday-Friday 0800-1900 h, and Saturday 08:00-14:00 h.
- Plant used onsite during the construction phase will be maintained in a satisfactory condition and in accordance with manufacturer recommendations. In particular, exhaust silencers will be fitted and operating correctly at all times. Defective silencers will be immediately replaced.

- Where it is proposed to operate plant during the period 0700–0800 h, standard ‘beeper’ reversing alarms will be replaced with flat spectrum alarms.

Residual Impact

Short-term slight Negative Impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.8 Dust and Air Quality

Potential dust and vehicle emission sources during the operational phase of the proposed development include the use of machinery and plant and on-site vehicular traffic. The entry and exit of vehicles from the site may result in the transfer of dust to the public road, particularly if the weather is wet. This may cause nuisance to residents and other road users, thereby creating a short-term slight negative impact.

Mitigation

The following measure will be enforced to ensure that dust and vehicle emission nuisance during the operational phase beyond the site boundary is minimised.

- All construction vehicles and plant will be maintained in good operational order while onsite, thereby minimising any emissions that arise.
- Overburden will be progressively removed from the working area in advance of construction.
- Dampening down the dust at the source by the use of barriers such as debris netting on scaffolding around the building to block dust escaping where the building is within 10m of the site boundary where residential properties exist.
- Site road ways will be maintained in a stoned hard core condition not allowing soil to accumulate which when dry can create dust.
- Wheel wash equipment will be set up at the site exit gate for all construction vehicles to pass through prior to leaving the site thus ensuring that no dirt etc. is transported outside the site onto the roadways.
- Plant and equipment that have the potential to create volumes of dust will have appropriate attachments to allow water source to dampen dust to not allow it to get airborne.
- Deploy Road Sweeper as required on External Roads.

Residual Impact

Short-term Imperceptible Negative Impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.2.9 Traffic

Construction traffic travelling to the proposed development site will use the existing entrance located off the existing Rocklands Roundabout on the N67. The permitted link road under planning ref 15/1334 shall connect to this roundabout allowing access to the proposed development.

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. Due to the designated access point off the existing Rocklands roundabout, allowing delivery vehicles to pull off the site, there will be no significant disruption on the traffic flows on the N67 as a result of the

construction of the development. It is recommended that all deliveries are provided with instructions/ directions on accessing the site from the N67 roundabout. The potential impacts for traffic and transportation are discussed in detail in Section 12 of this EIA.

Residual Impact

Short-term Slight Negative Impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3 Operational Phase

4.6.3.1 Health and Safety

Upon completion, the proposed development is unlikely to have any negative significant impact on human health.

The design, layout and separation distances of the duplex blocks have been designed to optimise the ingress of natural daylight/sunlight and to incorporate passive surveillance, with all units designed to include secure, passively surveyed, own door access.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.2 Employment and Investment

The proposed residential development will result in the creation of temporary and some full and part-time employment positions in the area. Those to be employed at the proposed site will be from the local community so any increased revenue from this employment returns directly to the local community.

Once the site has been developed and is fully operational, the site will require the hiring of those with specialist skills in regard to upkeep and maintenance of the development, which could result in the transfer of these skills into the local workforce, thereby having a long-term moderate positive impact on the local skills base.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.3 Population

Once the site has been developed and is fully operational, there will be a change to the population of the Study Area, where an increase in housing will cause an influx of new residents into the area. This will allow for changes in population trends, population density, household size and age structure in a manner that has been planned for and provided for in the Galway County Development Plan.

Residual Impact

No negative impact

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.4 Tourism

During the operational phase of the proposed development, there will be no negative impact on tourism. The increase in number of residents within the local or regional area, will have a slight long term positive impact on tourism.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.5 Land-use

The site is currently a greenfield site, past use as agricultural land. The proposed residential development will result in a change of land-use to residential. The total proposed area to be upgraded measures 8.642 hectares in area. The change in the land-use of this area would be significant in the context of the local and wider area, with resultant permanent moderate positive impact on land-use.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.6 Noise

There will be an imperceptible increase in noise levels in the vicinity of the proposed development site once the development has been built, as a result of increased population and increased vehicles making use of the development. The potential noise impacts that will occur during the operational phase of the proposed development are further described in Section 9 of this EIAR.

Mitigation

No mitigation will be required on site as the impact is assessed as being imperceptible, and will not be noticed within the area which already contains many residential developments.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.7 Dust and Air Quality

There will be no impact on human health from dust emissions in the vicinity of the proposed development site once the development has been built and all construction vehicles and personal are offsite.

Any further works which may need to occur on site as part of maintenance and repairs during the operation of the site, may cause slight short term dust emissions, and is

unlikely to have any negative significant impact on human health. The potential dust and air quality impacts that will occur during the operational phase of the proposed development are further described in Section 8 of this EIA.

Mitigation

No mitigation will be required on site as the impact is assessed as being imperceptible, and will not be noticed within the area which already contains many residential developments.

Residual Impact

No negative impact.

Significance of Effects

Based on the assessment above there will be no significant effects

4.6.3.8 Traffic

The Traffic and Transport Assessment, as presented in Section 12 of the EIA, calculates that during the operation phase of the proposed residential development, access to the subject site is to be facilitated via the road infrastructure proposed as part of an adjoining committed development, as already permitted. Link roads will also connect to Oranhill and Coill Clocha providing additional routes to the surrounding network. TRICS data for similar sized residential developments were obtained in order to inform the trip rate associated with such a development. It is anticipated that 108 trip movements are expected during the AM peak period and 131 movements during the PM peak period. Details of the TRICS data utilised are included in Appendix A of the Traffic and Transport Report included in this submission.

Further details on the traffic and transportation impact assessment are presented in Section 12 of this EIA.

Mitigation

The proposed development has integrated a number of measures in line with the relevant standards and guidelines, such as DMURS 2013 and the National cycle Manual, which promotes the use of sustainable travel to and from the site. The proposed site is suitably located close to a number of amenities located in the town of Oranmore including, schools, shops, sports facilities etc. which will allow for less congestion from private traffic.

Residual Impact

Medium to Long-term Slight Negative Impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.3.9 Vulnerability of the Project to Natural Disaster

A residential development is not a recognised source of pollution. Should a major accident or natural disaster occur the potential sources of pollution onsite during the operational phase is limited. Sources of pollution at the proposed residential development with the potential to cause significant environmental pollution and associated negative effects on health such as bulk storage of hydrocarbons or chemicals, storage of wastes etc. are limited.

Mitigation

There is no site specific mitigation required for the proposed residential development. Ireland is a geologically stable country with a mild temperate climate. The potential natural disasters that may occur are therefore limited to flooding and fire. The risk of flooding is addressed in Section 7 of this EIAR. It is considered that the risk of significant fire occurring, affecting the proposed site and causing the site to have significant environmental effects is limited. As described earlier, there are no significant sources of pollution within the proposed residential site with the potential to cause environmental or health effects.

Residual Impact

Unlikely Imperceptible Temporary Negative Impact.

Significance of Effects

Based on the assessment above there will be no significant effects.

4.6.4 Cumulative Impacts

The potential cumulative impacts between the proposed residential development and other projects described in Section 2.5.2 of this report, hereafter referred to as the other projects, have been considered in terms of impacts on human beings.

4.6.4.1 Health and Safety

Any potential cumulative impacts between the construction of the proposed residential development and the other projects in terms of health and safety will be mitigated by the requirement for all projects to adhere to Health & Safety legislation.

4.6.4.2 Dust and Noise

Potential cumulative impacts associated with noise are addressed in Section 9 of this EIAR and conclude that there will be no adverse noise impact on the local population or human health.

In regards to dust, mitigation measures addressed in Section 4.5.2.8 of this chapter will ensure there are no significant effects on local population or human health.

4.6.4.3 Traffic

Potential cumulative impacts associated with traffic are addressed in Sections 12.6.3 of this EIAR.

The findings of the assessment indicate that due to the reduction of traffic on the N67 because of the proposed road infrastructure under GCC PR 09/1925 (and extended under 15/1334), designed to facilitate access to the development proposed under 09/1925, and to operate as a link road to serve traffic from the N67 National Route to the Maree Road (and future Development); the additional volumes of traffic proposed for the N67 generated from the proposed development will have a minimal effect on the traffic volumes.

4.6.4.4 Employment and Investment

In terms of employment and economic benefit, there will be a significant, short-term, positive, cumulative impact between the proposed residential site and the other projects due to the majority of construction workers and materials being sourced locally, thereby helping to sustain employment in the construction trade.

The injection of money in the form of salaries and wages to those employed during the construction phase of the proposed residential site and the other projects, has the potential to result in a slight increase in household spending and demand for goods and services in the local area. This would result in local retailers and businesses experiencing a short-term positive impact on their cash flow.

4.6.4.5 Population

Those working within the proposed residential site and the other projects in the area during the construction phase, will travel daily to the site from the wider area. These projects will have no impact on the population of the Study Area in terms of changes to population trends or density, household size or age structure.

4.6.4.6 Land-use

The surrounding land-uses of agriculture and residential will continue during the operation phase of the proposed residential site.

The impact of the proposed residential site is negligible as the site will have a positive impact on the surrounding area, on a site that previously had no other use. As there will be a negligible impact the potential for cumulative impacts are negligible.

4.6.4.7 Tourism and Amenity

There are no tourist attractions in the immediate vicinity of the proposed residential site. The closest tourist attraction to the proposed site is Oranmore Castle, which is located approximately 850m to the northwest of the site.

There will be a slight positive cumulative operational impact on tourism between the proposed residential site and other projects in the area, where an increase in residents within the area will allow for a positive influence on local tourism.