# Environmental Impact Assessment Report

**KILLALA DATA CENTRE DEVELOPMENT**

**MULLAFARRY AND TAWNAGHMORE UPPER, KILLALA, CO. MAYO**

## Volume 1 – Non Technical Summary

**Prepared by: AWN Consulting, November 2024**

**Prepared for: Mayo Data Hub Limited**

# EIA REPORT

# NON-TECHNICAL SUMMARY

## NON-TECHNICAL SUMMARY CONTENTS

# 1.0 INTRODUCTION TO THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

## 1.1 INTRODUCTION

This Non-Technical Summary (NTS) has been prepared to accompany the Environmental Impact Assessment (EIA) Report. The Environmental Impact Assessment Report (EIAR) has been prepared in respect of the proposed Data Centre development and ancillary services, referred throughout the report as the Proposed Development.

In this chapter of the EIAR, the Proposed Development the Environmental Impact Assessment (EIA) process is summarised, and an overview of the methodology used for preparing the EIAR provided.

## 1.2 RELEVANT LEGISLATIVE REQUIREMENT FOR ENVIRONMENTAL IMPACT ASSESSMENT

This EIA Report has been prepared in accordance with the most relevant guidance and legalisation, including the following:

- EIA Directive (2011/92/EU) as amended by EIA Directive (2014/52/EU)
- Planning and Development Act 2000 (as amended)
- Planning and Development Regulations 2001 (as amended)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018)
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022)
- European Commission, Environmental Impact Assessment of Projects Guidance on Scoping (Directive 2011/92/EU as amended) (European Commission, 2017)
- European Commission, Environmental Impact Assessment of Projects Guidance on Screening (Directive 2011/92/EU as amended) (European Commission, 2017)
- Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017)

## 1.3 FORMAT AND STRUCTURE OF THIS EIA REPORT

This EIAR report examines each environmental factor in a separate chapter. These EIAR chapters have been prepared by suitably qualified expert(s) and have considered the construction and operational phases of the Proposed Development under the following headings:

- Assessment Methodology;
- Receiving Environment;
- Characteristics of the Proposed Development;
- Potential Impacts of the Proposed Development;
- Mitigation Measures;
- Monitoring or Reinstatement Measures;
- Residual Effects of the Proposed Development; and

- Cumulative Impacts of the Proposed Development.



### 1.4 DESCRIPTION OF EFFECTS

The quality, magnitude and duration of potential effects are defined within each specialist chapter of this EIA in accordance with the criteria provided in the EPA *'Guidelines on the information to be contained in Environmental Impact Assessment Reports'* (2022) as outlined in Table 1.3 of the chapter.

### 1.5 ADDITIONAL ASSESSMENTS

The additional reports and/or assessments required under legalisation or EU Directives other than the EIA Directive in respect of the Proposed Development are described in this section.

- **Appropriate Assessment (AA) Screening and NIS Report** - prepared for the Proposed Development by Ger O'Donohoe of Moore Group and is included with the planning application (Chapter 7 – Appendix 7.2).
- **Water Framework Directive (WFD) Assessment** - prepared for the Proposed Development by AWN and is included with the planning application (Chapter 6 – Appendix 6.2).
- **Industrials Emissions Directive (IED) licence application** - required prior to commencement of operation as combustion of fuels will be >50MW thermal input (aggregate).
- **Greenhouse Gas Emissions Regulations** - EPA Greenhouse Gas (GHG) Emissions permit in accordance with the EPA Act 1992, as amended. Required prior to commencement of operation.
- **Seveso Directive / COMAH Regulations** - the Proposed Development is not located within close proximity or within statutory consultation distances of any Notified Seveso Establishment. However, an adjacent development which has a current application for planning is noted by the Applicant and considered within the EIAR. Refer to Chapter 4 (Population and Human Health) for more detail.
- **Energy & Sustainability Statement** - prepared by Ethos Engineering

## 2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

### 2.1 INTRODUCTION

Figure 2.1 (below) presents a schematic layout of the Proposed Development including landscaping. The development comprises the construction of a single data centre development a sprinkler tank and pump house along with associated structures, generators, parking and vehicular routes, landscaping and all associated development. The datacentre building comprises a footprint of c. 185m x 77m and a maximum height of 21.9 m. A fenced generator yard is located to the south of the data centre building with 25 generator flues grouped into five columns. The development boundary also incorporates a new 110 kV substation which will form part of a separate SID application.

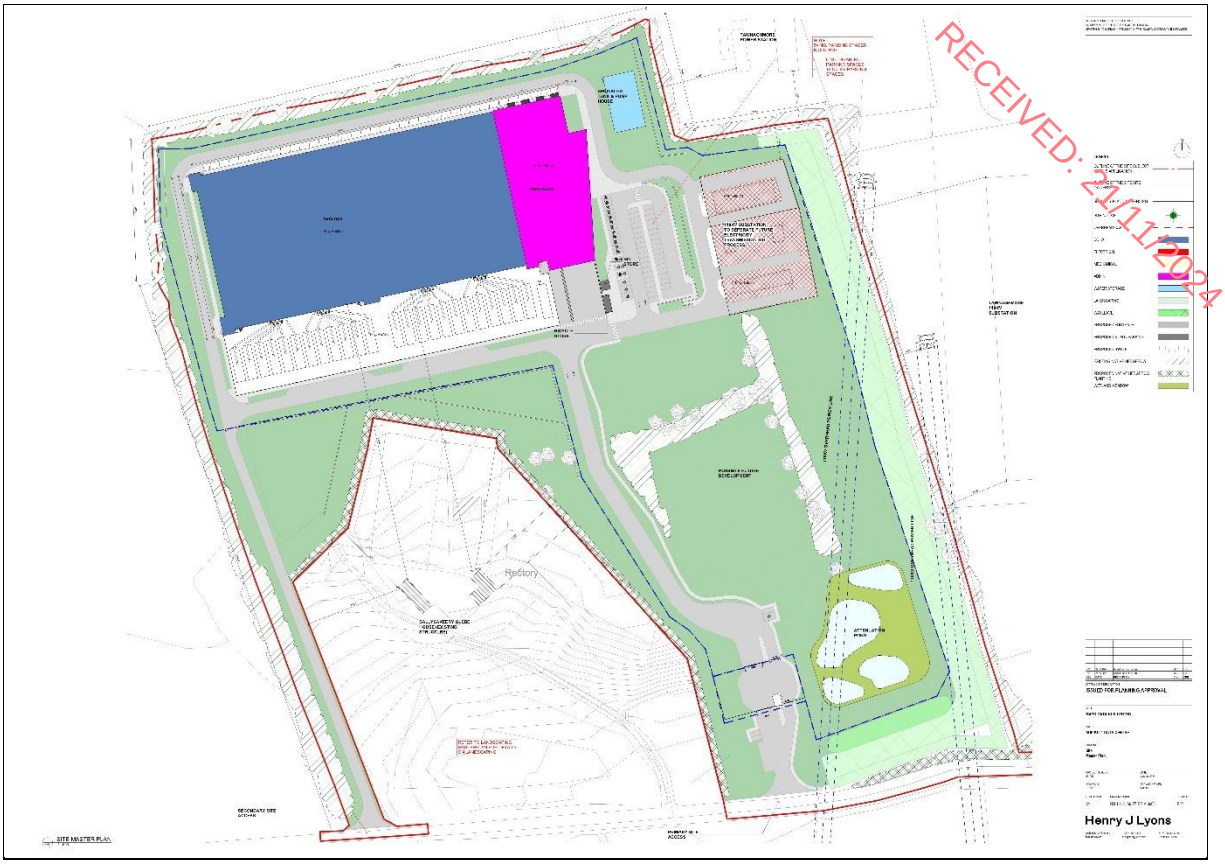


***Figure* 2.1** *Proposed Site Masterplan (Source:HJL KLL1-HJL-S0-ZZ-DR-A-D-0005)*

The generators are designed to automatically activate and provide power pending restoration of mains power. There will be 75 MWe of generation which is c.210MW thermal input.

The data centre facility, once fully operational will have an IT load in the order of 40 MW which will require c. 50 MW average electrical power to operate. This power supply will be provided from the national grid with emergency and peaking ability available from HVO fuelled generators. It will require an EPA IED licence to operate.

The data centre equipment rooms and electrical rooms require a consistent temperature and humidity to operate. The cooling system within the data halls will be a closed loop water circulatory system with roof chillers forming the primary cooling solution. A closed-loop system reuses the same volume of water, which minimises water usage (Overall water requirement is 0.047 l/s (peak) of which 0.04 (peak) is industrial).

## 2.2 BASELINE ENVIRONMENT

Figure 2.2 presents the lands subject to this application indicated by the red line boundary. The subject site is located adjacent to Killala Industrial Park and is located on undeveloped greenfield lands. The ground is characterised by a steep gradient, descending from approximately 61.0 m along the northern boundary to the lowest point at around 42.0 m, resulting in a level change of nearly 20 m. The redline boundary extends along the Mullaferry road to facilitate connection for wastewater treatment at the Uiscé Éireann (UÉ) wastewater treatment plant.


***Figure 2.2*** *Proposed Development Lands (indicative site boundary) (Source: Google Earth)*

The perimeters of the site are generally formed by hedgerows which also form internal field boundaries. The surrounding area is primarily defined by agricultural uses to the west and south and industrial uses (including historical) to the north and east. Surrounding development includes residential dwellings, a 110kv Electricity Supply Board Networks (ESBN) substation, an Uisce Éireann (UÉ) wastewater treatment plant site (Killala, Licence No. D0067-01) and Killala Community Windfarm is located immediately north of the site.

To the south of the redline boundary is Ballysakeery Glebe House, a 19th century house and surrounding gardens (NIAH No 31302208). To the west of the site there is a mix of residential dwellings, agricultural land, Mullafarry Presbyterian Church and a graveyard along with two quarries (Killala Rock and Mullafarry Quarry).

The site is also adjacent to the future land fall of the AEConnect 1 Transatlantic Data Cable. AEConnect 1 is a transatlantic subsea fibre optic cable extending from Long Island, New York, to Killala, Mayo, positioning the West of Ireland as a potential key telecommunications and data gateway.

The closest permitted licensed facility is the Tawnaghmore Electricity Generating Plant 'SSE Generation Ireland Limited (Killala)' located adjacent to the eastern boundary of the site.

## 2.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT



*Construction Phase*

Phase 1 enabling works will take approximately 4 months followed by a combined c. 20 months for construction and 3 months for testing. It is estimated that there will initially be 40 staff on site on a typical day, however during peak construction periods this is expected to fluctuate up to 300 staff and contractors on site per day.

Once the majority of the construction works are completed the landscaping will be completed in accordance with the specification of the project landscape architect (KFLA - landscape strategy) and to the agreement with the Local Authority. The Proposed Development includes embedded landscape and visual impact mitigation strategies, including retention and enhancement of existing site vegetation, earthwork bunding, additional woodland areas, belts and wildflower meadows, to enhance visual screening and biodiversity. Strategic placement of woodland belts, aims to:

- Enhance screening for sensitive visual receptors, including heritage properties to the south and southwest, residential properties to the southwest and west, and the R314 to the west.
- Increase biodiversity by connecting with the surrounding network of hedgerows.

The main potential impacts during the construction and commissioning phase which require mitigation are:

- Management of run-off water in terms of silt runoff and temporary dewatering (see Chapter 5 (Land, Soils, Geology and Hydrogeology) and Chapter 6 (Hydrology) for further information on potential impacts and mitigation measures);
- Impacts on human beings in terms of nuisances relating to the air quality of the environs due to dust and other particulate matter generated (see Chapter 8 (Air Quality) for further information);
- Impacts on human beings in terms of nuisances due to plant noise and vibration from equipment (see Chapter 10 (Noise and Vibration) for further information on potential impacts and mitigation measures;
- Effects on the road network (due to construction workers and other staff attending site (see Chapter 13 (Traffic and Transportation) for further information on potential impacts and mitigation measures;
- Impact on local landscape views while landscaping strategy is underway (see Chapter 11) and
- The generation of construction waste materials from excavation works and other construction waste (see Chapter 15 (Waste Management) for further information on potential impacts and mitigation measures).

Each specialist chapter of this EIA Report has assessed the construction activity, prevailing environmental conditions, and proximity to sensitive receptors to determine the likely significant effects on the environment and have proposed mitigation measures (where required) to minimise potential impacts and ensure that the project is completed in a safe and environmentally responsible manner.

CSEA have prepared an *Outline Construction Management Plan* (CMP) (2024). The CMP incorporates mitigation measures outlined in the EIA report as they relate to the construction phase. The CMP includes emergency response procedures in the event

of a spill, leak, fire or other environmental incident related to construction. This is an active document which is continuously updated to manage risk during the construction programme.



*Operational Phase*

It is estimated that when the site is fully developed that there will be up to 32 staff onsite per shift. The rotational shift system consists of 3 shifts over a 24 hour period.

There will be a small increase in traffic owing to staff movements to and from the Proposed Development once operational (Chapter 13 Traffic & Transportation). The traffic modelling results indicate that the proposed main site access junction would operate well within capacity during both peak hours.

The development has incorporated design measures to minimise effect on air and noise quality and modelling has been undertaken to confirm there are no significant environmental effects (ref Chapter 8 and Chapter 10).

Sustainable design and energy conservation features are incorporated throughout the development. Features. These measures are outlined in the Energy and Sustainability Statement prepared by Ethos Engineers. Climate effects are outlined in Chapter 9. The backup generators will be able to run with Hydrotreated Vegetable Oil (HVO). The project incorporates decarbonisation strategies including PV and the use of renewable CPPAs. The site is proximal to substantial renewable generation (Glenora, Sheskin, Bellacorick, etc) and will seek to enter into CPPAs with renewable (wind) generators/producers, including direct/private wire as and when it becomes available.

## 2.4 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

Each specialist has considered the list of relevant planning permissions from the surrounding areas of the Proposed Development presented in Appendix 2.1. and in particular local planning permissions which are presented in Table 2.1 and Figure 2.3 below. The cumulative assessment also considered the planned 110kV substation located within the site boundary.

***Table 2.1*** *Selection of local planning permissions. Full listing in Appendix 2.1*

| MCC Planning Ref. | Project ID | Decision Date |
|---|---|---|
| 2360266 Constant Energy | Hydrogen Plant | Further Information requested on 21/08/2023 and Further Information received on 04/09/2024 (Pending Decision) |
| 2360134 Mayo Renewables Ltd. | Tawnaghmore Power Station | Permitted 29/10/2024 |
| 2193 Lisglennon Ad Ltd. | Anaerobic Digestion Biogas Facility | Permitted 07/06/2022 |
| 21708 BP Mitchell Haulage & Plant Hire Ltd | Continued use and operation of existing quarry | Permitted 11/01/2022 |
| 21342 Mullafarry Quarry Ltd. | Filling of lands with Inert waste – Quarry Restoration | Permitted 22/11/2021 |
| 17619 Killala Community Windfarm | Wind Farm – Amendment to existing Windfarm | Permitted 11/01/2018 |
| 2193 Lisgennon anaerobic digestion biogas facility | anaerobic digestion biogas facility | Permitted 2014 – No commencement |




***Figure 2.3*** *Local Planning Permissions. Source Google Mapping. Indicative site in red. Full listing in Appendix 2.1*

# 3.0 ALTERNATIVES



## 3.1 INTRODUCTION

The requirement to consider alternatives within an EIAR is set out in Annex IV (2) of the EIA Directive (2014/52/EU) and in Schedule 6 of the Planning and Development Regulations, 2001, as amended. Reasonable alternatives may include project design proposals, location, size and scale, which are relevant to the Proposed Development and its specific characteristics.

## 3.2 DO NOTHING ALTERNATIVE

In the context of EIA the "do nothing" alternative refers to the option of not implementing the proposed project or activity and maintaining the current state or status quo. In other words, it is a scenario where no action is taken, and the environment is left unchanged.

In the event that the Proposed Development does not proceed, the specific National, regional and local strategic need for a database facility would still exist.

It is stated in Chapter 12.13.3 of the Mayo County Council Development Plan 2022-2028 (MCDP) that "*opportunities exist for Killala for a data centre and/or renewable energy hub at the Killala Business Park*". The designated site for the Proposed Development is currently unzoned under the MCDP, however the development is located in close proximity to other permitted and proposed renewable energy developments, in addition other industrial developments within Killala Business Park to the east.

If the Proposed Development does not proceed, the existing site would remain as a greenfield site and would result in a neutral impact on the environment. Therefore, opting for the 'do-nothing' scenario would be underutilising this strategically positioned site, and would contravene existing plans and policies.

## 3.3 ALTERNATIVE PROJECT LOCATIONS

The current location of the Proposed Development within Killala was decided by a number of preceding plans, policies and circumstances all of which pre-determined that a location in the vicinity of Killala offers an ideal project location in terms of planning, sustainability and the environment and is in accordance with the relevant policies and objectives of the MCDP.

Following consultation with Mayo County Council two suitable land banks were identified adjacent to Killala Business Park. One located southeast of Killala Business Park (the eastern parcel) and the other southwest of Killala Business Park (the western parcel).

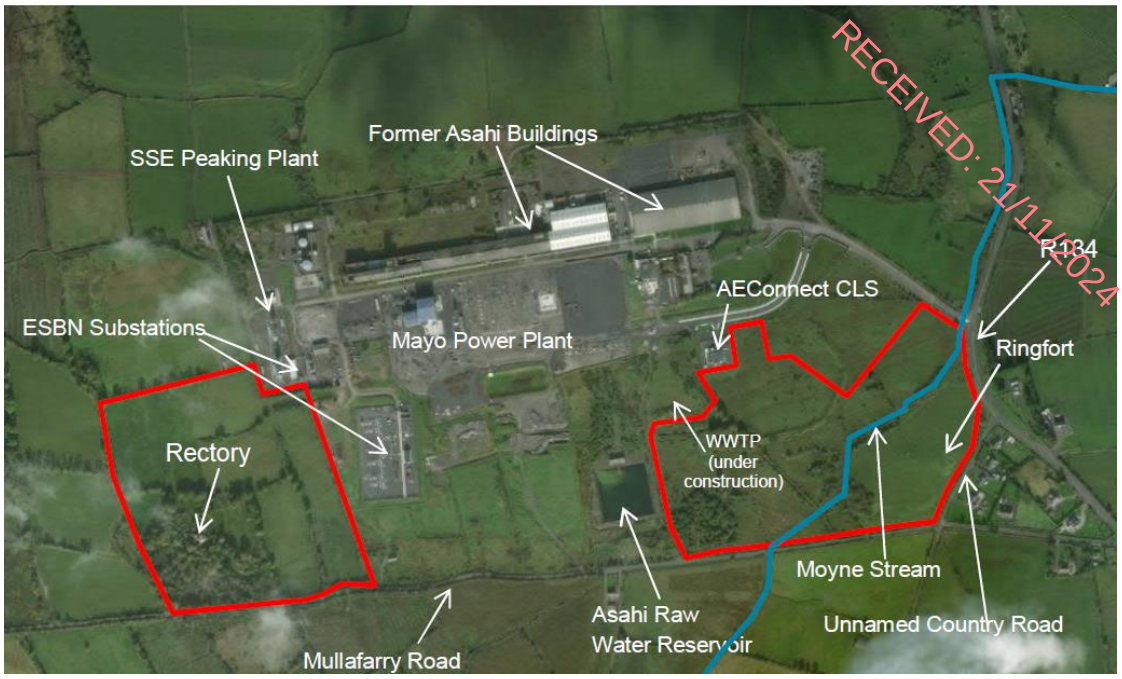


***Figure 3.1*** *Western and Eastern Parcels (source. Aecom (2019) Technical Due Diligence Assessment: Site at Killala Business Park)*

After careful analysis and comparison between the two parcels, it was determined that both have similar environmental constraints and are suitable for development with appropriate design and mitigation, with a slight preference shown for the western parcel. As can be seen in the ultimate Proposed Development design as presented in Chapter 2, a way leave through the western most portions of the eastern parcel (avoiding the known archaeological features, and the Moyne River) is being sought for the installation of sewerage to access the Killala waste water treatment plant.

Killlala Business Park has significant in-place infrastructure in terms of supporting a proposed Data Centre including HV (high voltage) lines, an upgraded substation, large capacity water lines, a newly built wastewater treatment facility, a planned battery array, and an adjacent peaker-plant complex with expansion potential.

## 3.4 ALTERNATIVE DESIGN / LAYOUTS

The project design team undertook a comprehensive design process to determine an effective and efficient layout for the Proposed Development, which has regard for the operation requirements, environmental sensitivities of the site and the surrounding context.

The design process was an iterative one, which while ultimately driven by the need to provide for a Data Centre that met the MCC objective outlined in Section 3.2, was also influenced by the following environmental criteria:

- To confine the most “industrial” aspect of the Proposed Development closest to similar adjacent land uses within the Killala Business Park – strengthening existing land use character, and capitalise upon adjacent availability of electric power sources.
- To reduce visual impact by confining the bulkiest portions of the Proposed Development to the northern extents of the site, stepping down the site by berming and tree planting, thereby affording greater opportunity for screening.

- To reduce the impact upon the architectural heritage of the Glebe house by confining installation to the most northern extent of the subject lands.
- Preserve as far as possible the existing hedgerows both internally and along the boundaries of the site.
- To seek the opportunities to maintain wooded areas and to provide further Green Infrastructure (GI) where feasible.
- Reduce the amount of excavation and geotechnical works on site.



## 3.5 ALTERNATIVE PROCESSES

In terms of the Proposed Development processes, the various layout options considered in the EIAR will generally necessitate the same power requirements, and result in the same waste and environmental emissions. The Proposed Development is guided by the applicant's standard specifications, and the flexibility to select alternative processes is limited for this type of development as opposed to an activity that has more complex equipment and processes.

Notwithstanding this the Proposed Development will further reduce, as far as is feasible and reasonable, the primary energy consumption and $CO_2$ emissions of the Proposed Development through best practice design measures, and the potential to make use of renewable energy technologies. In addition to this the Proposed Development has embraced the opportunity to utilise other sustainable measures such as SuDS measures, and closed loop cooling systems which minimises water requirements.

## 3.6 ALTERNATIVE MITIGATION

Mitigation measures have been considered based on the effect on quality, duration of impact, probability and significance of effects. The selected mitigation measures for the Proposed Development are outlined in each of the EIA Report Chapters 4-15. By considering a range of mitigation measures and strategies, the specialist team has sought to ensure that the Proposed Development is as environmentally sustainable and responsible as possible.

## 3.7 CONCLUSIONS ON ALTERNATIVES

The Proposed Development was carefully designed, taking into consideration the site context and existing neighbouring commercial and residential properties and the local environmental conditions including air quality, noise and vibration and visual impact.

The siting of the proposed Data Centre has been carefully selected based on a suitably comprehensive assessment of reasonable alternative site locations, layouts and technologies. The Proposed Development presents minimised environmental impacts, while maximising the strategic potential of the site with respect to proximity to power and fibre connections.

In conclusion, it is considered that the proposed site has capacity for development and is highly suitable for the Proposed Development.

# 4.0 POPULATION AND HUMAN HEALTH



## 4.1 INTRODUCTION

This chapter has been prepared to assess the likely significant impacts on Population and Human Health in respect of the Proposed Development.

Human health should be considered in the context of environmental pathways which may affect health such as air quality, noise, water and soil quality. All can contribute to negative effects on human health by facilitating the transport of contaminants or pollutants. An evaluation of the effects of these pathways on health, by considering the accepted standards of safety in dose, exposure or risk of air quality and noise levels for example, is considered appropriate, as these standards have been arrived at via scientific and medical research. Where these topics are dealt with in further detail elsewhere in this EIA Report, the relevant chapters have been cross referenced in this Chapter to provide the Planning Authority with a context for their determination.

## 4.2 BASELINE ENVIRONMENT

The baseline assessment considered the Population Health Sensitivity and Location and Character of the Local Environment.

The site is located adjacent to the Killala Business Park and is not subject to any specific zoning objective but is directly contiguous to an existing area of employment and industrial and energy-related development. Elsewhere the area is largely rural with a number of individual occupied dwellings and Ballysakeery Glebe House which is currently unoccupied and derelict but proposed for restoration as a public building. Three schools are located > 2.5 km from the site.

There are no protected structures or National Monuments on the site There are no listed or scenic views, no landscape or amenity designations or protected trees pertaining to the site.

The proposed development site is not at risk of any major accidents, hazards of natural disasters. There are no significant risks in relation to the proposed development and Major Accident Hazards. The site is not a Seveso facility.

## 4.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

The main potential impacts on population and human health from the proposed development are potential for spills/leaks, air emissions, noise, visual, and traffic impacts:

- Landscape character will be affected by increased construction traffic and the visible presence of construction rigs and cranes from various locations.
- During construction of the proposed development, there is a risk of accidental pollution incidences to ground but no source pathway linkage to a public water supply or amenity area.
- The key elements of construction of the proposed development with potential impacts on populations and human health from air quality and climate impacts

are dust soiling effects, dust ($PM_{10}$ and $PM_{2.5}$) emissions, engine emissions from construction traffic and changes in traffic flows on nearby road links.

- Construction will generate vehicular trips to and from site during the construction phase and increasing traffic flows at nearby existing junctions. Construction traffic also has the potential for short-term, slightly negative effects related to noise, vibration, and dust, as well as potential issues with inappropriate parking and conflicts with active travel users.



*Operational Phase*

The main potential impacts on population and human health from the proposed development are potential for spills/leaks, air emissions, noise, visual, and traffic impacts:

- With reference to Chapter 11 (Landscape and Visual), it is considered that the overall impact of the Proposed Development on the local landscape will be ***moderate and neutral*** during operation. Visual impacts and amenity impacts perceived by individual persons are highly subjective and difficult to characterise however, the visual impacts considered will be ranging from ***neutral, not significant to slight and adverse*** due to the operation of the proposed development.
- With reference to receiving waters there will be no likely impact on potable water supplies or water amenities. Therefore, there is no **potential for significant impacts** to human health.
- As outlined in Chapter 8 (Air Quality) air dispersion modelling of operational traffic emissions was undertaken to assess the impact of the development with reference to National and European ambient air quality standards which are based on the protection of human health. Due to the design of the proposed development there is **no potential for significant impacts** to air quality and human health during operation as a result of emissions.
- As detailed in Chapter 10 (Noise and Vibration), plant items with appropriate noise ratings and, where necessary, appropriately selected remedial measures (e.g. enclosures, silencers etc.) will be specified in order to ensure no significant increase in the prevailing background noise level occurs at existing noise sensitive locations. Noise modelling has been undertaken to confirm that the noise design measures will ensure a ***long-term not significant impact*** *to human health.*
- The Traffic and Transportation Assessment (TTA), accompanying this EIAR, has determined that the traffic effects of the Proposed Development on the local road network during operations will be minimum and will remain well within capacity. During the operational phase, with regards to peak hour and daily traffic, the impact will be ***neutral, imperceptible*** and ***brief***.
- There is a negligible risk of natural disasters or major accidents as a result of proximity to Seveso sites, and the proposed development is not at risk for flooding. The potential effect is therefore ***imperceptible,*** and unlikely, in respect of Major Accident Hazards or Natural Disasters on Population and Human Health during operations.

## 4.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

The mitigation measures to address the potential impacts on Population and Human Health from the construction phase of the Proposed Development and post-mitigation residual effects include:

- With reference to Chapter 12 (Landscape and Visual), no mitigation measures are required other than standard best practice construction site management (e.g., erection and maintenance of site hoarding, orderly storage of materials and vehicles, etc.). residual effect will be ***slight*** and ***adverse***, but ***temporary***
- Construction phase mitigation will include appointing a noise liaison officer to manage notifications and complaints, implementing noise-reducing practices such as switching off idle equipment and maintaining haul roads, and applying Best Practicable Means (BPM) for selecting quietest possible equipment. Enhanced sound reduction, strategic equipment placement, regular maintenance, and time restrictions on high-noise activities will further minimize disruption. A dedicated site representative will oversee noise and vibration management. Residual impact will be ***negative, not significant*** and ***short term***.
- A Construction Management Plan (CMP) has been developed to minimize the construction phase impact on public road safety and user amenity. It addresses dust and noise control, working hours, and parking arrangements. Key measures include ongoing assessment of construction traffic routes, prohibiting waiting on public roads, scheduling material deliveries, and providing vehicle and wheel washing facilities. Prior to the commencement of construction, the main contractor will prepare a detailed Construction Traffic Management Plan (CTMP). This plan will outline site logistics, including the site location, diversions for active travel users, and designated areas for loading, unloading, and material storage. Residual impact will be ***short-term neutral imperceptible.***

- It is predicted that there will be a slight positive impact on local business activity during the construction phase with the increased presence of construction workers using local facilities. This job creation will result in a ***positive***, local to regional, ***imperceptible***, ***short-term*** socioeconomic impact.

*Operational Phase*

The design and mitigation measures to address the potential impacts on Population and Human Health from the operational phase of the Proposed Development and post-mitigation residual effects include:

- With reference to Chapter 11 (Landscape and Visual), mitigation for landscape effects is integrated into the layout and design, with no additional measures needed to reduce impacts to an acceptable level. Landscape impacts will evolve as the landscape matures, resulting in a cohesive site characterized by mature trees, shrubs, and colourful wildflower meadows. Overall, the regional magnitude of effects will be ***negligible, long term,*** and ***neutral***, at the operational phase. Locally, the landscape and visual impacts will be considered ***medium, permanent*** and ***neutral***.
- As noted in Chapter 8 (Air Quality), no additional mitigation measures are required for the operational phase of the proposed development in respect of air quality. There is negligible additional operational phase traffic associated with the Proposed Development. The potential impact on human health from air quality during the operational phase is a breach of the ambient air quality standards as a result of air emissions from the site boundary. Atmospheric emissions of NO2 from the site will be in compliance with the ambient air quality standards which are based on the protection of the environment and human health. The impacts to human health are predicted to be ***direct, long-term*** and ***not significant***, which is overall not significant in EIA terms.
- As detailed in Chapter 10 (Noise and Vibrations), to minimize noise from external plant, low-noise equipment will be used, and in-line acoustic attenuators or ‘silencers’ will be incorporated for stacks and exhausts as needed. This approach,

integrated into the detailed design process, will ensure that the site operates within the noise limits established by best practice guidance. The potential health effects of exposure to excessive noise include sleep disturbance. The *Community Noise* guidelines published by Stockholm University in 1995 for the World Health Organisation recommend an internal night-time level of no more than 30 dB $L_{Aeq,8hr}$. As presented in Chapter 10, Table 10.18, the cumulative noise levels with the proposed development added to the prevailing noise environment are 37.5 dB $L_{Aeq,T}$ external to the worst-affected noise-sensitive location. Allowing for a 15 dB reduction across an open window, the expected noise level internal noise level is well within the indoor WHO criterion. The expected residual health effect due to noise from the proposed development is classified as ***neutral***, ***not significant*** and ***long-term***.

- As outlined in Chapter 13 (traffic and Transportation), a Mobility Management Plan (MMP) has been developed to promote healthier and more sustainable transportation options for future staff, reducing reliance on private cars. The MMP includes specific actions such as providing information on local public transport, offering tax incentives for public transport use, encouraging cycling through the cycle-to-work scheme, promoting carpooling, and providing cycle parking, showers, and lockers. Implementing the MMP from the early operational phase is expected to maintain the development's impact on human health as ***neutral, imperceptible,*** and ***brief.***

The Proposed Development will result in an ***imperceptible, positive*** impact due to increased employment opportunities and improved accessibility to jobs in the area during the operation phases.

## 4.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

The implementation of mitigation measures within each chapter as well as the compliance of adjacent developments with their respective planning permissions, will ensure there will be minimal cumulative potential for change during the construction phase of the Proposed Development.

In a worst-case scenario, multiple developments in the area could begin construction concurrently or overlap in the construction phase and contribute to additional impacts in terms of traffic, dust, and noise.

Contractors for the Proposed Development will be contractually required to operate in compliance with a project-specific CMP, application of noise limits and hours of operation and implementation of a Construction Traffic Management Plan which will include the mitigation measures outlined in this EIA Report. There are no predicted cumulative impacts arising from the construction phase of the proposed development.

The residual impact of the proposed development in combination with other planned or permitted developments is direct, ***short-term, negative*** and ***not significant***.

*Operational Phase*

The potential cumulative impacts of the Proposed Development during the operational phase in terms of Air Emissions, Noise generation and Traffic assessment in the context of the Permitted Development and permitted and planned developments have been considered in Chapter 8 (Air Quality), Chapter 10 (Noise and Vibration) and Chapter 13 (Traffic). The assessments include modelling of cumulative effects and

indicate that there are ***no likely significant adverse impacts*** on Human Health either alone or in combination with any likely future projects.



## 5.0 LAND, SOILS, GEOLOGY AND HYDROGEOLOGY

### 5.1 INTRODUCTION

This chapter assesses and evaluates the likely significant impacts of the Proposed Development on the land, soil, geological and hydrogeological aspects of the site and surrounding area. In assessing likely potential and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects.

### 5.2 BASELINE ENVIRONMENT

The Proposed Development site is currently a greenfield site comprising c. 10.58 hectares of undeveloped, agricultural lands adjacent to Killala Business Park.

There is an old rectory house (Ballysakeery Glebe House) and associated structures (sheds) located to the south of the site. The area of land between the Glebe House and the Mullafarry Road is boggy and contains a stand of trees and shrubs. There is a compacted gravel access road leading from Mullafarry Road to the old rectory house.

A small drainage ditch is located along the southern boundary, adjacent to the Mullafarry Road, which eventually discharges into the Moyne Stream. The only other feature observed across this area of land was improved grassland (for grazing), hedgerows and a historic Lime Kiln, located c. 110 m east of the Glebe House

Inspection of the available Geological Survey of Ireland (GSI mapping data (GSI, 2024) shows that the bedrock geology underlying the site is Visean limestone and calcareous shale comprising dark fine-grained limestone and shale and is classified as a "*Locally Important Aquifer*" (LI), which is described by the GSI as bedrock as "*Bedrock which is Moderately Productive only in Local Zones*".

There are no source pathway linkages to public water supplies, groundwater dependent wetlands or landfills.

The site is underlain by the Bellacorick-Killala Groundwater Body (European Code: IE_WE_G_0041). Based on the most recent data (www.epa.ie), the Bellacorick-Killala GWB for which the site is located entirely within, has a WFD status of "*Good*" (2016-2021) and a WFD risk score of "*Not at Risk*" of not achieving good status.

The GSI presently classifies the aquifer with a vulnerability classification of "*Rock at or near Surface or Karst*" (X). The south and eastern portion of the site is classified as "*Extreme*" (E). To the immediate south of the site the GSI classifies the aquifer vulnerability as being "*High*" (H).

The GSI vulnerability classification is relatively consistent with data obtained from the site investigations carried out by Site Investigations Limited between August and September 2024, where the natural ground conditions were shown to be dominated by brown sandy slightly gravelly silty CLAY with cobbles ranging in depth between 0.4m BGL at BH04 and 0.6m BGL at TP05 (north-west of site) to 1.8m BGL at TP01 and 1.6m BGL at TP02 (south & south-east of site).

## 5.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT



*Construction Phase*

In absence of mitigation measures, the construction phase would present potential impacts associated to the following activities:

- Excavation (including localised dewatering) and Infilling.
- Accidental Spills, discharges, and leaks

Without the employment of mitigation measures the potential impacts during the construction phase on land, soils and geology, hydrogeology (groundwater) are **negative, not significant** and **short term**.

*Operational Phase*

In absence of mitigation methods but with design measures in place (including paving, bunding of HVO tank, stormwater design and oil interceptors), the operational phase would present potential impacts associated to the following activities:

- Spills of HVO during filling of tanks.
- Slight increase in hardstanding.

In the absence of mitigation measures (or design measures) the potential impacts during the operational phase on land, soils, geology and hydrogeology are **negative, not significant**, and **long-term**.

## 5.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

In order to reduce impacts on the soils, geological and hydrogeological environment, a number of mitigation measures will be adopted as part of the construction works on site.

Implementation of a Construction Management Plan (CMP) including:

- Control of soil excavation;
- Sourcing of fill and aggregates
- Water management during construction
- Fuel and chemical handling.

The predicted impact on the geological and hydrogeological environment during the construction phase is ***neutral, imperceptible*** and ***short-term,*** the magnitude of impact is considered ***negligible***.

*Operational Phase*

Hydrogenated Vegetable Oil (HVO) is proposed for use rather than diesel which will minimise risk to the receiving water environment.

A number of design measures are included ion the design which minimises the likelihood of any spills entering the soil and groundwater environment. The proposed surface water drainage system comprises multiple design measures to protect ground

and surface water quality (interception system, petrol inceptors, settlement tanks, SuDS measures, etc.). No further mitigation measures are required during the operational phase.

The predicted impact on the land, geological and hydrogeological environment during the construction phase is ***neutral, imperceptible*** and ***long-term,*** the magnitude of impact is considered *negligible*.



### 5.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

The chapter has considered the cumulative impact of the proposed development with any/all relevant other planned or permitted developments.

Existing developments that are already built and in operation contribute to the characterisation of the baseline environment.

*Construction Phase*

All developments will have to incorporate measures to protect soil and water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010 and S.I. 266 of 2016). As a result, there will be minimal cumulative potential for change in soil quality or the natural groundwater regime. The likely cumulative impact is considered to be **short-term, neutral** and **imperceptible**.

*Operational Phase*

All developments are required to manage groundwater discharges in accordance with S.I. 9 of 2010 and S.I. 266 of 2016 amendments. As such, there will be no cumulative impact to groundwater quality and, therefore, there will be no cumulative impact on the Groundwater Body Status. The operation of the proposed development is concluded to have a **long-term**, **imperceptible significance** with a **neutral** impact on soil and groundwater in combination with other developments in the surrounding area.

## 6.0 HYDROLOGY (WATER)

### 6.1 INTRODUCTION

This chapter assesses and evaluates the likely significant effects of the development on the hydrological aspects of the site and surrounding area. In assessing likely potential and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects.

### 6.2 BASELINE ENVIRONMENT

The proposed development site is currently a greenfield site comprising c. 10.58 hectares of undeveloped, agricultural lands adjacent to the southwest portion of Killala Business Park. The entire area is undeveloped and in agricultural use.

According to the EPA maps, the proposed development site lies within the Moy and Killala Bay Catchment (Catchment ID: 34) and the Abbeytown_SC_010 Sub-Catchment (Sub-Catchment ID: 34_19). A small drainage ditch is located along the southern boundary of the site, adjacent to the Mullafarry Road, which eventually

discharges into the Moyne 34 Stream located c. 3.5 km downstream (0.55 km south-east of the site - linear distance). The Moyne 34 Stream flows in a north-easterly direction and eventually discharges to Killala Bay coastal waterbody a further c. 3.25 km downstream (c. 2.52 km north-east/linear distance), where the receiving environment is designated as part of the Killala Bay/Moy Estuary SAC and the Killala Bay/Moy Estuary SPA.



A Site-Specific Flood Risk Assessment (SSFRA) undertaken for the proposed development by Clifton Scannell Emerson Associates (CSEA) shows the site is located entirely within the CFRAM Flood Zone C i.e. the probability of flooding is low (less than 0.1% AEP or in 1 in 1000 chance a year) for river and coastal flooding. No residual risk on or offsite is foreseen as the development is located outside any flooding zones associated with future scenarios (MRFS and HEFS). The development includes the implementation of SUDS and an attenuation system. The design includes for a climate change allowance.

There are no source pathway linkages to Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPA in the vicinity of the site.

Records received from Uisce Éireann indicate that there is an existing 250mm uPVC watermain running through the northern section of the site.The closest Uisce Éireann WWTP, Killala WWTP (Licence Number: D0067-01) is located in the east section of Killala Business Park. Killala WWTP serves as the municipal wastewater treatment plant for Killala village and environs.

There is an existing 750mm concrete outfall pipe (which formerly served Asahi Chemical Plant) to Killala Bay coastal waterbody. The outfall pipe is located on the north east section of the site just north of the Killala Waste Water Treatment Plant (WWTP) (Active Licence No. D0067-01).

## 6.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

In absence of mitigation measures, the construction phase would present potential impacts associated with the following activities:

- Increased surface run-off and sediment loading in run-off.
- Accidental spills, discharges and leaks impacting surface water quality.
- Impact on off site drainage ditch due to crossing for foul sewer construction

Without the consideration and employment of mitigation measures, the potential impacts during the construction phase on surface water quality are ***negative***, ***not significant,*** and ***short term***.

*Operational Phase*

The operational phase includes design measures to manage water quality and run-off in relation to:

- Slight increase in hardstanding.
- Runoff from car park area.
- Accidental leak from 25 no. HVO backup generators supplied by individual double lined/bunded tanks or ‘belly tanks’ (36,000 litres).

In the absence of mitigation measures (or design measures) the potential impacts during the operational phase are **negative, imperceptible**, and **long-term**.



## 6.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

In order to reduce impacts on the soils, geological and hydrogeological environment, a number of mitigation measures will be adopted as part of the construction works on site.

Implementation of a Construction Management Plan (CMP) including:

- Fuel and chemical handling.
- Management of run-off water quality during crossing of the site stream
- Silt reduction measures on site will include a combination of silt fencing and settlement measures (silt traps, attenuation pond).

The predicted impact on the hydrological environment with mitigation during the construction phase is ***neutral, imperceptible*** and ***short-term,*** the magnitude of impact is considered ***negligible***.

*Operational Phase*

The design ensures that the stormwater leaving the site is to be attenuated and treated within the new development site boundary to ensure suitable quality, before discharging to the existing drainage ditch located along the sites southern boundary and eventually to the Moyne 34 Stream and Killala Bay.

The proposed development stormwater drainage network design includes sustainable drainage systems (SuDS). The collected run-off will be conveyed via the proposed gravity surface water sewer system towards the proposed attenuation pond (4500 $m^3$) in the south east of the site, including a forebay berm and a permanent pond feature located in the south-eastern section of the development lands. The attenuation pond will reduce the risk of flooding, improve water quality by acting as natural filters and removing pollutants and excess nutrients. Additionally, it will create a habitat for diverse aquatic species, promoting biodiversity and ecological balance. Interceptors are located in the generator yard and at the outlet of the attenuation pond prior to discharge off site. Drainage in the refuelling area is diverted to the foul sewer.

No further mitigation measures are to be required during the operational phase. Irish Water has confirmed that the connection is feasible subject to upgrades.

The predicted impact on the hydrological environment during the construction phase is ***neutral, imperceptible*** and ***long-term,*** the magnitude of impact is considered ***negligible***.

## 6.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

The cumulative impact of the proposed development with any/all relevant other planned or permitted developments are discussed below.

*Construction Phase*

The works contractors for other planned or permitted developments as set out in Chapter 2, Section 2.8 and Appendix 2.1 of this EIA Report. will be obliged to ensure that measures are in place to protect water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009 and S.I. 77 of 2019).



As a result, there will be minimal cumulative potential for change in the natural hydrological regime. The cumulative impact is considered to be ***short-term***, ***neutral*** and ***imperceptible***.

*Operational Phase*

All the operational cumulative developments are required to manage discharges in accordance with S.I 272/2009 and 77/2019 amendments. The implementation of mitigation and monitoring measures detailed in Section 6.6.1; and 6.7.1 of this EIA as well as the compliance of the other permitted developments with their respective planning conditions, will ensure there will be minimal cumulative potential for change in surface water during the operational phase of the proposed development. As such there will be no cumulative impact to surface water quality and therefore there will be no cumulative impact on the surface waterbody status.

The operation of the proposed development is concluded to have a ***long-term***, ***imperceptible*** significance with a ***neutral*** impact on surface water quality.

# 7.0 BIODIVERSITY

## 7.1 INTRODUCTION

This chapter describes the existing flora and fauna present on site and within the zone of influence of the site. Likely effects as a result of the development are described. A Natura Impact Statement is provided in Appendix 7.2 A bat survey is included in Appendix 7.1 .

## 7.2 BASELINE ENVIRONMENT

The majority of the fields within the proposed development area are improved with relatively high levels of grazing with the exception of the lower or southern portions of the two most southeasterly fields in the main data centre site which grade to Wet grassland and wetter sections form a Marsh mosaic adjacent to the local access road.

There are a number of field boundaries with associated hedgerows with drainage predominantly flowing south toward the local road where it is conveyed in a drainage ditch toward the Moyne Stream which ultimately discharges to Killala Bay approximately 3.25 river kilometres downstream where the receiving environment is designated as part of the Killala Bay/Moy Estuary SAC and the Killala Bay/Moy Estuary SPA.

There are no Annexed habitats at the proposed development site.

The habitats under the footprint of the proposed development are of relatively low local ecological value.

Three species of bat were recorded commuting around the overall site; Common and Soprano Pipistrelles and Leisler's bat. In addition registrations from an unidentified Myotis bat were recorded.



There are no suitable habitats for otters within the site.

There were no badger setts along field boundaries which would be disturbed and no signs of badgers in the study area.

There are abundant woodland habitats available for breeding birds in the proposed development area.

Field surveys carried out deemed the overall lands to be unsuitable feeding and/or roosting sites for wintering birds, due to habitat conditions being dominated by semi-improved agricultural grassland or subject to relatively high levels of grazing disturbance.

## 7.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

There are no direct pathways to water courses leading to European sites. Significant effects on any European sites as a result of the proposed development are unlikely given the distance of removal. However, best practice construction management will be employed to control surface water leading to the Moyne Stream and Killala Bay.

There will be no significant negative effects on species of non-volant mammals including badgers and otters during the construction stage.

Potential effects on nesting birds may occur as a result of vegetation cutting.

*Operational Phase*

There will be no negative operational effects on badgers and otters during the operational phase.

Inappropriate or excessive illumination of hedgerow areas at night can cause disturbance to roosting, commuting and foraging bats.

## 7.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

A landscape plan has been prepared by KFLA landscape architect showing the location of the proposed compensatory planting around the site. All replacement planting will be of native stock and of local provenance for the promotion of biodiversity.

The majority of trees surveyed on the Proposed Development site displayed low roosting potential for bats. However, not all trees could be surveyed at the time of year and mature trees to be removed will be subject to survey by an ecologist who has experience in Ground Level Tree Assessment (GLTA) for Potential Bat Roost Features (PRFs). This measure will be undertaken as part on ongoing seasonal surveys.

The retention of existing green corridors such as hedgerows and promotion of biodiversity through native species landscaping will be undertaken where feasible. All areas of hedgerow vegetation removed will be fully reinstated with an appropriate native planting mix of local provenance.



*Operational Phase*

In addition to retention of existing green areas where feasible, the Proposed Development includes a Landscape Plan which provides for biodiversity offset through the additional planting.

Best practice measures will be included in the lighting design. Specialist bollard or low-level downward directional luminaires will be used on site. No white light will be permitted as this has the greatest impact on bats. Lighting will be fitted with LED luminaires using warm white colours. Luminaires will avoid the component of light most disturbing to bats.

*Residual Effects*

With the employment of appropriate mitigation measures with regard to local biodiversity, the Proposed Development will have a **neutral, imperceptible and long-term** effect on biodiversity.

## 7.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

A review of the National Planning Application Database was undertaken. The database was queried for developments granted planning permission within the zone of impact of the Proposed Development.

The proposed development will have no predicted impacts on European sites; therefore in-combination and cumulative effects can be ruled out.

Given the inclusion of strict Best Practice Construction Measures to be included and enforced through a Construction Environmental Management Plan, the proposed development and surrounding will have no significant negative construction effects on local ecology and biodiversity or on hydrologically linked European sites, therefore significant cumulative impacts can be ruled out.

Once operational, the landscape strategy for the project to enhance and strengthen the existing native floral species, while retaining existing trees remaining grassland areas. There will be no negative operational effects on biodiversity, habitats or fauna therefore, there are no cumulative effects.

The Mayo County Development Plan in complying with the requirements of the Habitats Directive and Habitats Regulations requires that all Projects and Plans that could affect European sites and/or Biodiversity in the same zone of influence of the Proposed Development would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, or where potential effects on Biodiversity are identified, that appropriate, industry standard, successfully employable mitigation measures are put in place to avoid, reduce or ameliorate negative effects. In this way any cumulative or in-combination effects with other Plans or Projects in the same zone of influence, will be avoided.

# 8.0 AIR QUALITY



## 8.1 INTRODUCTION

The assessment of Air Quality is contained within Chapter 8 of the EIAR.

## 8.2 BASELINE ENVIRONMENT

Baseline data and data available from similar environments indicates that levels of nitrogen dioxide ($NO_2$), particulate matter less than 10 microns ($PM_{10}$) and particulate matter less than 2.5 microns ($PM_{2.5}$) and carbon monoxide (CO) are generally well below the National and European Union (EU) ambient air quality standards.Potential Impacts of the Proposed Development

*Construction Phase*

An assessment of the potential dust impacts as a result of the construction phase of the proposed development was carried out based on the UK Institute for Air Quality Management 2024 guidance *'Guidance on the assessment of Dust from Demolition and Construction'*. This established the sensitivity of the area to impacts from construction dust in terms of dust soiling of property and human health effects. The surrounding area was assessed as being of medium sensitivity to dust soiling and of low sensitivity to dust-related human health effects.

The sensitivity of the area was combined with the dust emission magnitude for the site under three distinct categories: earthworks, construction and trackout (movement of vehicles) in order to determine the mitigation measures necessary to avoid significant dust impacts. It was determined that there is at most a high risk of dust related impacts associated with the proposed development. In the absence of mitigation there is the potential for ***direct***, ***short-term, negative*** and ***slight*** effects on air quality.

In addition, construction phase traffic emissions have the potential to impact air quality, particularly due to the increase in the number of HGVs accessing the site. Construction stage traffic did not meet the scoping criteria for a detailed modelling assessment outlined in Transport Infrastructure Ireland's 2022 guidance document '*Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106'* As a result a detailed air assessment of construction stage traffic emissions has been scoped out from any further assessment and the construction stage traffic emissions will have a ***direct***, ***short-term, negative*** and ***imperceptible*** effect on air quality.

*Operational Phase*

Operational phase traffic has the potential to impact air quality due to vehicle exhaust emissions as a result of the increased number of vehicles accessing the site. Operational stage traffic did not meet the scoping criteria for a detailed modelling assessment outlined in Transport Infrastructure Ireland's 2022 guidance document '*Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106'* As a result a detailed air assessment of operational stage traffic emissions has been scoped out from any further assessment and the operational stage traffic emissions will have a ***direct***, ***long-term, negative*** and ***imperceptible*** impact on air quality.

The operational phase assessment also involved air dispersion modelling of through the release of nitrogen dioxide ($NO_2$), particulate matter (as $PM_{10}$ and $PM_{2.5}$) and carbon monoxide (CO) from 25 no. standby backup generators as part of the proposed

development. The assessment evaluated the impacts of emissions at off-site locations including nearby residential properties and sensitive ecological sites. The dispersion modelling has determined that concentrations of all pollutants are in compliance with the relevant ambient air quality standards. The effect on air quality will be ***direct, long-term, negative*** and ***not significant***.



## 8.3 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

Detailed dust mitigation measures are outlined within Section 8.7.1 of Chapter 8 and are incorporated into the Construction Environmental Management Plan for the site to ensure that no significant nuisance as a result of construction dust emissions occurs at nearby sensitive receptors.

Once these best practice mitigation measures, derived from the Institute for Air Quality Management 2024 guidance *'Guidance on the assessment of Dust from Demolition and Construction'* as well as other relevant dust management guidance, are implemented the residual effect on air quality during the construction of the proposed development is considered ***direct, short-term, localised, negative*** and ***not significant***, posing no nuisance at nearby sensitive receptors (such as local residences).

*Operational Phase*

As the effect of the predicted concentrations of pollutants due to road traffic will be imperceptible, and not significant due to operational emissions, no mitigation is required.

The residual effect of operational traffic on air quality has been assessed as ***direct***, ***long-term, negative*** and ***imperceptible***. The residual effect of operational emissions on air quality has been assessed as ***direct, long-term, negative*** and ***not significant***.

## 8.4 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

There is the potential for cumulative impacts to air quality should the construction phase of the proposed development coincide with that of other developments within 500 m of the site. A review of proposed/permitted developments in the vicinity of the site was undertaken and relevant developments with the potential for cumulative impacts were identified.

There is at most a low risk of dust impacts associated with the proposed development. The dust mitigation measures outlined in Section 8.7.1 of Chapter 8 will be applied during the construction phase which will avoid significant cumulative impacts on air quality. With appropriate mitigation measures in place, the predicted cumulative impacts on air quality associated with the construction phase of the proposed development and the permitted cumulative developments are deemed ***direct, short-term, negative*** and ***not significant***.

*Operational Phase*

The operational phase effect on air quality from road traffic associated with the proposed development are predicted to be imperceptible. The traffic data provided for the operational stage air quality assessment included cumulative traffic associated with other developments in the area. The cumulative effect on air quality are considered ***direct***, ***long-term, negative*** and ***imperceptible***.

The operational phase effect on air quality from operational emissions of the 25 no. are standby backup generators predicted to be not significant. The cumulative assessment involved modelling the proposed development emissions, as well as nearby EPA licensed sites and facilities with planning applications. The cumulative effect on air quality are considered ***direct, short-term, negative*** and ***not significant***.

Overall, there are no significant impacts to air quality are predicted during the construction or operational phases of the proposed development

# 9.0 CLIMATE

## 9.1 INTRODUCTION

The assessment of Climate is contained within Chapter 9 of the EIAR.

## 9.2 BASELINE ENVIRONMENT

The existing climate baseline can be determined by reference to data from the EPA on Ireland's total greenhouse gas (GHG) emissions and compliance with European Union's Effort Sharing Decision *"EU 2020 Strategy"* (Decision 406/2009/EC). The EPA estimate that Ireland had total GHG emissions of 60.62 Mt $CO_2$e in 2023. The provisional 2023 figures indicate that Ireland has used 63.9% of the 295 Mt $CO_2$e Carbon Budget for the five-year period 2021-2025. EPA projections indicate that assuming full implementation of the Climate Action Plan and the use of the flexibilities available Ireland can achieve an emissions reduction of 30% by 2030.

## 9.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

The potential impacts on climate have been assessed in two distinct ways – a greenhouse gas assessment (GHGA) and a climate change risk assessment (CCRA). The GHGA quantifies the GHG emissions from a project over its lifetime and compares these emissions to relevant carbon budgets, targets and policy to contextualise magnitude. The CCRA considers a projects vulnerability to climate change and identifies adaptation measures to increase project resilience.

*Construction Phase*

Construction traffic would be expected to be the dominant source of greenhouse gas emissions during this phase of the Proposed Development. Construction vehicles and machinery will give rise to $CO_2$ and $N_2O$ emissions during construction of the Proposed Development. The Institute of Air Quality Management document '*Guidance on the Assessment of Dust from Demolition and Construction'* (IAQM, 2024) states that site traffic and plant is unlikely to make a significant impact on climate.

It is important to note that the potential impacts associated with the construction phase of the Proposed Development are short-term in nature. When the mitigation measures are implemented, GHG emissions from the site will not be significant. Due to the duration and nature of the construction activities, $CO_2$ and $N_2O$ emissions from construction vehicles and machinery will have a *short-term* and *imperceptibly negative* impact on climate and thus have a *not significant* impact.



*Operational Phase*

Traffic emissions associated with vehicles accessing the site during the operational phase have been screened out of a detailed assessment as the traffic changes are not considered significant.

The Proposed Development has the potential, in the absence of mitigation, to indirectly (from the use of electricity) and directly (through onsite backup generators) release significant quantities of GHG emissions during the operational phase of the project. However, as the capacity of the Proposed Development is greater than 20 MW rated thermal input, a greenhouse gas emission permit will be required for the facility which will be regulated under the EU-wide Emission Trading System (ETS) which necessitates offsetting GHG emissions through the purchase of 'carbon credits'. Thus, the Proposed Development will operate under a system where GHG emissions will become increasingly costly and will encourage GHG emission reductions.

In addition, the proposed development has been designed so as to reduce impacts to climate once operational where possible. The effect of climate is considered ***direct, long-term, negative*** and ***slight,*** which is considered ***not significant*** with regard to the construction and operational phase.

A CCRA was conducted to consider the vulnerability of the proposed development to climate change, as per the TII 2022 PE-ENV-01104 guidance. This involves an analysis of the sensitivity and exposure of the development to future climate hazards which together provide a measure of vulnerability. The hazards assessed included flooding (coastal, pluvial, fluvial); extreme heat; extreme cold; drought; extreme wind; lightning, hail, fog, wildfire and landslides. The proposed development is predicted to have at most low vulnerabilities to the various climate hazards and therefore the effect of climate change on the proposed development is considered ***direct, long-term, negative*** and ***imperceptible,*** which is considered overall ***not significant*** with regard to the construction and operational phase.

Overall, no significant impacts to climate are predicted during the construction or operational phases of the proposed development.

## 9.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

A number of best practice mitigation measures are proposed for the construction phase of the proposed development to ensure that impacts to climate are minimised. Design mitigation has been considered when assessing the vulnerability of the development to future climate change.

*Operational Phase*



The impact to climate as a result of a proposed development must be assessed as a whole for all phases. The proposed development will result in some impacts to climate through the release of GHGs. TII state that the crux of assessing significance is *"not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050"*. The proposed development has been designed to reduce the impact on climate where possible during operation.

In addition, it is the intention of the applicant that measures be implemented in line with "best practice" as outlined in the IEMA guidance (IEMA, 2022). The backup generators will be able to run with Hydrotreated Vegetable Oil (HVO). The phasing of the development and the period taken to reach full capacity within each planned phase will result in the 'ramping up' of demand associated with the project over a number of years during the lifetime of the permission and thus the GHG emissions in the early years of the project will be an overestimation of reality. In addition, the project intends to facilitate Corporate Purchase Power Agreement (CPPA) between renewable energy projects and Project's tenants, which would offset residual GHG emissions associated with the Proposed Development. Once mitigation measures are put in place, the effect of the proposed development in relation to GHG emissions is considered ***direct, long-term, negative*** and ***slight,*** which is overall ***not significant*** in EIA terms.

In relation to climate change vulnerability, it has been assessed that there are no significant risks to the proposed development as a result of climate change. The residual effect of climate change on the proposed development is considered ***direct, long-term, negative*** and ***imperceptible***, which is overall ***not significant*** in EIA terms.

## 9.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

No significant cumulative impacts are expected during the construction phase of the development.

The cumulative impact of the construction phase of the proposed development in relation to GHG emissions is considered ***direct, long-term, negative*** and ***imperceptible,*** which is overall ***not significant*** in EIA terms.

*Operational Phase*

With respect to the requirement for a cumulative assessment PE-ENV-01104 states that *"for GHG Assessment is the global climate and impacts on the receptor from a project are not geographically constrained, the normal approach for cumulative assessment in EIA is not considered applicable."*

However, by presenting the GHG impact of a project in the context of its alignment to Ireland's trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland's ability to meet its national carbon reduction target. Therefore, the assessment approach is considered to be inherently cumulative.

The cumulative impact of the proposed development in relation to GHG emissions is considered ***direct, long-term, negative*** and ***slight,*** which is overall ***not significant*** in EIA terms.



## 10.0 NOISE AND VIBRATION

### 10.1 INTRODUCTION

Chapter 10 of the EIAR provides information on the assessment of the noise and vibration impacts on the surrounding environment during both the construction and operational phases of the proposed development. A review of the applicable standards and guidelines has been carried out in order to set a range of acceptable noise and vibration criteria for the construction and operational phases of the proposed development. Predictive calculations have been performed to determine the noise and vibration impact on the nearest sensitive locations during the construction and operational phases. Finally, the predicted noise levels are compared to criteria and the effects are described in terms of their quality, frequency and duration.

### 10.2 BASELINE ENVIRONMENT

The baseline noise environment at the closest noise sensitive locations to the proposed development and across the development site is influenced by road traffic both local and distant, along with activities within neighbouring sites and a degree of distant construction noise.

### 10.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

Construction noise calculations have been performed representing typical noise levels associated with the construction of the various phases of work on site. The results of the assessment have determined that construction works can take place within the construction noise criteria adopted for the project. The resultant noise effects are negative, not significant and short-term.

Vibration impacts during the construction phase of the proposed development are not significant at the nearest sensitive buildings due to the type of construction activity on site, the low levels of vibration associated with same and the distances to nearest sensitive buildings. Site activities will be managed so as not to exceed the vibration limits set out in Chapter 10. The resultant vibration effects are negative, not significant and short-term.

*Operational Phase*

Operational Phase

The main potential sources of outward noise from the development during the operational phase relate to building services plant and is deemed to be long term in nature. Traffic flows to and from the development via public roads is also assessed. There is no vibration source associated with the operational phase.

The assessment has determined that the above sources will not generate any significant noise impact at existing noise sensitive locations in the surrounding environment.



## 10.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

The results of the assessment have determined that construction works can take place within the construction noise criteria adopted for the project. Notwithstanding this, a range of best-practice noise mitigation measures have been included to reduce construction noise levels. The application of binding noise limits and hours of operation, along with implementation of appropriate noise control measures, will ensure that the noise impact is controlled to within the construction significance thresholds. The resultant noise effects are ***negative, not significant and short-term***.

*Operational Phase*

Once the design parameters in terms of sound power levels are not exceeded the and the minimum acoustic performance of the louvre around the rooftop plant is implemented, the proposed development will not generate any significant noise effect at noise-sensitive locations in the surrounding environment. The resultant noise effects are ***negative, slight-to-moderate and long-term.***

## 10.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

Based on the potential cumulative developments reviewed, it is not anticipated that there will be any other construction activities that would give rise to significant cumulative impacts during the construction phase. With the implementation of mitigation measures, the predicted noise emissions for the proposed development are not of enough magnitude to cause an increase in the cumulative construction noise emissions exceeding the threshold for significant impacts at any noise-sensitive location. The corresponding cumulative noise and vibration effects are ***negative, not significant and short-term.***

*Operational Phase*

A set potential cumulative developments reviewed have been reviewed in detail. Combining the predicted noise levels from these developments does not change the conclusion of the assessment, The resultant noise effects remain ***negative, slight-to-moderate and short-term.***

# 11.0 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

## 11.1 INTRODUCTION

This chapter assesses the potential effects of the proposed development on the landscape and views/visual amenity of the receiving environment, following the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3).

## 11.2 BASELINE ENVIRONMENT



*Landscape Character*

The site is within an area designated for strategic employment development by the Regional and Local Authority, adjacent to Killala Business Park, in the *Area G North Mayo Drumlins* Landscape Character unit (LCU). The area is transitioning from agriculture to industrial and commercial use. Landscape receptors include the site, *Area G North Mayo Drumlins* LCU, *Area D North Coast Plateaux LCU*, 6 National Inventory of Architectural Heritage (NIAH) Listed Buildings, the Wild Atlantic Way on the R314, and local road corridors. The overall sensitivity of the host landscape character locally is considered to be Low.

*Visual Amenity*

Eleven viewpoints have been selected to show what the site looks like from differing distances and landscape types. Each provides an example of what a variety of receptors, with varying sensitivity to the views, might perceive. Photomontages of the Proposed Development are then overlayed on the views, which are reassessed to understand what changes it will make to the views and their acceptability (level of significance). The sensitivity of each visual receptor is summaries in the chapter.

## 11.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

*Landscape Effects:*

- Regionally, landscape character effects will be impacted by an increase in construction traffic, the moving presence of construction riggs and cranes that will be visible from a number of locations within LCUs D and E.
- With medium sensitivity and low magnitude of change. Overall, the Regional significance of effects will be ***Slight***, short term, but negative.
- Locally, landscape character of the subject site would be changed temporarily (for the duration of the works programme of the new development) by amongst others, the following key activities resulting in adverse impacts, on a daily basis and for the duration of the contract:
  - Earthworks for accommodating the buildings and roads, screening and runoff ponds, causing unsightliness, dust and mud (adverse, daily, temporary)
  - Traffic and heavy plant moving on site and on the surrounding road network causing temporary congestion and noise (adverse, daily, temporary)
  - Temporary work lighting (adverse, at night and in winter, temporary)
  - Tree work including surgery, felling and mulching (adverse, infrequently, permanent)
  - Temporary security hoarding (neutral, fixed, temporary)
- Construction Phase magnitude of landscape effects will accordingly be ***Medium.***
- Construction Phase significance of landscape effects is a combination of Medium sensitivity and Medium magnitude of effects, resulting in a ***Moderate*** Significance***.***

*Visual Effects during Construction Phase:*

- The assessment predicts that of the 11 views, like the landscape character assessment effects would have the following Construction Phase Significance of Visual Effects :
  - Viewpoints 1 and 7 – Not Significant
  - Viewpoints 2, 3, 9 and 11 - Slight, adverse, temporary
  - Viewpoints 4, 6, 8 and 10 – Moderate, adverse, temporary
  - Viewpoint 5 – Significant, adverse, temporary
- Only 1 viewpoint (from Mullafarry Road, west of the site) would be considered to have a Significant adverse visual effects during Construction Phase, but this will be temporary.
- Please see NTS Table 11.1 below for summary.

*Operational Phase*

*Landscape Effects:*

- Regionally, there will be a minor increase in service vehicles and maintenance traffic within LCUs D and G. Overall, the Regional magnitude of effects will be ***Negligible***, long term, but neutral.
- Locally, there will be a permanent change to landscape character, including:
  - site topography altered;
  - grassland fields and mature hedgerows removed, replaced by industrial buildings and infrastructure.
  - potential impact on the setting of heritage properties.
- This is mitigated by:
  - alignment with the trend towards an urban area dominated by employment uses;
  - proposed development proportionate to existing and proposed commercial uses in the area;
  - buildings comparable in height to structures in Kallia Business Park and the proposed Power Station, but greater in horizontal mass;
  - contrasts with degraded structures in Kalila Business Park;
  - less effect on heritage properties than existing wind turbine generators and insulated from change by mature trees;
- Operational Phase magnitude of change will be ***Medium***, permanent and neutral.
- Operational Phase significance of landscape effects is a combination of Medium sensitivity and Medium magnitude of effects, resulting in a ***Moderate*** significance***.*** This is below the level of significance considered to be unacceptable for a development of this type.

*Visual Effects (with reference to the EIAR Appendix 11.1):*

- The assessment predicts during Operational Phase, that of the 11 views, like the landscape character assessment effects would have the following Significance of Visual Effects:
  - Viewpoint 1,3, 7, 9 and 11 – Not Significant
  - Viewpoints 2, 4, 6, and 8 – Slight, adverse
  - Viewpoints 5 and 10 – Moderate, adverse
- Although the majority of effects would adverse and permanent, no viewpoints would be considered to have a Significant adverse visual effect during Operation Phase.

- Please see NTS Table 11.1 below for summary.



## 11.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

If the proposed development is not permitted, the site remains agricultural with no impact on character and visual amenity.

*Construction Phase*

- No specific mitigation measures are needed beyond standard best practices (e.g., site hoarding, orderly storage).

*Operational Phase*

*Landscape Effects:*

- Mitigation measures are embedded in the layout and landscape design. Additional mitigation measures beyond those incorporated into the proposal are not required to reduce effects to an acceptable level. the development will have and be influenced by the height of existing wind turbines:
  - structure planting to screen from public views;
  - buildings will have a similar horizontal mass to those in nearby Killala Business Park;
  - setting back the layout from sensitive receptors (e.g., Mullafarry Road, R134 Wild Atlantic Way, Presbyterian Church, Ballysakeery Manse);
  - Landscape impacts during operation Phase would vary over time as the landscape scheme matures.
- This would alter the character of the subject site and Proposed Development, to a 'bedded-in' composition of buildings knitted together by mature crowns of trees and entwined foliage of shrubs and the developed, densely vegetated and colourful wildflower meadows.
- These measures are part of the design and not post-assessment mitigation.
- There would be no significant residual landscape effects.

*Visual Effects:*

- The assessment predicts during Operational Phase, that as all views would not be subject to significant levels of effect, no further mitigation would be required, and all residual effects would be acceptable.

## 11.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

In terms of relevant planning history within the vicinity of the subject site, the cumulative proposal plan located in Appendix 2.1 of the EIAR. The Proposed Developments that may be intervisible with the Proposed ADP KLL1 Data Centre are as follows:

1. Planning ref 2360117 Constant Energy Limited Hydrogen Plant (CEHP)
2. Planning ref 2360134 Tawnaghmore Power Station (TPS)
3. Planning ref 19351 Westlands Networks Ltd telecommunications facility (WNTC)

Other schemes were scoped out for landscape and visual impacts cumulative assessment either as being remote or existing elements within the receiving environment.

*Construction Phase Cumulative Effects*

*Landscape Effects:*

- Regionally, the presence of construction equipment and increased traffic in the wider area resulting from construction to all schemes will have a Low, short term, but negative cumulative effect on landscape character.
- Local cumulative effects of the Proposed Development with schemes 1, 2, and 3 will increase construction traffic and the presence of construction rigs and cranes visible from various locations within the study area. The landscape character of the subject site will be temporarily changed by the following key activities:
  - Earthworks for accommodating the buildings and roads, screening and runoff ponds, causing unsightliness, dust and mud (adverse, daily, temporary);
  - Traffic and heavy plant moving on site and on the surrounding road network causing temporary congestion and noise (adverse, daily, temporary);
  - Temporary work lighting (adverse, at night and in winter, temporary);
  - Tree work including surgery, felling and mulching (adverse, infrequently, permanent);
  - Temporary security hoarding (neutral, fixed, temporary).
- The Proposed Development landscape proposals respect all existing trees and hedgerows, and screening will remain as existing. Therefore, no additional magnitude of effects is anticipated, remaining **Medium** during construction. Cumulative Construction Phase landscape effects will be **Moderate**.

*Visual Effects (with reference to the EIAR Appendix 11.1):*

- The assessment predicts that the cumulative visual effects resulting form the adjacent proposed developments during Construction Phase, would remain similar to the stand-alone scheme, due in part to the similar levels of intrusion that the Proposed Scheme would cause within local landscape.
- Of the schemes assessed for cumulative effects there are none which are subject to effects that are proportionately greater than those of the Proposed Development in isolation.
- There would be no significant cumulative visual effects during Operational Phase.

*Operational Phase Cumulative Effects*

*Landscape Effects:*

- Regionally, the effects of the presence of construction equipment and increased traffic in the wider area resulting from construction to all schemes will have a Negligible, long term, and neutral.
- Locally, cumulative landscape character of the subject site, along with schemes 1, 2, and 3, will be permanently altered by the new development. Key changes include:
  - altered topography and removal of grassland fields and mature hedgerows, erasing the long-standing field pattern;
  - replacement of existing industrial-scale buildings and infrastructure with larger new structures, resulting in a high magnitude impact. However, at a broader landscape scale, this aligns with the trend towards urban areas focused on sustainable productivity and employment.

- The Proposed Development will be a small part of the combined commercial and industrial uses in the study area.
- The change in landscape character near heritage properties will be similar to the existing impact of wind turbine generators. The Proposed Development, closer to heritage properties than Tawnaghmore Power Station and Killala Business Park, will not introduce unprecedented changes. Physical separation and vegetation will remain unchanged.
- Considering the Medium magnitude of change and the Low over all sensitivity of the receiving environment, the significance of the potential landscape effects can be classified ***Not Significant*** and neutral.
- The development would reinforce the trend of change in landscape character, from the current peri-urban condition towards employment-dominated urban. It would contribute to the realisation of the development strategy for the area and can therefore be considered a neutral change.

*Visual Effects (with reference to the EIAR Appendix 11.1):*

- The assessment predicts that the cumulative visual effects resulting form the adjacent proposed developments would remain similar to the stand-alone scheme, due in part to the similar mass, height and location within local landscape.
- Of the schemes assessed for cumulative effects there are none which are subject to effects that are proportionately greater than the baseline due to Proposed Development in isolation.
- There would be no significant cumulative visual effects during Operational Phase.

## 12.0 ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

### 12.1 INTRODUCTION

Chapter 12 provides an assessment of the potential impacts of the Proposed Development on archaeological and cultural heritage.

### 12.2 BASELINE ENVIRONMENT

The baseline survey has identified that this area has been inhabited since early prehistory, with a possible Mesolithic shell midden, a Neolithic stone axe head, a Bronze Age / Iron Age barrow and cist burial and Bronze to Iron Age artefacts recorded. Significant human settlement in the area in the early medieval period is attested to by a series of ringforts. Continued settlement in the post-medieval period is evidenced by reference to the area in seventeenth- and eighteenth-century surveys. No previously unrecorded features of archaeological or architectural heritage interest were noted in the desk top study or during the site walkover survey.

The land on which the Proposed Development is sited is marshy and uneven, with reeds growing throughout. Fields are bounded by mature hedgerow, including substantial hedgerows in the eastern and northern boundaries which are townland boundaries. The house or related structures, including the former square garden landscape, will not be directly impacted. Ballysakeery Glebe House (undergoing repair) is visible from the northeast through the substantial tree cover. The formerly managed grounds of Ballysakeery Glebe House are extensively overgrown.

## 12.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT



*Construction Phase*

There are no recorded archaeological sites or monuments within the Proposed Development lands, as listed in the Record of Monuments and Places. There are fifteen recorded archaeological sites within c. 500m of the Proposed Development lands. None of these sites will be impacted, either directly or indirectly, by the Proposed Development works.

There have been five licenced archaeological excavations in the study area in advance of development works (none of which are within the Proposed Development footprint). Only one of these uncovered archaeological remains, a shell midden of unknown date (but possibly Mesolithic).

The archaeological sites in the study area, coupled with the results of archaeological excavation, and with stray archaeological finds in the vicinity are indicative of the landscape having been populated since early prehistory and throughout the Medieval and Post-Medieval periods.

The eastern extent of the main proposed development boundary forms part of the boundary between the townlands of Mullafarry and Tawnaghmore Upper, which is also the civil parish boundary between Ballysakeery and Killala. The proposed development crossed this boundary on previously developed land (the roadway). However, boundaries of this nature can be in the form of wide and deep ditches, traces of which can survive sub-surface. Should they exist, they could potentially be impacted by construction works.

A desk-top survey of the lands proposed for development, did not highlight any additional, previously unrecorded, archaeological features. However, there is the potential for previously unrecorded archaeological material to be uncovered during the course of development works.

There are no recorded architectural heritage sites within the Proposed Development lands, as listed in the National Inventory of Architectural Heritage. There are six recorded NIAH sites within c. 500m of the Proposed Development lands. The most significant of these is Ballysakeery Glebe House (NIAH 31302208), which the Proposed Development lands surround. The house or related structures, including the former square garden landscape, will not be directly impacted. However, as outlined in Chapter 11 Landscape, “the significance of the visual effects for the stand alone Proposed Development would be moderate and adverse” for this location (illustrated in Photomontage Viewpoint 10) based on the views during construction without full landscape mitigation in place. It should be noted though that the existing Killala Business Park is currently visible from Ballysakeery Glebe House (NIAH 31302208) and gardens.

None of the remaining five NIAH sites will be impacted, either directly or indirectly, by the Proposed Development works.

Therefore, the potential impact of the Proposed Development on the archaeology architectural and cultural heritage within the area is considered to be ***negative, slight*** and ***short term***.

*Operational Phase*

No direct impacts on archaeological, architectural and cultural heritage are expected as a result of the operational phase of the Proposed Development.

However, as noted above, the site will still be visible from Ballysakeery Glebe House (NIAH 31302208), albeit reduced by landscaping as it matures.

There will be no disturbance to ground during operation and as such the potential impact on archaeology during the operational phase of the Proposed Development i.e ***neutral, imperceptible*** and ***long term***

The visual impact will remain to Ballysakeery Glebe House alone during the operational phase of the Proposed Development if not adequately mitigated and as such the potential effect on Cultural heritage within the area is **negative*, slight*** and ***long term.***

## 12.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

A suitably qualified archaeological consultant will be retained to oversee the archaeological and architectural mitigation strategy for project from design through to planning and construction phase.

At pre-construction phase, a geophysical survey should be undertaken under license to the National Monuments Service, of areas that will be subject to development or construction-related impacts. Licensed archaeological testing will be undertaken of anomalies identified by the geophysical survey.

Any archaeological features identified positively by testing in areas where they will be impacted on, directly or indirectly, by the development, will require permission from National Monuments for the excavation (preservation by record) of these remains.

Given the scale of the Proposed Development, it is not possible to fully mitigate against the indirect, visual impact of the Proposed Development on Ballysakeery Glebe House (NIAH 31302208) and gardens. However, through the screening as outlined in the landscape report (Chapter 11 Landscape), the visual impact can be minimised.

The residual effects during the construction phase relating to archaeological is ***positive, imperceptible*** and ***short term.***

With mitigation in place, the residual effect on cultural heritage is deemed to be ***negative, not significant*** and ***short term.***

*Operational Phase*

No mitigation measures are required for archaeological during the operational phase of the Proposed Development. As landscaping matures further mitigation will reduce visual impact on the proximal Ballysakeery Glebe house.

There are no identified residual effects during the construction phase relating to archaeology. With mitigation in place, the residual effect on architectural and cultural heritage is deemed to be ***negative, not significant*** and ***longterm.***

## 12.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT



*Construction Phase*

Of the five archaeological investigations undertaken in advance of or during previous development works, only one has yielded archaeological features. Should archaeological features be uncovered during testing or monitoring of the Proposed Development, these will be archaeologically excavated, and the knowledge added to the academic record.

The academic knowledge gained from the excavation of these features, has resulted in a net cumulative ***permanent***, ***significant***, ***positive*** impact.

The cumulative effect on architectural and cultural heritage is unchanged as surrounding developments will not have greater impact on local NIAH sites than already assessed for the datacentre development i.e ***negative, not significant*** and ***short term.***

*Operational Phase*

With regard to archaeology, during operation there is no potential for cumulative impact as there will be no disturbance to ground.

The cumulative effect on architectural and cultural heritage is unchanged as surrounding developments will not have greater impact on local NIAH sites than already assessed for the datacentre development i.e ***negative, not significant*** and ***long-term.***

# 13.0 TRAFFIC AND TRANSPORT

## 13.1 INTRODUCTION

This Chapter of the EIAR presents the traffic and transport assessment of the receiving environment for the construction and operational phases of the Proposed Development.

The construction of the proposed development is predicted to result in an additional 240 cars, 100 – 120 Heavy Goods Vehicles and 30 Light Goods Vehicles per day during the construction phase peak. 10% of which are estimated to occur during the local road network peak hours. For the operational phase, the Proposed Development will generate/attract 22 car trips and 4 service trips (trucks) on the peak hours during the shift changeover periods.

## 13.2 BASELINE ENVIRONMENT

The site is located to the south of Killala town, north of Mullafarry Road, west of the R314 and southwest of the Killala Business Park. R314 is a regional road running north-south to the west of the site and serves as a key vehicular route linking Killala to Ballina, whilst the Mullafarry Road is a rural road running east-west along the southern boundary of the site providing access to some non-residential properties.

The modelling results of the baseline traffic indicate that all local assessed junctions are operating well within capacity during both AM and PM peak hours.

The site lacks good provision of public transport and active travel infrastructure in the immediate surrounding area.



## 13.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

The modelling results indicated that the construction traffic impact will be minimum on the assessed local junctions, which currently have plenty of residual capacity to accommodate future traffic. The effects of the construction traffic will be ***negative***, ***not significant*** and ***short-term***. The changes to the junctions' operational capacities will be minor.

There is also potential for construction traffic to impact from a noise, vibration and dust perspective, potential for inappropriate parking and conflicts with active travel users. The effects of the construction traffic on these aspects will be ***short-term*** and ***slightly negative***.

*Operational Phase*

The analysis results indicated that the effects of the Proposed Development during the operational phase with regards to peak hour and daily traffic will be ***neutral, imperceptible*** and ***brief***. The changes to the junctions' operational capacities will be minor.

## 13.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

A Construction Management Plan (CMP) has been prepared in order to provide guidance on how to minimise the potential impacts of the construction stage on the safety and amenity of other users of public road and considers aspects such as dust and dirt control measures, noise assessment and control measures, working hours of the site, facilities for parking. Specific measures include, ongoing assessment of construction traffic routes, not allowing construction traffic to wait on public roads, schedule delivery of material, provision of vehicle and wheel washing facilities, amongst others.

Prior to the construction, a detailed Construction Traffic Management Plan (CTMP) will be prepared by the main contractor which will outline the site logistics and indicate the site aspects such as site location, diversion of active travel users, location of loading and unloading areas and material storage.

Through the implementation of these Plans, it is anticipated that the construction traffic effects will continue to be ***negative***, ***not significant*** and ***short-term***.

*Operational Phase*

To encourage future staff to reduce dependence on private car alone and avail of more sustainable forms of transport, a Mobility Management Plan (MMP) has been prepared and sets out a number of specific actions to be implemented during the operational phase of the site such as providing information on the available local public transport, tax incentives for public transport users, cycle to work scheme, benefits of carpooling and provision of cycle parking, shower and locker facilities.

Through the implementation of the MMP from early stages of the operational phase, it is anticipated that the effects of the proposed development will continue to be ***neutral***, ***imperceptible*** and ***brief***.



### 13.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

Should one or more of the permitted third-party developments listed in Appendix 2.1 be constructed at the same time as the proposed development, there is potential for cumulative impact in terms of traffic in the local area.

Based on the modelling results and the junctions' spare capacities to accommodate additional traffic beyond those being modelled, it is anticipated that the local assessed junctions would be able to handle any cumulative traffic arising from the permitted third-party developments during the construction phase. However, as some construction traffic to and from the local permitted developments are likely to be routed via Mullafarry Road, should one or more of the permitted developments be constructed at the same time as the proposed development, the cumulative impact along this road is predicted to be ***moderate negative*** in terms of magnitude and ***short-term*** in terms of duration.

*Operational Phase*

During the operational phase of the proposed development, the permitted developments listed in Appendix 2.1 are anticipated to generate some additional traffic to the local road network, such as employee commutes and delivery/collection activities related to each development's operational arrangements.

Similarly to the construction phase, based on the modelling results and the junction's spare capacities, it is anticipated that, during the operational phase of the proposed development, the local assessed junctions would be able to accommodate any cumulative traffic arising from the permitted developments. Traffic growth rates used for the operational phase models (as set out in Section 13.5.2.2) to establish future baseline traffic - both light and heavy vehicles, already account for any additional traffic that may arise from future/permitted developments in the area. However, since some traffic to and from the local permitted developments are likely to be routed via the rural Mullafarry Road and the assessed junctions, the cumulative local impact is predicted to be ***slight negative*** in terms of magnitude and ***long-term*** in terms of duration.

## 14.0 MATERIAL ASSETS – UTILITIES

### 14.1 INTRODUCTION

This chapter assesses material assets which have not already been addressed elsewhere in this EIAR. The potential impacts, if any, are assessed in terms of the following:

- Land Use, Property, and Access.
- Power and Electrical Supply.
- Telecommunications.
- Surface water infrastructure.
- Foul drainage infrastructure.

- Water supply.



This assessment has been prepared from a desk top review of existing information and consultation undertaken by the project engineers Ethos Engineering, civil engineers Clifton Scannel Emerson Associates (CSEA), project architects Henry J Lyons (HJL), and with service providers including Uisce Éireann (UÉ), Electricity Supply Board (ESB), and Gas Network Ireland (GNI). The existing land use has been determined using interrogation of Google Maps and land use designations with the Mayo County Development Plan 2022-2028.

## 14.2 BASELINE ENVIRONMENT

The Mayo County Development Plan 2022–2028 provides the local planning framework; however, the site falls outside designated zoning boundaries and is currently unzoned. The site is however in close proximity to industrial-zoned lands at Killala Business Park and adjacent to existing commercial, industrial, and energy-related developments in the surrounding area.

An existing MV (10KV/20KV) power line runs through the site from the site of the Old Rectory to the North of the site. Two existing HV (110KV) overhead lines also run over the site from south of the site from Mullafarry Road. Records from GNI indicate the presence of existing Aurora and Eir telecommunications cables in close proximity to the site. The site is also adjacent to the future land fall of the AEConnect 1 Transatlantic Data Cable.

An existing water main crossed the lands.

## 14.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

*Land use & Access:* During the construction phase the site will be accessed via Mullafarry Road.

*Power*: Excavations near existing electrical services will be coordinated with ESB Networks to prevent impacts on current users. The electrical connection will not disrupt the national grid during installation..

*Surface Water Infrastructure*: There will be no connection to public surface / storm water networks. Surface water is to be attenuated on site and discharged appropriately. Therefore, there is no impact on public utilities during construction.

*Potable Water Supply:* Water demand during the construction phase will be minimal and will not impact existing pressures. Initially, water will be supplied via tankers and bottled water. Once a connection to the local water mains is established, subject to agreements with the utility, there will be an increase in demand on local potable water supplies.

*Foul Drainage*: Portable sanitary/ welfare facilities will be provided through the duration of the construction period. Foul effluent will be appropriately managed and treated off site by a licensed waste sewerage contractor. Therefore, no potential effects on foul drainage infrastructure.

*Natural Gas:* There is no requirement for natural gas connection during the construction phase.



The potential impact for the construction phase will be ***localised, negative, not significant,*** and ***short term.***

*Operational Phase*

*Land use & Access:* The Proposed Development located on lands that are currently unzoned. These, however, are adjacent to developments of industrial and energy projects. The existing road, Mullafarry Road, will be used to access the Proposed Development.

*Power*: The Proposed Development will increase demand on existing power and electrical utilities. A separate SID application under Section 182A of the Planning and Development Act 2000 (as amended) will request permission to establish a new on-site 110kV GIS substation in the northeast, connecting the development to the grid. Any excess power generated may be fed back into the grid, supporting nearby wind farms. During the operational phase, maintenance of the power and electrical infrastructure will be conducted in accordance with the utility supplier's requirements.

*Surface water Infrastructure*: There will be no connection to public surface / storm water networks. Therefore, no likely potential effects on surface water infrastructure

*Foul Drainage*: Foul water will be discharged in accordance with UÉ requirements and review of capacity within the WWTP.

*Potable water*: The Proposed Development incorporates sustainable water usage measures, including water-saving devices and a closed-loop cooling system for the data centre. A water meter will be installed at the connection to the public water main, in line with UÉ's requirements, review and approval of network capacity.

*Natural Gas:* If a connection is made available (part of a future panning approval), there will be an increase in demand of natural gas on the GNI network to provide the potential supply of up to 50-150 MWth. The future gas pipeline would be subject to an application to the Commission for Regulation of Utilities (CRU) under Section 39A of the Gas Act 1976 (as amended).

The potential impact on the above infrastructure for the operational phase is ***neutral, not significant,*** and ***long term.***

Do Nothing Scenario

If the Proposed Development does not proceed, the need for the warehouses will remain for the intended occupier, necessitating construction at an alternative location. The development site would remain a greenfield area, underutilising its potential for development.

## 14.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

The contractor will implement best practices and agree on any planned service interruptions with utility suppliers in advance. The CMP outlines the construction techniques, mitigation measures, and emergency response procedures for incidents

such as spills or fires, which will be regularly updated to manage risks. The Proposed Development will be in accordance with the requirements of statutory providers for electrical infrastructure, gas infrastructure, surface water, foul drainage, and water infrastructure. The residual impacts on the material assets during the construction phase will be ***neutral, not significant,*** and ***short term***.



*Operational Phase*

The Proposed Development has been designed in compliance with local requirements. The anticipated power supply, supplemented by the proposed on-site substation, provides sufficient capacity with potential excess to feed back into the local grid, requiring no additional mitigation. Telecommunications needs are met through nearby Aurora and Eir services, with no further remedial or mitigation measures required.

A Pre-Connection Enquiry (PCE) has been submitted to UÉ regarding the proposed foul pumping station and rising main to handle wastewater from the service areas, pending approvals for connection to the treatment plant located approximately 550m east. A separate PCE has been submitted for potable water supply for both domestic and industrial uses.

A natural gas connection has been requested from GNI, with plans for a 150 MWth connection via a 400mm pipeline.

All utility infrastructure maintenance or upgrades during the operational phase will follow the specifications of service providers and be managed by facilities management, with no further mitigation needed.

Consultations with UÉ, ESB, and GNI have considered the environmental impacts of the wider network, ensuring no significant effect on material assets, the economy, or the environment. Residual impacts during the operational phase are ***neutral, not significant***, and ***long-term***.

## 14.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

The Proposed Development will make minimal use of public utilities during construction, limiting the potential for cumulative impacts when combined with other planned or permitted developments. Coordination between the construction contractor and local service providers will ensure the development adheres to all requirements for electrical, gas, water, and drainage infrastructure. Mitigation measures and compliance with network providers' agreements (GNI, UÉ, ESB) will prevent prolonged utility disruptions, excessive demand, or medium-term impacts on infrastructure. As a result, significant cumulative effects with other developments are unlikely. The residual cumulative effects on material assets during construction are expected to be ***negative, slight,*** and ***short-term***.

*Operational Phase*

The Proposed Development, along with other permitted projects, will coordinate with Mayo County Council (MCC), Gas Networks Ireland (GNI), UÉ, and ESB to ensure sufficient capacity for increased demands on water, wastewater, and electricity.

The proposed and surrounding developments will comply with the requirements of statutory providers for electrical, gas, water, and drainage infrastructure. Due to the design and coordination with GNI, UÉ, ESB, and telecom providers, no significant or prolonged utility disruptions are expected. As a result, the cumulative effects of the proposed and other developments are anticipated to be ***neutral, not significant***, and ***long-term*** during the operational phase.



## 15.0 MATERIAL ASSETS (WASTE)

### 15.1 INTRODUCTION

Chapter 15 provides assessment of waste management.

### 15.2 BASELINE ENVIRONMENT

The receiving environment is largely defined by Mayo County Council (MCC) as the local authority responsible for setting and administering waste management activities in the area through regional and development zone specific policies and regulations.

There is currently no waste generated at the proposed development site. There will be waste materials generated from site clearance works, excavations, construction of the new development and from the operation of the new development.

### 15.3 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

*Construction Phase*

During the construction phase the mismanagement of waste, including the inadequate storage of waste, inadequate handling of hazardous waste, the use of inappropriate or insufficient segregation techniques, and the use of non-permitted waste contractors, would likely lead to negative impacts such as waste unnecessarily being diverted to landfill, litter pollution which may lead to vermin, runoff pollution from waste, fly tipping and illegal dumping of waste. In the absence of mitigation, the effect on the local and regional environment is likely to be **long-term, significant** and **negative**.

*Operational Phase*

The potential impacts on the environment during the operational phase of the proposed development would be caused by improper, or lack of waste management. In the absence of mitigation, the effect on the local and regional environment is likely to be **indirect, long-term, significant** and **negative**.

### 15.4 MITIGATION AND RESIDUAL EFFECTS (POST-MITIGATION)

*Construction Phase*

During the construction phase, typical construction waste materials will be generated which will be source segregated on-site into appropriate skips/containers, within designated waste storage areas and removed from site by suitably permitted waste contractors as required, to authorised waste facilities, by appropriately licensed waste contractors. While the accurate keeping of waste records will be undertaken. All waste leaving the site will be recorded and copies of relevant documentation maintained.

This will all be overseen by the main contractor, who will appoint a construction phase Resource Manager to ensure effective management of waste during the excavation and construction works. All construction staff will be provided with training regarding the waste management procedures on site.



A carefully planned approach to waste management and adherence to the site-specific Resource and Waste Management Plan (Appendix 15.1) and Chapter 15 during the construction phase, this will ensure that the effect on the environment will be **short-term, imperceptible** and **neutral**.

*Operational Phase*

During the operational phase, waste will be generated by the residents. Dedicated waste storage areas (WSAs) have been allocated throughout the development for the use of residents. The WSAs have been appropriately sized to accommodate the estimated waste arisings from the development. The WSAs have been allocated to ensure a convenient and efficient management strategy with source segregation a priority. Waste will be collected from the designated waste collection areas by permitted waste contractors and removed off-site for re-use, recycling, recovery and/or disposal.

Mitigation measures have been prepared and provided in chapter 15.6 of the chapter as part of this submission. These mitigation measures provide a strategy for segregation (at source), storage and collection of wastes generated within the development during the operational phase including dry mixed recyclables, organic waste, glass, mixed non-recyclables, garden/green waste, batteries, waste electrical equipment, printer cartridges, chemicals, lightbulbs, textiles, cooking oil, furniture and abandoned bicycles. A Plan/Strategy will be prepared and supplemented, as required, by facilities management with any new information on waste segregation, storage, reuse and recycling initiatives that are subsequently introduced.

Provided the mitigation measures outlined in Chapter 15 are implemented and a high rate of reuse, recycling and recovery is achieved, the predicted effect of the operational phase on the environment will be **long-term, neutral** and **imperceptible**.

## 15.5 CUMULATIVE IMPACT OF THE PROPOSED DEVELOPMENT

*Construction Phase*

There are existing residential and commercial developments close by, along with the multiple permissions remaining in place in the area. In a worst-case scenario, multiple developments in the area could be developed concurrently or overlap in the construction phase. Due to the high number of waste contractors in the MCC region, as provided from the National Waste Collection Permit Office and the EPA, there would be sufficient contractors available to handle waste generated from a large number of these sites simultaneously, if required. Similar waste materials would be generated by all of the developments.

Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will mitigate against any potential cumulative effects associated with waste generation and waste management. As such the cumulative effect will be **short-term, imperceptible** and **neutral**.

*Operational Phase*



There are existing residential and commercial developments close by, along with the multiple permissions remaining in place. All of the current and potential developments will generate similar waste types during their operational phases. Authorised waste contractors will be required to collect waste materials segregated, at a minimum, into recyclables, organic waste and non-recyclables. An increased density of development in the area is likely improve the efficiencies of waste collections in the area.

Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will mitigate any potential cumulative impacts associated with waste generation and waste management. As such the cumulative effect will be a ***long-term, imperceptible*** and ***neutral***.