S. 37

File With _____

**SECTION 131 FORM**

Appeal NO: ABP 313583-22

TO: SEO

Defer Re O/H ☐

Having considered the contents of the submission ~~dated~~/ received 13/6/24

from

Applicant

I recommend that section 131 of the Planning and Development Act, 2000 be/not be invoked at this stage for the following reason(s): per Boards review

E.O.: _____ Date: 19/6/24

To EO: _____

Section 131 not to be invoked at this stage. ☐

Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: _____ Date: _____

S.A.O: _____ Date: _____

M Task-370864-24

Please prepare BP 20 - Section 131 notice enclosing a copy of the attached submission

to: ~~other~~ parties

Allow ~~2~~/3/~~4~~ weeks – BP 20

EO: _____ Date: 2/7/24

AA: Fadimie Khalipova Date: 2/7/24

**M..y ..icker**

**From:** Evan Walsh <evan@brockmcclure.ie>
**Sent:** Thursday 13 June 2024 16:35
**To:** Appeals2
**Cc:** Suzanne McClure
**Subject:** ABP Ref. 313583-22 - Applicant Submission following Invitation from An Bord Pleanala
**Attachments:** ABP313583 - Huntstown Response Report.pdf



Dear Sir/Madam,

We, Brock McClure Planning & Development Consultants, 63 York Road, Dun Laoghaire, Co. Dublin, are instructed by our client, Huntstown Power Company Limited, The Generali Building (formerly The Liberty Centre), Blanchardstown Retail Park, Dublin 15 (D15 YT2H) to lodge the attached submission in response to a letter issued by An Bord Pleanála inviting a submission from the applicant in respect of matters which An Bord Pleanála proposes to take into account in deciding appeal reference ABP-313583-22 regarding the development of 2 no. data hall buildings on lands adjacent to Huntstown Power Station, North Road, Finglas, Dublin 11.

An Bord Pleanala have confirmed via phone that this submission can be made via email to appeals@pleanala. This submission is made to An Bord Pleanala before the noted submission deadline of 5.30 pm 13th June 2024.

I would be grateful if you could please confirm receipt of this submission via return email. We ask that all correspondence regarding this appeal case is forwarded to our offices at 63 York Road, Dun Laoghaire, Dublin.

Evan Walsh

*Senior Executive Planner*

Brock McClure

Irish Planning Awards 2023 Highly Commended

Brock McClure
Planning & Development Consultants
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Office: +353 1 559 3859
Direct: 01 514 3286

# Submission to An Bord Pleanála

**ABP Case No. ABP-313583-22**

**Fingal County Council Ref. FW21A/0151**

**On behalf of**

## Huntstown Power Company Limited

June 2024

Brock McClure
PLANNING & DEVELOPMENT CONSULTANTS

63 York Road,
Dun Laoghaire
Co. Dublin
www.brockmcclure.ie

# Table of Contents



Attachments:

# 1 Introduction

We, Brock McClure Planning & Development Consultants, 63 York Road, Dun Laoghaire, Co. Dublin, are instructed by our client, Huntstown Power Company Limited, The Generali Building (formerly The Liberty Centre), Blanchardstown Retail Park, Dublin 15 (D15 YT2H) to lodge this submission in response to a letter issued by An Bord Pleanála inviting a submission from the applicant in respect of the following matters which An Bord Pleanála proposes to take into account in deciding appeal reference ABP-313583-22 regarding the development of 2 no. data hall buildings on lands adjacent to Huntstown Power Station, North Road, Finglas, Dublin 11:

1. *Having regard to the adoption of the Fingal Development Plan 2023-2029 and the Government Statement on the Role of Data Centres in Irelands Enterprise Strategy (July 2022) since the lodgement of the appeal, the Board invites all parties to make any submission or observations on the proposed development noting in particular Objective DMS092 – Space Extensive Developments and the zoning objective "HI" Heavy Industry relating to the site for the proposed development in the plan and the principles for Sustainable Data Centre Development set out in the Government Statement. In particular, observations are requested on the agreed principle of Economic Development relating to the end user agreement; the principle of Grid Capacity and Efficiency relating to the connection agreement in place and the principle of Renewables Additionality in the Government Statement.*

2. *The Board also invites observation on how the proposed development aligns with the Climate Action Plan 2023, including addressing the matching demand and supply of renewable energy.*

In accordance with section 137 of the Planning and Development Act, 2000 (as amended) this response is submitted to an Bord Pleanála on or before the noted date of **13th June 2024.**

As noted by An Bord Pleanála, since the lodgement of the 3rd Party appeals of the scheme (ABP 313583) as granted by Fingal County Council (on 20 April 2022 under FW21A/0151), there have been a number of changes to policy relevant to the proposed development. This submission in response to the letter issued by An Bord Pleanála details how the scheme remains consistent with current policy context, in particular the following documents:

| | |
|---|---|
| Fingal County Development Plan (FCDP) 2023-2029 | • Objective DMS092 – Space Extensive Developments<br>• Zoning Objective "HI – Heavy Industry" |
| Government Statement on the Role of Data Centres in Irelands Enterprise Strategy (July 2022) | • Principles for Sustainable Data Centre Development<br>(in particular (1) Principle of Economic Development relating to the end user agreement, (2) Principle of Grid Capacity and Efficiency relating to the connection agreement in place, (3) Principle of Renewables Additionality |
| Climate Action Plan 2023 | • How the proposed development aligns with the Climate Action Plan 2023 |

***Table 1: Relevant Policy Documents***

A response to each of the items that An Bord Pleanála has invited comment from the applicant on are now presented from section 4 onwards below.

# 2 Executive Summary

This document has been prepared in response to a letter issued by An Bord Pleanála inviting a submission from the applicant to demonstrate compliance of the proposed development with the following policy documents that have come into effect since the lodgement of appeal reference ABP-313583-22 regarding the development of 2 no. data hall buildings on lands adjacent to Huntstown Power Station, North Road, Finglas, Dublin 11:

- Fingal County Development Plan 2023-2029
- Government Statement on the Role of Data Centres in Irelands Enterprise Strategy (July 2022)
- Climate Action Plan 2023

It is submitted to An Bord Pleanála that the proposed development complies with, and contributes to, the achievement of the policies and objectives included within the above noted documents. We refer An Bord Pleanála to Section 4 of this report for details.

## 2.1 Microsoft – End User and Data Centre Sustainability Commitments

The end user of the proposed data centre facility will be Microsoft who is an experienced data centre operator. Microsoft has undertaken a number of key initiatives, and made a number of sustainability commitments, to ensure the environmental sustainability of its facilities including:

- Being a founding member of the Green Software Foundation which aims to reduce carbon emissions of software.
- Has committed to achieving 100% renewable energy coverage by 2025.
- Entering into Corporate Power Purchase Agreements to add clean energy to the grid.
- Incorporating water reuse and recycling measures into data centre design.
- Commitments to diverting 90% of data centre operational waste by 2030.
- Using low carbon building materials when feasible.

We refer An Bord Pleanála to Section 3 of this report for details.

## 2.2 Maximise the Use of Renewables

The Applicant has entered into binding legal agreements with Microsoft to provide Corporate Power Purchase Agreements ('CPPAs') for new renewable energy. We can confirm that these agreements are in place and have been signed by both parties, to this effect, due to the highly sensitive and commercial nature of these agreements, a signed letter of confirmation from both Energia Group and Microsoft is appended to this submission. These agreements are capable of underpinning *new* renewable energy generation calculated to offset the energy consumed by the proposed development from the electricity grid. The agreements provide a legal obligation for:

- Corporate Power Purchase Agreements between the applicant's group (the Energia Group) and the facility end user (Microsoft).
- The establishment of new renewable energy generation projects by the applicant's group, that will not be supported by government or consumer subsidies will be:
    - Located throughout Ireland, with a concentration in South Meath / North Dublin;
    - Developed in parallel to the energy demand of the proposed development; and
    - In total, should see the collective annual generation exceed the data centre's annual electricity use.

Through these obligations, for every unit of energy consumed by the data centre, a unit of new renewable energy generation would be despatched to the wider electricity network to off-set it. This delivers the objective of operating the proposed development on an annual net energy zero basis that would support Ireland's overall climate targets. Any associated additional renewable energy supply would also increase energy security through the development of renewable generation development within Ireland.

Subject to a grant of planning permission for the proposed development, Energia Group is well positioned to deliver the renewable energy generation required to offset the energy demand of the data centre based on its approximately 900 MW renewable energy development pipeline. Energia Group has developed a pipeline consisting of 634 MW (MEC) of solar assets and 275 MW (MEC) of onshore wind assets, the majority of which have received planning consent. Energia Group has committed its renewable energy pipeline to Microsoft for the execution of CPPAs under a binding Framework Agreement signed by the parties. The construction of the Energia Group's portfolio is underpinned by the agreement between Energia Group and Microsoft and is contingent on the proposed data centre development proceeding. The portfolio of renewable projects have all applied for a 10 year planning permission. It can be confirmed the portfolio of renewable development projects, where developed, must be constructed within the associated planning permission duration. Attached to this submission (Attachment 1) is a letter signed by both parties (Energia Group and Microsoft). This letter confirms:

- Energia Group's portfolio of projects available under the agreements in place with Microsoft; and
- The parties' intention to enter into CPPAs for additional renewable energy projects for the data centre in order to meet Microsoft's sustainability goals and support the objective of operating the proposed development on an annual net energy zero basis that would support Ireland's overall climate targets.

## 2.3 Strategic Location

The Energia Group have engaged with EirGrid from the very start of the project. EirGrid have been supportive of the proposed location adjacent to existing generating power stations, therefore minimising additional electricity infrastructure requirements. The Overall Development includes the construction of a 220kV Substation, which is the subject of a separate application currently with An Bord Pleanála (ABP.311528). The 220kV substation, once commissioned, will be owned and operated by EirGrid and form part of the national electricity grid.

The design of the proposed substation and grid connection (ABP.311528) associated with the data centre was completed in conjunction with EirGrid as the design provides the grid services needed to strengthen the redundancy of the transmission network in north Dublin, making the electricity grid in the area more robust and resilient to faults.

The site has been strategically located adjacent to the Huntstown Power Station campus and is located in very close proximity to two high voltage nodes on the North Dublin electricity transmission system being the Finglas 220kV substation (0.5km to the south of the site) and Corduff 220kV substation (3.0km to the west of the site. Locating the development adjacent to the electricity transmission system is efficient as it minimises the losses incurred in transporting electricity over longer distances.

The associated 220 kV electrical substation (ABP Ref. 311528) will be connected to both Finglas and Corduff substations through a ring connection resulting in the ability for the electricity network operator to despatch the electricity generated by either power plant (Huntstown 1 and Huntstown 2) to either node.

This new flexibility for the electricity network operator will help alleviate the electricity network constraints in north Dublin and make the network more resilient to faults. It is considered this will reduce the need for new electrical overhead or cable infrastructure in the area that would otherwise be needed.

Attached to this submission is a map which demonstrates the proximity of the proposed development to existing electricity transmission infrastructure.

**2.4 Grid Capacity**

A Transmission Connection Agreement ("TCA") with Eirgrid to provide electricity to the proposed development has been executed by both parties (Huntstown Power Company Limited and Eirgrid) on 8 March 2021. (Ref. P28L).

EirGrid as the national authority for the grid has the requirement to ensure that the connection will not impact or reduce the capacity available within the local network to support the neighbouring area. The TCA confirms that there is sufficient power available from the existing area network to facilitate the proposed development.

The Proposed Data Centre is not classified by Eirgrid to be "new demand" and will therefore not place any further burden on the local grid that is not already forecast by the grid operator.

**2.5 Compliance with Fingal County Development Plan Objective DSM092**

The proposed development demonstrates full compliance with each of the individual requirements listed under Fingal County Development Plan 2023-2029 Objective DMS092.

Section 4.1 of this report itemises out the individual requirements that space extensive developments should address under Objective DMS092 and provides a summary of how the proposed development will comply with each item.

**2.6 Site Zoning**

There are 22 no. zoning classes set out in the FCDP. Data Centres are listed as 'not permitted' uses within all zoning classes, with the exception of HI Zoning, and two others. It is considered that 'HI' Zoning aligns with the nature and operational requirements of data centres. It is reiterated to An Bord Pleanála that 'Data Centres' are not listed as "not permitted" on 'HI' zoned lands and should be assessed in terms of their contribution towards the achievement of the Zoning Objective and Vision, and their compliance and consistency with the policies and objectives of the Development Plan.

The nature and operational requirements of data centres are sympathetic to 'HI – Heavy Industry' zoning due to the scale and ancillary plant required for the development.

**2.7 Compliance with Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022)**

The Government Statement on the Role of Data Centres in Irelands Enterprise Strategy (July 2022) includes 6 no. national principles that will inform and guide decisions on data centre development. The government has a preference for data centre developments that:

- Are associated with strong economic activity and employment.
- Make efficient use of our electricity grid, using available capacity and alleviating constraints.
- Can demonstrate the additionality of their renewable use in Ireland.
- Have potential to co-locate a renewable generation facility or advanced storage with the data centre, supported by a CPPA, private wire or other arrangement.
- Provide opportunities for community engagement and assist SMEs, both at construction phase and throughout the data centre lifecycle.

The proposed development can demonstrate its alignment and full compliance with each of the above listed 6 no. principles for Sustainable Data Centre Development. We refer An Bord Pleanála to section 4.1.11 of this report for details.

## 2.8 Compliance with Climate Action Plan 2023 (and Climate Action Plan 2024)

A standalone document has been prepared by AWN consulting and is submitted to An Bord Pleanála for consideration as part of this response pack to show how the development aligns with CAP23 and CAP24. An assessment has been carried out which assesses the proposed development against the overall Carbon Budget, and more specifically, the Emission Ceiling for the Electricity Sector as set out under CAP 23 and CAP 24.

Having regard to:

- the emissions associated with proposed development relative to the Carbon Budget and the Emission Ceiling for the Electricity Sector; and
- the level of renewable additionality that will be provided under agreements between the applicant and the end user, Microsoft,

it has been assessed that the proposed development would result in a minor adverse impact (based on IEMA Methodology).

We refer An Bord Pleanála to the accompanying response document prepared by AWN Consulting (Attachment 5), which details how the proposed development aligns with the Climate Action Plan 2023, including addressing the matching of demand and supply of renewable energy in detail.

## 2.9 Conclusion

This response demonstrates the proposal complies and aligns with:

- HI Zoning and Objective DMS092 – Space Extensive Developments as set out in the Fingal County Development Plan 2023,
- The key principles of the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022); and
- The Climate Action Plan 2023 and Climate Action Plan 2024.

It is submitted that the information set out in this response was largely included in the original planning application, FI Response and Appeal Response. It is therefore considered that it is open to the Board to form the opinion that the information provided is not 'significant further information'.

# 3 Development End User: Microsoft

The end user of the proposed data centre facility will be Microsoft. Microsoft are experienced data centre operators and are undertaking a number of key initiatives, and have made several sustainability commitments, to ensure the environmental sustainability of its facilities.

Key initiatives which are underway to fulfil Microsoft's sustainability commitments are outlined below:

## 3.1 Data Centre Efficiency

A decade-long initiative to improve the sustainability of cloud services has resulted in significant advancements in Data Centre design and management.

Microsoft is a founding member of the Green Software Foundation (GSF) which is a non-profit organization formed under the Linux Foundation. Its mission is to create a trusted ecosystem for building green software. Green software refers to software that emits fewer greenhouse gases, with a focus on reduction rather than neutralization1. The GSF aims to provide answers and best practices for reducing software emissions, involving both organizations and individuals in its projects. Notably, Accenture, GitHub, Microsoft, and ThoughtWorks are among the founding members of the GSF.

Through the Green Software Foundation, Microsoft collaborates with other industry-leading organizations to help grow the field of green software engineering, contribute to standards for the industry and work together to reduce the carbon emissions of software. Across cloud services, Microsoft are working to ensure IT professionals have the information they need to better understand and reduce the carbon emissions associated with their cloud usage.

While AI scenarios increase in complexity, Microsoft is empowering developers to build and optimize AI models that can achieve similar outcomes while requiring fewer resources. Over the past few months, Microsoft have released a suite of small language models (SLMs) called "Phi" that achieve remarkable performance on a variety of benchmarks, matching or outperforming models up to 25x larger. Now available in the Azure AI Studio model catalogue, Phi-2 offers a compact model for research and development or fine-tuning experimentation on a variety of tasks.

## 3.2 Energy Generation and Management

Microsoft is committed to using 100% renewable energy coverage globally by 2025. The growing demand for advanced cloud and AI services has accelerated the push for energy efficiency. Decarbonisation of the electricity grid and the development of zero carbon energy sources such as wind and solar energy is key to Microsoft's climate targets.

Microsoft has a strong track record in procuring renewable energy supply in Ireland, for their known and forecasted electricity needs throughout Ireland, through Corporate Power Purchase Agreements - in alignment with their global sustainability goals. Microsoft have publicly announced their commitment to over 900 megawatts of Corporate Power Purchase Agreements in 2022 of onshore wind and solar energy projects across Ireland. Microsoft will contribute close to 30% of Ireland's corporate power purchase agreement target by 2030.

These power purchase agreements will help support efforts to add additional clean energy capacity to the electricity grid. The Government's Climate Action Plan includes a target of 15% of electricity demand to be delivered from renewable energy CPPAs by 2030. This equates to approximately 6 terawatt hours of additional electricity generation.

Microsoft has, last year, outlined plans to use uninterruptable power supply (UPS) batteries within their data centres in Dublin for real-time interaction with Ireland's power grid. On days when wind or solar

power production is fluctuating, these backup batteries can be used to help maintain a steady flow of energy to power customers. That means fossil-fuel burning powerplants will be needed less often to maintain steady power, cutting emissions and fuel costs. The design for the Huntstown Data centre includes for UPS with energy aware capabilities.

### 3.3 Water Use and Recycling

Microsoft takes a holistic approach to water reduction, from design to efficiency, looking for immediate opportunities through operational usage and, in the longer term, through design innovation to reduce, recycle and repurpose water. Microsoft have found success in using direct air instead of water to cool data centres, harvesting rainwater, and procuring reclaimed water from utilities to reduce our dependence on fresh water.

Microsoft has also committed to diverting 90% of data centre operational waste by 2030. This builds on ongoing waste reduction efforts that started in 2008 which resulted in the zero waste certifications of their Dublin data centre.

The design for Huntstown Data Centre includes rainwater harvesting which is used in the administration building for the flushing of toilets and urinals. The design also includes water treatment and storage which the rainwater can be pass through to be used in the evaporative cooling systems, reducing the reliance on the public water supply. Approximately 33% of the water used in the evaporative cooling process (blowdown water) is recovered and recirculated through the water treatment system so it can be re-used for cooling again.

# 4 Fingal County Development Plan 2023-2029

An Bord Pleanála have invited comment from the applicant in relation to the following as included in the Fingal County Development Plan 2023 – 2027:

- Objective DMS092 included within the FCDP 2023-2027 which outlines the requirements that space extensive developments, such as data centres; and
- Zoning of the site as 'HI – Heavy Industry'

## 4.1 Compliance with Objective DMS092 – Space Extensive Developments

As part of the invitation to make a submission on the appeal in relation to the FCDP 2023-2029, An Bord Pleanála have specifically invited the applicant to submit observations regarding Objective DMS092 – Space Extensive Developments. This outlines requirements that should be addressed by space extensive developments such as data centres. Details of this objective are included on figure 1:

**Objective DMSO92 – Space Extensive Developments**

Proposals for space extensive developments such as data centres are required to address the following:

- Energy efficiency measures for the development to reduce the carbon footprint in support of national targets towards a net zero carbon economy, including renewable energy generation.
- The extent of energy demand and proximity to multiple high voltage strategic grid connections with significant electricity supply capacity available, including areas with high concentration of renewable energy electricity generators.
- The availability of appropriate infrastructure such as high voltage electricity, fibre optic cables, water and wastewater etc. to support the use as a data centre.
- Measures to support the just transition to a circular economy.
- Measures to facilitate district heating or heat networks where excess heat is produced.
- High-quality design approach to buildings which reduces the massing and visual impact of same. A visual impact assessment may be required in some circumstances, depending on the specific site.
- Details of employment numbers once operational.
- Details of the levels of traffic to and from the site at construction and operation stage.
- Evidence of sign up to the Climate Neutral Data Centre Pact.
- A decommissioning report which sets out the development strategy for the site if and when the data centre is no longer in use, in order to bring the site back to a future developable state.
- The principles for Sustainable Data Centre Development as per the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022).

*Figure 1: Fingal County Development Plan Objective DMS092 – Space Extensive Developments*

The proposed development is fully in accordance with, and positively contributes to the achievement of, Objective DMS092. This is outlined below, with reference to all specific elements included within the overall objective:

### 4.1.1 Energy efficiency measures for the development to reduce the carbon footprint in support of national targets towards a net zero carbon economy, including renewable energy generation

The following measures are proposed and will be implemented as part of the proposed development. These measures will reduce the carbon footprint of the development and support the national targets towards a net zero economy fully in accordance with this objective. The measures include:

- Building Design and Technology
- Significant Renewable Additionality that will produce more than the annual energy requirements of the proposed data centre.

(1) *Building Design and Technology*

The proposed development has incorporated highly efficient technologies and methodologies allowing for a high degree of sustainability. These measures are listed below:

- The data halls will be cooled by air handling units via free air cooling for the majority of the time with evaporative (adiabatic cooling) during unusual high temperature periods (temperatures typically greater than 25 degrees Celsius).

- During normal operation the data storage buildings will be air cooled which significantly reduces the requirement for water compared to mechanical chilling, or a fully water-cooled design. The chosen design efficiencies significantly reduce water demand on site.

- On site Solar PV – 640sqm of roof mounted solar arrays (50kWp) is proposed for each building that will assist with on-site power use within the office areas.

- Hydrotreated Vegetable Oil (HVO) is planned to be used in the energy generators.

- Waste management during and post construction will actively control the generation, recycling and disposal of waste material.

- Roof surfaces will be finished with white cap sheets with a high solar reflectance index (SRI) to minimise heat absorption.

- Low/ zero carbon technologies such as low energy lighting, sensor lighting controls, variable speed bumps etc are proposed to be included in the detailed design.

- Airside heat recovery systems with air-to-air heat pumps shall be installed in the office areas. These systems are to accommodate the fresh air and heating/ cooling requirements for the space.

- Energy Efficient Direct Drive Electrically Commutated (EC) fans and motors shall be utilised where possible and variable speed drives (VSDs) will be utilised where EC Fans are not variable. Premium Efficiency Motors will be specified on all equipment.

- It has been calculated that the heat captured from the data centre will be between 25C and 30C. The applicant and end user are supportive of the development of a waste heat recovery and district heating scheme in conjunction with Fingal and have reserved space on site to accommodate the associated plant should a design be feasible. The design and construction of the Data Centre buildings to accommodate waste heat supply is contingent on the existence or the parallel development of a local waste heat receptor system.

- All other data storage engineering services installations proposed have been considered in detail from an energy perspective.

Both the Applicant and Microsoft will work with the system operator in respect of the use of the uninterruptable power supply (UPS) batteries within the proposed data centre to assist with real-time interaction with Ireland's power grid. On days when wind or solar power production is fluctuating, these backup batteries can be used to help maintain a steady flow of energy to power customers. The design for the Huntstown Data centre includes for UPS with energy aware capabilities.

An Energy Statement was submitted with the application which demonstrates alignment with Policy CAP12 and addresses the first objective of Objective DMS092. The development is designed to achieve Building Regulations (Part L) compliance and a targeted BER of at least A2 rating. Full details of design measures and technology/equipment to be used to reduce the carbon footprint are included in the Energy Statement.

(2) *Additional Renewable Energy Generation*

The Applicant has entered into binding legal agreements with Microsoft to provide Corporate Power Purchase Agreements ('CPPAs') for new renewable energy. We can confirm that these agreements are in place and have been signed by both parties, to this effect, due to the highly sensitive and commercial nature of these agreements, a signed letter of confirmation from both Energia Group and Microsoft is appended to this submission. These agreements are capable of underpinning *new* renewable energy generation calculated to offset the energy consumed by the proposed development from the electricity grid. The agreements provide a legal obligation for:

- Corporate Power Purchase Agreements between the applicant's group (the Energia Group) and the facility end user (Microsoft).
- The establishment of new renewable energy generation projects by the applicant's group, that will not be supported by government or consumer subsidies will be:
    - Located throughout Ireland, with a concentration in South Meath / North Dublin;
    - Developed in parallel development to the energy demand of the proposed development; and
    - In total, should see the collective annual generation exceed the data centre's annual electricity use.

Through these obligations, for every unit of energy consumed by the data centre, a unit of new renewable energy generation would be despatched to the wider electricity network to off-set it. This delivers the objective of operating the proposed development on an annual net zero energy basis that would support Ireland's overall climate targets. Any associated additional renewable energy supply would also increase energy security through the development of renewable generation development within Ireland.

Subject to a grant of planning permission, Energia Group is well positioned to deliver the renewable energy generation required to offset the energy demand of the data centre based on its approximately 900 MW renewable energy development pipeline. Energia Group has developed a pipeline consisting of 634 MW (MEC) of solar assets and 275 MW (MEC) of onshore wind assets, the majority of which have received planning consent. Energia Group has committed its renewable energy pipeline to Microsoft for the execution of CPPAs under a binding Framework Agreement signed by the parties. The construction of the Energia Group's portfolio is underpinned by the agreement between Energia Group and Microsoft and is contingent on the proposed data centre development proceeding". The 634MW MEC of Solar Farms which forms part of the portfolio are all located within 35km of the Proposed Development with 236MW being within 15km.

- 236MW MEC located between 0-15km;
- 368.MW MEC between 15-30km; and
- 30MW MEC between 30-35k.

Since execution of the agreement, Energia and Microsoft have signed one CPPA for a wind asset that is expected to achieve commercial operations by July 2024. A second CPPA between the parties is targeted to be signed imminently. These two initial contracts – totalling 74 MW of new capacity – in advance of a decision on the proposed Huntstown development demonstrates the companies' commitment to ensuring data centre operations commence with renewable energy supply. The companies will enter into more CPPAs under the Framework Agreement for additional renewable energy projects.

The portfolio of renewable projects have all applied for a 10 year planning permission. It can be confirmed the portfolio of consented renewable development projects, where developed, must be constructed within the associated planning permission duration. The proposed data centre has also applied for a 10-year planning permission. Therefore, the development of the consented renewable portfolio should be completed within the lifetime of the planning permission for the data centre.

Attached to this submission is a letter signed by both parties (Energia Group and Microsoft). This letter confirms:

- Energia Group's portfolio of projects available under the agreements in place with Microsoft; and
- The parties' intention to enter into CPPAs for additional renewable energy projects for the data centre in order to meet Microsoft's sustainability goals and support the objective of operating the proposed development on an annual net energy zero basis that would support Ireland's overall climate targets.

In deciding to grant permission for the proposed development, Fingal County Council imposed the following condition 3:

> *Prior to the commencement of operation of the development hereby permitted, the developer shall submit for the written agreement of the Planning Authority details of a Corporate Purchase Power Agreement that the developer has entered into which demonstrates that the energy consumed by the development on site is offset with new renewable energy generation. The Agreement shall comply with the following:*
>
> *a) The new renewable energy projects shall not be supported by government, consumer or other public subsidies.*
> *b) The new renewable energy projects shall be located in Ireland.*
> *c) The new renewable energy projects shall be provided by the applicant's group, that is, Huntstown Power Company Limited.*
> *d) The new renewable energy generation shall relate to energy that is not being generated at the date of grant of this permission.*
>
> *REASON: In the interests of sustainable development.*

The Applicant welcomes a similar condition to be issued by An Bord Pleanála in the event of a grant of planning permission. The applicant would request that in issuing any such condition, that An Bord Pleanála take into account the two renewable energy generation projects which have already commenced development post the notification of decision to grant permission by Fingal County Council in April 2022, but which have been backed by Microsoft under the CPPA arrangements.

(3) Construction:

To help drive progress industry-wide, Microsoft is seeking to advance progress by helping to accelerate markets for low-carbon building materials. As a sector, building materials such as steel and cement are currently some of the highest contributors to the carbon cost of new construction, together producing an estimated 13.5% of global carbon emissions. Innovations in green steel and lower-carbon cement are rapidly emerging, however, these markets are still nascent and need significant investment to scale up and bring supply online.

With Microsoft's $1 billion Climate Innovation Fund, they are investing to hasten the development and deployment of new climate innovations, especially for underfunded sectors and supply-constrained markets like lower-carbon building materials. For example, Microsoft are investing in solutions such as H2 Green Steel to expand market supply of near-zero carbon steel which can deliver up to 95% lower $CO_2$ emissions than conventional steel. Microsoft's investment in H2 Green Steel is a world-wide commitment.

Microsoft is also working to broaden availability of low-carbon concrete and other construction materials through commercial projects and collaboration with the largest data centre companies in the world. Microsoft's pilot programs use concrete alternatives like biogenic limestone and fly ash and slag with the goal of lowering the embodied carbon in concrete by more than 50% compared to traditional concrete mixes with these investments.

This project is seeking to achieve LEED Gold certification. Product specifications will include the requirement to provide Environmental Product Declarations (EPDs) and Corporate Statements of Responsibility (CSR) to meet LEED certification. EPDs support carbon emission reduction by making it possible to compare the impacts of different materials and products to allow architects, engineers and designers select the most sustainable option.

LEED certification also leads to increased energy efficiency and environmental sustainability, better indoor environmental quality and improved water efficiency and conservation.

Microsoft ensure that the data centres that they operate adhere to these standards.

4.1.2 **The extent of energy demand and proximity to multiple high voltage strategic grid connections with significant electricity supply capacity available, including areas with high concentration of renewable energy generators.**

(1) *Extent of Energy Demand*

The proposed development will have a maximum operational energy consumption capacity of 150MW.The proposed development seeks a 10-year planning permission and therefore the ramping up its energy consumption will occur over period of several years. The development is therefore not be capable of consuming its maximum energy requirement of 150MW until the proposed development becomes fully operational.

The 150MW quoted represents the energy consumption capability for the proposed development, it does not however represent the day-to-day energy requirements. During the operational phase, the development will consume on average a much lower level of energy than its design capability of 150MW. Data Centres typically operate at an 80% IT load.

Nevertheless, the assessments submitted as part of the planning application used 150MW / 1,310GhW as a possible worst-case scenario for assessment purposes (i.e. the development operating at its 150MW full capacity all year round).

(2) *Proximity to Grid Connection with Available Capacity*

The site has been strategically located adjacent to the Huntstown Power Station campus and is located in very close proximity to two high voltage nodes on the North Dublin electricity transmission system being the Finglas 220kV substation (0.5km to the south of the site) and Corduff 220kV substation (3.0km to the west of the site. (See Attachment 2, which maps out the proximity of the proposed development site relative to the Dublin electricity transmission system).

For the avoidance of repetition, we refer the Board to Section 2.3 'Strategic Location' and Section 2.4 'Grid Capacity' above. These sections further detail the proximity of the proposed development to the grid, the associated efficiencies and benefits of the proposed site location and confirms that a Transmission

Connection Agreement with Eirgrid is in place for the Proposed Development, thus verifying that there is sufficient power available from the existing area network to facilitate the proposed development.

(3) *Concentration of Renewable Electricity Generators*

The proposed development is located in north Dublin in close proximity to a large cluster of renewable development, including in construction and operational large scale solar parks located in south Meath / north Dublin which will directly connect to the same part of the electricity transmission system as the Proposed Development. The total volume of solar parks expected to be constructed and connected in south Meath / north Dublin prior to 2030 is expected to be in the region of 2GW.

Of the 2GW expected to be constructed and connected in south Meath/North Dublin, the Energia Group has a portfolio of 11. solar farms totalling 634MW MEC, all of which are located with 35km of the Proposed Development as follows:

- 236MW MEC located between 0-15km;
- 368MW MEC between 15-30km; and
- 30MW MEC between 30-35k

These solar parks are yet to be built / commissioned. Subject to receipt of a grant of planning for the proposed data centre allowing for successful build out of these solar farm projects, the Framework Agreement in place allows for the parties (Energia Group and Microsoft) to enter into further CPPAs The portfolio of renewable projects, including the aforementioned solar farms, have all applied for a 10 year planning permission and therefore, where constructed, must be done so within its planning permission duration. The proposed data centre has also applied for a 10-year planning permission. Therefore, the development of the consented renewable portfolio should be completed within the lifetime of the planning permission for the data centre.

**4.1.3 The availability of appropriate infrastructure such as high voltage electricity, fibre optic cables, water and wastewater etc to support the data centre.**

(1) *High Voltage Electricity*

The site has been strategically located adjacent to the Huntstown Power Station campus and is located in very close proximity to two high voltage nodes on the North Dublin electricity transmission system being the Finglas 220kV substation (0.5km to the south of the site) and Corduff 220kV substation (3.0km to the west of the site. Locating the development adjacent to the electricity transmission system is efficient as it minimises the losses incurred in transporting electricity over longer distances.

Attached to this submission is a map which demonstrates the proximity of the proposed development to existing electricity transmission infrastructure.

A Transmission Connection Agreement with Eirgrid to provide electricity to the proposed development has been executed by both parties (Huntstown Power Company Limited and Eirgrid) on 8 March 2021. (Ref. P28L)

EirGrid as the national authority for the grid has the requirement to ensure that the connection will not impact or reduce the capacity available within the local network to support the neighbouring area. The TCA confirms that there is sufficient power available from the existing area network to facilitate the proposed development.

(2) *Fibre Optic Cables*

There are telecommunication lines in existence for telephone and broadband services in the area including the high speed T50 fibre ring which circles Dublin and is located only 1.3km to the north and 1.5km to the west of the site. A fibre optic cable distribution network will be installed with a separate incoming fibre infrastructure and provided to each building via underground fibre ducts. There are existing underground carrier ducts adjacent to the site that will be utilised for the development. The connection into the wider telecommunications network will be undertaken by a statutory telecommunications operator.

The installation of a new fibre optic cable network on the site will be carried out in accordance with best practice standards.

Telecommunications including fibre required during the construction phase will be provided via a mobile connection or temporary connection to the nearby telephone network.

(3) *Water*

A water connection offer from Irish Water for the Proposed Development (reference CDS2000446801) has been accepted by the Applicant confirming the availability of water to the site. The volume of water to be supplied will be restricted to the annual allowance requested by the Proposed Development of 5,724m3. The site will be connected by a new 250mmø watermain to the proposed 450mmø water main in the R135 (which is located only 2m from the edge of the development site).

The works required to facilitate this are detailed further in the Engineering Planning Report which was submitted with this application.

Microsoft, the facility end user, takes a holistic approach to water reduction across its businesses, from design to efficiency, looking for immediate opportunities through operational usage and, in the longer term, through design innovation to reduce, recycle and repurpose water.

The proposed data centre uses direct free air instead of water for cooling and water from the public mains is supplemented through harvesting rainwater.

(4) *Wastewater*

A wastewater connection offer from Irish Water for the Proposed Development (reference CDS2000446801) has been accepted by the Applicant confirming wastewater disposal is available using existing infrastructure without any upgrade works. The site will be connected by a new 150mmø wastewater pipe to the proposed connection point in the R135 (which is located adjacent to the edge of the development site). These works are detailed further in the Engineering Planning Report which was submitted with this application.

### 4.1.4 Measures to support the transition to circular economy

(1) *Waste Management*

Waste management from the site will be carried out in accordance with Waste Regulations, Regional Waste Plan (Eastern Midland Region) and Waste Hierarchy/Circular Economy Principals.

The recovery of materials will be managed within the established waste management hierarchy which gives the order of preference as:

- Reduction of Waste
- Reuse
- Recovery.

During construction of the development, where possible, soil will be reused for site levelling, roads, car parking areas, berms and other landscaping purposes. Excess soil/subsoil or rock not required for re-use on site will be transferred off site for re-use or disposal.

Material removed from site may be re-used offsite for beneficial use as a by-product on other sites with appropriate planning/waste permissions/derogations (e.g., in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011) as amended or will be reused, recovered and/or disposed off-site at appropriately authorised waste facilities. Waste disposal in landfills shall be minimized to the greatest extent possible. Of the inevitable waste that is generated, as much of the waste material as economically feasible shall be salvaged, recycled or reused.

During construction, the contractor shall be required to use all reasonable means to divert construction and demolition waste from landfills and incinerators, and facilitate their salvage and recycle not limited to the following:

1. Waste Management Plan development and implementation.
2. Techniques to minimize waste generation.
3. Sorting and separating of waste materials.
4. Salvage of existing materials and items for reuse or resale.
5. Recycling of materials that cannot be reused or sold.

All of the above are to be monitored and recorded in accordance with the requirements for LEED certification.

(2) *District Heat:*

It has been calculated that the heat captured from the data centre will be between 25C and 30C. The applicant and end user are supportive of the development of a waste heat recovery and district heating scheme in conjunction with Fingal and have reserved space on site to accommodate the associated plant should a design be feasible. The design and construction of the Data Centre buildings to accommodate waste heat supply is contingent on the existence or the parallel development of a local waste heat receptor system.

(3) *Rainwater Harvesting*

Water storage is proposed to be provided for 48 hours for the evaporative cooling system. The design for the proposed Data Centre includes rainwater harvesting which is used in the administration building for the flushing of toilets and urinals. The design also includes water treatment and storage which the rainwater can pass through to be used in the evaporative cooling systems, reducing the reliance on the public water supply. Approximately 33% of the water used in the evaporative cooling process (blowdown water) is recovered and recirculated through the water treatment system so it can be re-used for cooling again.

**4.1.5 Measures to facilitate district heat or heat networks where excess heat is produced.**

It is noted to An Bord Pleanála that as part of the Further Information Response to Fingal County Council, an assessment of waste heat from the data centre was undertaken by Mott McDonald and Ethos Engineering.

It has been calculated that the heat captured from the data centre will be between 25C and 30C. The applicant and end user are supportive of the development of a waste heat recovery and district heating scheme in conjunction with Fingal and have reserved space on site to accommodate the associated plant should a design be feasible. The design and construction of the Data Centre buildings to accommodate waste heat supply is contingent on the existence or the parallel development of a local waste heat receptor system.

4.1.6 **High quality design approach to buildings which reduces the massing or visual impact of same. A visual impact assessment may be required in some circumstances, depending on the specific site.**

The proposed development was subject to extensive pre-planning engagement with Fingal County Council, with specific focus on design consideration. An initial pre-planning meeting was conducted between the Applicant and Fingal County Council in 2019. Following the initial meeting, the Applicant had two formal pre-planning meetings with Fingal County Council. The first meeting took place on 22 September 2020 and the second meeting took place on 11 November 2020.

The final design of the data centre facility was subject to a number of design options before a final site layout was agreed, progressed to final and lodged to Fingal County Council at full planning application stage. Previous iterations of scheme design, before the chosen option was progressed, are detailed within Chapter 4: Alternatives of the submitted EIAR, EIAR Addendum (Response to Item 7(a) of FCC FI Request) and Response to Item 7(b) of the FCC FI Request. The chosen option was preferred from both visual and environmental perspectives, providing increased setbacks from sensitive receptors, providing a generous landscape buffer and significantly lower water consumption than other design options.

The proposed development layout has struck an appropriate balance between providing sufficient capacity on the site to make the development economically viable and providing a suitable layout for the environmental factors considered. Site layout considerations were primarily made based on the following factors:

- Minimising potential impacts on the environmental and visual impact sensitivities associated with the surrounding land uses;
- Location of the proposed substation and its proximity to the future grid connection; and,
- Orientation of the main buildings to optimise the use of the space available and minimise visual and noise impact.

A Landscape Visual Impact Assessment (LVIA) of the proposal was completed as part of the Environmental Impact Assessment Report prepared for the development. The completed LVIA concluded that the operational phase of the development will give rise to a noticeable change in the landscape character. The initial impact of the built development on the landscape character would be perceived as negative in the short term due to the change in form from a field to a built development. Implementation of the proposed landscape plan would meaningfully reduce any negative visual effects on the small number of affected residential properties around the site. The establishment of significant areas of native woodland in ecological corridors would also impact positively on local biodiversity.

At further information stage, it was requested by Fingal County Council that:

> *'The applicant is requested to submit revised plans for the data centre building to include revisions to the eastern elevation to provide a more aesthetic appearance and/or screening to the flues associated with Data Hall B along the eastern boundary'.*

During the application process, the applicant's design team engaged constructively with Fingal County Council. Through this engagement and design process, it was determined that the flues associated with Building B along the eastern boundary should be designed as an architectural feature. The chosen design solution includes rectangular panels that appear to be floating on the flue exterior, thus enhancing the perceived lightweight nature of the vertical flues. The flue re-design achieves an enhanced aesthetic appearance of the eastern elevation. The re-designed flues not only fulfil a functional requirement, but also create an architectural feature on site in response to request by Fingal County Council. It is noted to An Bord Pleanála that this change to the building design in response to Fingal County Council's request at Further Information stage confirms the applicant's commitment to providing a high-quality design approach for the scheme.

**4.1.7 Details of employment numbers once operational**

It is estimated that up to 181 no. full time staff will be employed during the operational phase. Staff will be employed on a shift basis over a 24-hour period, seven days a week. This is directly employed staff only. Indirect employment and economic impacts are set out at 4.1.11 below.

**4.1.8 Details of the levels of traffic to and from the site at construction and operation stage**

Construction

- Average construction staff 600, with peak of 1,050 no.
- Average cars/ light vehicles per day 400, with peak of 700 no of which up to 500 no. will use an off-site parking area – with workers being transported to and from the site by bus.
- Peak HGVs – 110 and LGVs – 30 per day with numbers spread through the working day – 07.00hrs to 17.00hrs.

Construction phase work will occur over a period of approximately 36 months. Peak hour flows were included in table 13.2 of the EIAR submitted, and are detailed below:

| Type | PCU factor | AM Peak (PCU's) | | PM Peak (PCU's) | |
|---|---|---|---|---|---|
| | | In | Out | In | Out |
| Construction staff vehicles 200/day | 1 | 20 | 0 | 0 | 20 |
| Construction staff – bus | 2 | 4 | 4 | 4 | 4 |
| HGV's | 2 | 22 | 22 | 11 | 11 |
| LGV's | 1 | 3 | 3 | 3 | 3 |
| Peak Hour Totals | | 49 | 29 | 14 | 34 |
| Two Way Traffic (PCU's) | | 78 | | 48 | |

*Table 2 – Construction Traffic – Peak Hour Generation*

Operation

- It is proposed that the quantum of car parking provision is 202 no. spaces (101 per building) for the development to include for visitor and staff parking.
- At operational phase the site will be run on a 24-hour basis with varying shifts. Considering the location of the site it has been conservatively assumed that all staff will travel by private vehicle to and from the site.

A breakdown of operational traffic arising from staff using the site, together with shifts, was provided in table 13.3 of the EIAR submitted, and are detailed below:

| Type | Shift | Total | AM Peak (08.00-09.00) (PCU's) | | PM Peak (16.30-17.30) (PCU's) | |
|---|---|---|---|---|---|---|
| | | | In | Out | In | Out |
| Office/Management | 08.00-17.00 | 98 | - | - | - | 98 |
| FOC | 07.00-19.00 | 3 | | | | |
| | 19.00-07.00 | 3 | | | | |
| Service/Logistic | 08.00-17.00 | 55 | | | | 55 |
| | 06.00-14.30 | 3 | | | | |
| | 14.30-24.00 | 3 | | | | |
| | 24.00-06.00 | 3 | | | | |
| DCPS | 07.00-19.00 | 9 | | | | |
| | 19.00-07.00 | 4 | | | | |
| Visitors | 08.00-17.00 | 75 | 8 | 8 | 4 | 4 |
| Peak Hour Totals | | | 8 | 8 | 4 | 157 |
| Two Way Traffic (PCU's) | | | 16 | | 161 | |

*Table 3 – Operational Traffic – Peak Hour Generation*

It is noted that the development of the data halls will be phased, with Phase 1 development commencing operation when Phase 2 is under construction. It can be assumed conservatively that the staff totals for the initial operational phase will be the same as that of the fully operational development. The resultant traffic from this combined scenario was set out in table 13.4 of the submitted EIAR, and is included below for the benefit of An Bord Pleanála:

| Type | AM Peak (PCU's) | | PM Peak (PCU's) | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Peak Construction Traffic | 49 | 29 | 14 | 34 |
| Operational Traffic | 8 | 8 | 4 | 157 |
| Peak Hour Totals | **57** | **37** | **18** | **191** |
| Two Way Traffic (PCU's) | 94 | | 209 | |

*Table 4 – Phase 2 Construction Traffic + Phase 1 Operational – Peak Hour Generation*

The trip distribution will be the same proportions as set out for the construction phase above.

### 4.1.9 Evidence of sign up to the Climate Neutral Data Centre Pact

The end user of the facility, Microsoft has been a certified member of the Climate Neutral Data Centre Pact since 29-Jan-21. As per Certificate of Conformity number BV-CNDCP-SRI-VC-0010 for the period 1-Jul-23 to 30-Jun-27, Bureau Veristas Denmark have verified that Microsoft has been audited under a limited assurance statement and found to be in accordance with the Climate Neutral Data Centre Pact including in respect of energy efficiency, clean energy, water conservation, circular economy and circular energy system, confirming Microsoft's credentials (See Attachment 3 - Certificate of Conformity). Microsoft are named on the public register set out on the Climate Neutral Data Centre Pact website (https://www.climateneutraldatacentre.net/public-register).

**4.1.10 A decommissioning report which sets out the development strategy for the site if and when the data centre is no longer in use, in order to bring the site back to a developable status.**

A Decommissioning Plan in respect of the proposed development has been prepared by AWN Consulting to comply with the requirements of Objective DMS092 as included within the Fingal County Development Plan 2023-2029 and is submitted to An Bord Pleanála for consideration as part of this response pack.

The Decommissioning Plan sets out the development strategy for the site to ensure the site is brought to a future developable state if and when the data centre is no longer in use. The goal of the Decommissioning Plan is to leave the facility in a state that maximises its utility and value for future occupants or owners whilst supporting the circular economy by promoting reuse and recycling during decommissioning. Given the multi-storey nature of the development and the flexibility of the large floor plates within Buildings A and B, the site can be readily reconfigured for various commercial or industrial uses.

A thorough assessment of the site will be undertaken to create a detailed inventory of all assets, materials, and equipment. This inventory will identify items that can be reused, recycled, or need to be disposed of. Throughout the decommissioning process reuse and recycling will be prioritised to minimise waste.

Remediation efforts will focus on restoring the site to a safe and developable condition, meeting regulatory standards and facilitating future development opportunities. The existing state of the site prior to development, as set out in the Environmental Impact Assessment Report (EIAR), will serve as the baseline. Following the completion of site decommissioning, a validation audit will be conducted to ensure the decommissioning plan's details have been implemented effectively.

Through adhering to the procedures and guidelines specified in this Decommissioning Plan, the facility will demonstrate compliance with Fingal County Development Plan 2023-2029 Objective DMS092 and maximises the site future development potential.

We refer An Bord Pleanála to the Decommissioning Plan now submitted as part of this response pack for details. (See Attachment 4)

**4.1.11 The principles for Sustainable Data Centre Development as per the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022).**

The proposed development complies with each of the 6 no. principles for Sustainable Data Centre Development as per the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022) is now outlined below:

**Principle 1: Economic Impact**

**The Government has a preference for data centre developments associated with strong economic activity and employment.** In particular, it favours developments in regional locations, aligned with the National Planning Framework and Regional Spatial and Economic Strategies, which will embed the technology sector in locations and communities that can benefit from this investment, employment and spillover effects. In assessing economic impact, the totality of the Irish-based economic impact should be considered and factors such as associated total corporate employment, exports, wage levels, Irish materials/services purchased taken into account.

The availability of digital infrastructure should serve our national digitalisation objectives, drive innovation, productivity and skills across our economy aligned to the National Digital Strategy.

The proposed development complies with the above principle as follows:

**Aligned with the National Planning Framework and Regional Spatial and Economic Strategies**

National, regional and local planning policy provides unequivocal support for the delivery of ICT Infrastructure and Data Centres in Ireland.

The development complies with National Strategic Outcome 5 – A Strong Economy Supported by Enterprise, Innovation and Skill as listed in Project Ireland – National Planning Framework (2040), which includes an objective for the:

> *'Promotion of Ireland as a sustainable international destination for ICT infrastructures such as data centres and associated economic activities.'*

The proposed development delivers on this objective of the National Planning Framework as follows:

- The proposal will contribute to the emerging digital infrastructure in Fingal County Council that helps to support a strong Irish economy through its enterprise, skills and innovation sectors.

- The proposal will continue to maintain high quality international connectivity, that Ireland is quickly becoming renowned for.

The development complies with the Guiding Principles of Investment and Prioritisation in Placemaking for Enterprise Development as included in the Regional Spatial and Economic Strategy for the Eastern and Midlands Region, one of which listed is to:

> *'Align the national strategy and approach for data centres – right location for use and energy demand'.*

RPO 8.25 of the Regional Spatial and Economic Strategy for Eastern and Midlands Region states that Local Authorities shall:

- Support and facilitate delivery of the National Broadband Plan.

- Facilitate enhanced international fibre communications links, including full interconnection between the fibre networks in Northern Ireland and the Republic of Ireland.

- Promote and facilitate the sustainable development of a high-quality ICT network throughout the Region in order to achieve balanced social and economic development, whilst protecting the amenities of urban and rural areas.

- Support the national objective to promote Ireland as a sustainable international destination for ICT infrastructures such as data centres and associated economic activities at appropriate locations.

- Promote Dublin as a demonstrator of 5G information and communication technology.

It is submitted to An Bord Pleanála that the data centre development proposed is supportive of the overall growth strategy as included in the Regional Spatial and Economic Strategy for the Eastern and Midlands Region.

**Strong Economic Activity and Employment**

***Direct Economic Impact***

In terms of the direct economic impact/benefits arising from the proposed development, it is noted that:

- An average of 600 jobs will be generated during the construction phase, with peak construction employed figures estimated to be 1,050.
- Estimation of 181 no. Full time staff will be employed during the operational period.

***Indirect Economic Impact***

*Microsoft:*

Microsoft has been investing in Ireland since 1985. Microsoft is a major multinational Data Centre operator and provides significant employment in Ireland, both directly within their data centres and within the wider office-based settings in Ireland which represents a centre for tech employment.

As a strategic hub for the business, Microsoft Ireland employs more than 3,500 people representing over 90 different nationalities across a variety of roles including operations, sales, engineering, and product development. Embracing a hybrid working model, the company encourages, employees to be curious, to experiment, and to share the things they learn. Microsoft's mission is to empower every person and every organisation on the planet to achieve more and the company lives out this mission every day through its engagement with businesses, government, partners, non-profit organisations, the start-up ecosystem, and society as a whole.

Data centres represent a core digital infrastructure for both Ireland's and Europe's digital economies and for strengthening Ireland's position as a strategic international location for IT services. Investments by technology multinationals in large, long-life assets such as data centres further secures the presence of the global technology sector in Ireland. According to IDA Ireland, companies that operate data centres in Ireland, including hyperscale data centres and smaller colocation providers, account for approx. 16,000 direct employees. However, when contractor numbers are factored in, that number reaches 27,000. Between hyperscale and colocation data centre providers, they provide hosting capability to a range of software, services and consumer companies that create tens of thousands of additional jobs here. In many cases, the ability to host data here and use Irish data centres to sell product or services is a critical part of their presence in Ireland. Huntstown is another step in Microsoft's Data Centre journey here in Ireland but also a strategic part of our strategy to unlock the opportunities of the digital economy and further strengthen Irelands' technology sector.

*Energia Group:*

Energia Group directly employs over 800 employees and has a proven history of delivering new renewable energy projects and providing innovative solutions to customers. The agreements in place between Energia Group and Microsoft will result in the construction and operation of a large portfolio of renewable assets and will support the on-going operations of Energia Group.

*Energia Group Community Benefit:*

As the proposed development supports the development of our renewable portfolio, it is important to note that the communities around these renewable projects will also benefit.

The Energia Group is committed to ensuring that local communities benefit from the construction and operation of our renewable assets. Energia Group works with Community Foundation Ireland to ensure our community benefit funding has maximum positive and lasting impact in the areas where we operate.

Energia Group is now investing c.€750,000 every year in our benefit funds, wind farm sponsorships and local electricity discount schemes for those households in the immediate vicinity of our new developments. The company's overall wind farm community investment to date is approaching €4m – and growing.

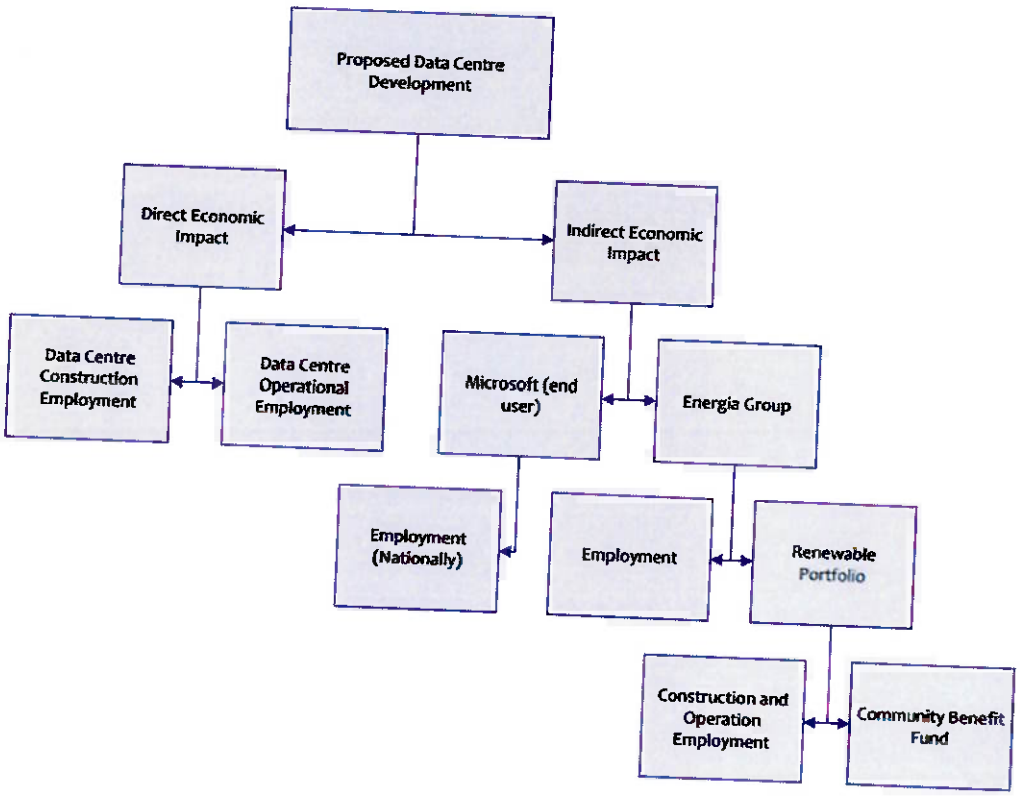



*Figure 2: Direct and Indirect Economic Impacts of Proposed Data Centre Development*

## Alignment with The Digital Ireland Framework

According to the *Harnessing Digital – The Digital Ireland Framework, Ireland's National Digital Strategy* (DIF), published in February 2022, 'Ireland is strongly committed to supporting and progressing the digital transformation of our economy and society, and to building on its position as a digital leader at the heart of Europe and globally'.

The DIF notes that data centres are a core infrastructure enabler of a technology-rich, innovative economy, which makes Ireland a location of choice for a broad range of sectors and value-added activities, such as business collaboration, online commerce, banking, and supply chain management. The DIF also acknowledges that data centres are a feature of Ireland's electricity demand and that appropriate grid connection policy and electricity market design, alongside research, development and innovation in the sector, can facilitate increasingly efficient, flexible and low carbon infrastructure for Ireland's digital, knowledge-based economy.

The DIF states that it is a goal to 'be a digital leader at the heart of European and global digital developments' and notes that Ireland, with its strong capabilities and the presence of leading global digital enterprises, 'will be at the heart of EU digital progress, playing a unique role as a bridge between the US and EU'.

For Ireland to be an international leader in the digital economy, the DIF highlights that skills policy must be focused on meeting digital skills needs at all levels. These includes:

- High-Level Digital Skills: Ensuring a strong pipeline of talent and expertise for the economy through the development of high-level digital skills;

- Digital Skills for the Labour Market: Supporting appropriate levels of digital skills for the labour force as a whole; and
- Digital Skills for Society: Ensuring digital skills for the general population, to enable all cohorts to fully engage in society, and benefit from digital transformation

As noted in the DIF, skills development is crucial for redesigning jobs that increasingly involve working alongside new technologies. This will also be critical in boosting innovation and productivity across the workforce including in what traditionally have been characterised as low skilled job.

Overall, the proposed development algins with the Digital Ireland Framework, Ireland National Digital Strategy, having regard to the following:

- The development of a data centre, which is deemed to be a *"core infrastructure enabler of a technology-rich, innovative economy"*.

- The agreements in place between the applicant and the end user that delivers the objective of operating the proposed data centre on an annual net energy zero basis that would support Ireland's overall climate targets. Any associated additional renewable energy supply would also increase energy security through the development of renewable generation development within Ireland. These measures facilitate increasingly efficient, flexible and low carbon infrastructure for Ireland's digital, knowledge-based economy.

- The energy efficient and innovative measures which from part of the development to assist the reduction the carbon footprint in support of national targets towards a net zero carbon economy.

- Associated community and SMEs benefits throughout the data centre lifecycle. We refer the Board to our response to Principle 6 of the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy which sets out initiatives and programmes by the applicant and the end user, including Microsoft's investment in programmes in the Dublin community that focus on three key pillars: community technology skills for jobs, enabling community sustainability, and empowering communities.

**Principle 2: Grid Capacity and Efficiency**

**The Government has a preference for data centre developments that make efficient use of our electricity grid, using available capacity and alleviating constraints.** Data centres should engage collaboratively with the respective system operators to understand capacity availability and required grid services across geographic locations, and where connection can be facilitated, provide grid services such as to best utilise available infrastructure to the benefit all electricity customers. This is in line with the CRU Direction to the System Operators related to Data Centre grid connection processing (CRU/21/124).

The proposed development complies with the above principle as follows:

*Collaborative Engagement and Grid Capacity:*

The Energia Group has engaged collaboratively with EirGrid from the very start of the project. EirGrid are supportive of the proposed location adjacent to existing generating power stations, therefore minimising additional electricity infrastructure requirements, and the design of the new substation grid connection was completed in conjunction with EirGrid as the design provides the grid services needed to strengthen

the redundancy of the transmission network in north Dublin, making the electricity grid in the area more robust and resilient to faults.

On 8th March 2021, Energia accepted a grid transmission connection offer ("TCA") from EirGrid for the data centre project. EirGrid as the electricity grid operator has the obligation to ensure that any new grid connection will not impact or reduce the capacity available within the local network to support the neighbouring area. The TCA from EirGrid confirms that there is sufficient power available to facilitate the proposed development. If there was a potential impact or inadequate capacity, then EirGrid would not have issued the TCA that is already in place. The additional electricity grid flexibility agreed with EirGrid in the TCA, which could help alleviate constraints in north Dublin, will be fully funded by the Applicant.

For the avoidance of doubt, the proposed data centre already has a connection agreement in place and therefore does not fall under "new demand" in the context of the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (2022). Notwithstanding this, this response details alignment with the principles set out in the Statement.

*Efficiency/Grid Efficiency:*

The proposed development has been strategically located to adjoin the Huntstown Power Station. The proximity of the location also provides the most energy efficient location for an energy consumer as it minimises electrical losses that occur when transferring electricity longer distances.

The Overall Development includes the construction of a 220kV Substation, which is the subject of a separate application currently awaiting decision from An Bord Pleanála (ABP.311528). The 220kV substation, once commissioned, will be owned and operated by EirGrid and form part of the national electricity grid. The 220kV Substation will strengthen and increase resilience and redundancy of the EirGrid 220kV electricity transmission network in north Dublin. The existing two power stations at Huntstown are currently connected directly and independently to the Finglas and Corduff 220kV substations respectively. As such, there is no flexibility as to where the electricity generated is despatched.

The proposed 220kV electrical substation would form a new node on the electricity transmission network that would allow the transmission system operator the flexibility to despatch the electricity generated by either power station to either Finglas or Corduff 220kV substations. This provides additional flexibility for the transmission system operator to balance the electricity system in north Dublin, making it more resilient to faults. As previously stated, this is supported by EirGrid as it provides the flexibility needed to operate the grid more efficiently, without additional high voltage electricity lines and other electrical infrastructure in the area that would otherwise be the case.

**Principle 3: Renewables Additionality**

**The Government has a preference for data centre developments that can demonstrate the additionality of their renewable energy use in Ireland.** Developments should provide clear additionality in renewable energy delivery in Ireland, whether through new generation, repowering or otherwise increasing in-country renewable energy capacity – proportionate to the impact of their energy demand.

Microsoft, the end user of the proposed data centre, has committed to using 100% renewable energy coverage globally by 2025. Decarbonisation of the electricity grid and the development of zero carbon energy sources such as wind and solar energy is key to Microsoft's climate targets. As such, Microsoft is procuring renewable energy supply in Ireland, for both its known and forecasted electricity needs, through Corporate Power Purchase Agreements, in alignment with their publicly stated global sustainability goals.

To facilitate these goals on this proposed development, the Energia Group on behalf of the Applicant has entered into binding legal agreements with Microsoft to provide Corporate Power Purchase Agreements ('CPPAs') for new renewable energy.

For the avoidance of repetition, we refer the Board to Section 2.2 'Maximise the Use of Renewables' and Section 4.1.1 (2) which details the Energia Group's Renewable portfolio available under the agreements in place with Microsoft.

**Principle 4: Co-Location or proximity with future proof energy supply**

**The Government has a preference for data centre developments in locations where there is the potential to co-locate a renewable generation facility or advanced storage with the data centre, supported by a CPPA, private wire or other arrangement.** Where the combination of technologies at a generation facility is built to match the demand capacity factor (e.g. endeavouring to match the maximum import capacity with export capacity), the same infrastructure may be able to assist both demand customers and generation facilities (wind/solar/battery farm). This would make efficient use of grid investments, reduce curtailment and potentially enable significant decarbonisation of the data centre. The Government also encourages the co-location of downstream value-adding activities that can make use of carbon, excess heat and other outputs from the data centre activity, such as for horticultural activities or district heating schemes.

*New Renewable Energy in Proximity to the Site*

The proposed development is located in north Dublin in close proximity to a large cluster of in development, in construction and operational large scale solar parks located in south Meath / north Dublin which will directly connect to the same part of the electricity transmission system as the Proposed Development. The total volume of solar parks expected to be constructed and connected in south Meath / north Dublin prior to 2030 is expected to be in the region of 2GW.

Of the 2GW expected to be constructed and connection in south Meath/North Dublin, the Energia Group has a portfolio of 11. no solar farms totalling 634MW MEC, all of which are located with 35km of the Proposed Development as follows:

- 236MW MEC located between 0-15km;
- 368MW MEC between 15-30km; and
- 30MW MEC between 30-35k

The portfolio of renewable projects, including the aforementioned solar farms, have all applied for a 10 year planning permission and therefore, where constructed, must be done so within its planning permission duration.

The use of private wires is being consulted on by the Commission for Utility Regulation in Ireland but until that consultation concludes private wires are currently prohibited in Ireland. Working alongside the proposed development, Energia and Microsoft have entered into signed binding legal agreements which set a framework under which new renewable energy generation calculated to offset the energy consumed by the proposed development from the electricity grid can be delivered through corporate power purchase agreements.

*Future Suitability*

The proposed data centre site is strategically located in an area, zoned 'HI', that has strong potential to accommodate the future development of battery storage facilities, in line with the above Principle. Energia Group own additional undeveloped land in the vicinity of the proposed Data Centre site. An

application for battery storage within this zoning (HI) has previously been granted by Fingal County Council under FW19A/0015.

In 2023, Microsoft outlined plans to use the uninterruptable power supply (UPS) batteries within its data centres in Dublin for real-time interaction with Ireland's power grid. On days when wind or solar power production is fluctuating, these backup batteries can be used to help maintain a steady flow of energy to power customers. That means fossil-fuel burning power plants will be needed less often to maintain steady power, cutting emissions and fuel costs. The design for the Huntstown Data centre includes for UPS with energy aware capabilities.

*On-Site Renewables:*

100kWp / 640sqm of onsite roof mounted solar arrays that will assist with onsite power use within the office areas have been included in the planning application.

*District Heating Scheme:*

It has been calculated that the heat captured from the data centre will be between 25C and 30C. The applicant and end user are supportive of the development of a waste heat recovery and district heating scheme in conjunction with Fingal and have reserved space on site to accommodate the associated plant should a design be feasible. The design and construction of the Data Centre buildings to accommodate waste heat supply is contingent on the existence or the parallel development of a local waste heat receptor system.

*EU Climate Neutral Data Centre Pact*

As set out at Section 4.1.9 above, the end user of the facility Microsoft has been a certified member of the Climate Neutral Data Centre Pact since 29-Jan-21. For the avoidance of repetition, we refer the Board to Section 4.1.9 'Evidence of sign up to the Climate Neutral Data Centre Pact' which details compliance by the end user Microsoft with the Climate Neutral Data Centre Pact.

*Maximise the use of Renewables*

As set out at Section 2.2 'Maximise the Use of Renewables' and Section 4.1.1 (2), the renewable development project portfolio available for CPPAs would produce on an annual basis in excess of the expected annual volume of energy to be consumed by the proposed data centre.

**Principle 5: Decarbonised Data Centres by Design**

**The Government has a preference for data centres developments that can demonstrate a clear pathway to decarbonise and ultimately provide net zero data services.** It is expected that data centres will align with the EU Climate Neutral Data Centre Pact energy efficiency and water use targets and set themselves targets to achieve zero carbon electricity use at all hours. System operators will work with large energy users to facilitate accurate hourly emissions reporting, grid carbon-intensity transparency, and allow data centre to optimise computing loads to maximise use of renewables and minimise carbon emissions (as per Action 99 of Climate Action Plan 2021).

**Climate Neutral Data Centre Pact**

As set out in Section 4.1.9, the end user of the facility Microsoft has been a certified member of the Climate Neutral Data Centre Pact since 29-Jan-21. The main targets set out by the pact that relate to the proposed development are set out below:

- Energy Efficiency - By January 1, 2025, new data centres operating at total capacity in cool climates will meet an annual power usage efficiency (PUE) target of 1.3 - through the use of direct free air cooling in the design of the proposed development, the data centres will operate with a PUE well below this limit.

- Water Usage - By 2025, new data centre operators will set and meet an annual target for water usage effectiveness (WUE) or another water conservation metric – through the use of direct free air cooling in the design of the proposed development together with rainwater harvesting, the level of water usage is the facility has been minimised.

- Clean Energy - Data centre electricity demand will be matched by 100% renewable energy by December 31, 2030 – as set out above, the renewable development project portfolio available for CPPAs would produce on an annual basis in excess of the expected annual volume of energy to be consumed by the proposed data centre.

- Circular Economy - Data centres will set a high bar for circular economy practices and assess for reuse, repair, or recycling 100% of their used server equipment

**Maximise the use of Renewables**

As set out at Section 2.2 and 4.1.1 (2), the renewable development project portfolio available for CPPAs would produce on an annual basis in excess of the expected annual volume of energy to be consumed by the proposed data centre.

Renewable Guarantees of Origin are currently issued on an annual basis which are used to underpin an annual offset assessment of renewable energy generated.

**Building Design and Construction**

As set out in Section 4.1.1 (1), the design of the proposed development and the technologies to be used measures will assist in the decarbonisation of the development and support the national targets towards a net zero economy.

**System Operator Engagement**

In 2023, 42% of electricity generated in Ireland was from renewable sources, mainly through onshore wind and solar, and Government policy is targeting increasing this penetration to 80% by 2030. To address the intermittent generation profiles of wind and solar generation, the system operator is currently implementing the procurement of additional long duration energy storage to reinforce the grid so that the electricity generated from intermittent renewable sources can be stored and released at times of low renewable generation. In the medium term the system operator will also be looking at alternative storage options such as hydrogen production to compliment the battery storage currently being procured.

As set out above, the proposed data centre site is strategically located in an area that has strong potential to accommodate the future development of battery storage facilities and the Energia Group as a leading Irish utility will continue to work with the System Operator to provide long duration storage services as needed, in line with but contingent on being successful, in the procurement processes to be set out by the System Operator.

**Principle 6: SME Access and Community Benefits**

**The Government has a preference for data centre developments that provide opportunities for community engagement and assist SMEs, both at the construction phase and throughout the data centre lifecycle.** Data centres should provide benefits for regional locations and their surrounding areas

through place-making, community engagement and collaboration with local and regional stakeholders to ensure they offer value to the communities in which they locate. Data centres are also construction projects, built environment and physical investments of scale. By necessity, they have an impact on the geography and communities in their vicinity. Data centre developers should make every effort to minimise the disruption of their construction on these communities.

**Community Engagement**

The Applicant has a long history of successful operation of significant energy infrastructure in the area since 2001. The Applicant has always placed significant importance on its interactions and relationships with the local community. While not a statutory requirement, the Applicant has been engaging in consultations with the community on an ongoing basis in relation to the Proposed Development since December 2020. Initial engagement provided information to local residents on the Applicant's development intentions in the area. The Applicant has continued engagement with local residents since these initial discussions.

In July 2021 (prior to the lodgement of the planning application) further door-to-door visits were carried out providing local residents with more detailed maps showing site boundaries, layouts, photomontages and construction access etc. Following this engagement and where required neighbourly agreements, setting out specific construction undertakings and requirements in line with good construction practices, have been entered into to ensure the disruption to the community is minimised. If the proposed development proceeds, the Applicant will continue to engage both proactively and regularly with the community.

The Applicant intends to continue engagement with local property owners.

In addition to the community engagement carried out to ensure minimal disturbance during the construction phase of the proposed development, both the Energia Group and the proposed data centre end user, Microsoft invest in programmes and initiatives that benefit wider communities. The following sections sets out initiatives to date which demonstrate a track record to provide funding and collaboration with a range of community grounds, charities, education bodies and local projects.

It is also noted that in granting permission for the proposed development, Fingal County Council requested the applicant to pay a Development Contribution to the sum of €6,510,742 (index linked). If successful, the Applicant will pay the specified Development Contribution to Fingal County Council. In addition, Fingal County Council in granting planning permission to the proposed development, issued a condition (no.22) for a Special Contribution of €39,372,30 in respect of the upgrading of the junction of the R135/North Road with the northbound slip road form the N2. In the event of granting planning permission, the applicant welcomes similar conditions to be imposed by An Bord Pleanala.

**Community Initiatives**

**Energia Group**

Energia Group invests in green energy and jobs, looking after people in need, and empowering clubs and teams across Ireland. We are committed to making a positive impact in the communities in which serve.

A key strategic objective of Energia Group is to support the communities in which we operate, making a meaningful contribution that adds both economic and social value and which remains aligned to our core value of being Community Focussed.

Over many years, we have established a credible track record in collaborating closely and working in true partnership with a range of community groups, charities, sports clubs, educational bodies and local projects to deliver that social value.

In addition to providing community benefit funds in areas where we operate our renewable projects, the Energia Group have established a credible track record in collaborating closely and working in true partnership with a range of community groups, charities, sports clubs, educational bodies and local projects to deliver that social value, including within the Fingal County Council area. These include:

1. *Energia Group's Greener Possibilities Fund*

Energia Group's Greener Possibilities Fund was established in 2022 with the purpose of supporting communities across the island of Ireland who participate in climate action.

In its first year, Greener Possibilities supported 6 projects in the Republic of Ireland with each awarded €10,000. In December 2023, phase 1 was completed delivering meaningful impacts across the 6 projects. The Greener Possibilities Fund provided funding for Climate Action Projects being run by Global Action Plan, FoodCloud, Leave No Trace, Autism Support Louth & Meath, The B!g Idea, and ALONE.

In its second year Greener Possibilities supported two additional projects in the Republic of Irland, each being awarded €50,000 over a period of two years. The Greener Possibilities Fund awards €50,000 over a period of two years to each of these two projects being run by FoodCloud and Global Action Plan. These funds are administered by Community Foundation Ireland, an independent philanthropic body that provides external governance and oversight. Funding provided under the Greener Possibilities Fund helped support the following:

- FoodCloud streamlined their surplus food ordering process;
- ALONE insulated homes for older people;
- NOW Group created community gardens;
- Autism Louth and Meath to support young people with various neurodiversities.
- Leave No Trace developed a community toolkit which focussed on biodiversity and environmental stewardship

2. *Volunteering*

The Energia Group recognises the contribution that volunteering can make to our communities, while volunteering also connects our teams to their local communities.

In FY24, 400 volunteers from across the Group spent 1,800 hours volunteering in their communities. Volunteering efforts focused on helping local food banks, including at FoodCloud at its Warehouse Hub in Tallaght and supporting Global Action Plan at its GLAS garden in Blanchardstown.

3. *Partnering with Charities*

The Energia Group work with a wide range of charities both in the Republic of Ireland, as well as in Northern Ireland.

In FY24, Energia Group continued our strategic partnership with the NOW Group, a social enterprise who provides a range of services that support people with learning difficulties and autism, helping them to realise their full potential. Our social value partnership with NOW works on a number of levels including Energia Group being JAM Card friendly, operating as a supply chain partner whilst using their catering service, LOAF, at our offices, in addition to using its training services for our staff teams.

Energia Group also sponsored a Data Analytics and Basic Coding Academy for 10 NOW Group participants. The Academy included a 10-week placement which subsequently provided a Trainee Developer position within Energia Group which was secured by one of the NOW Group participants.

Energia Group also continued its support for Co-Operation Ireland, particularly the Future Leaders programme. During the year a number of staff supported some of the young people during the research phase of their social action activities and joined a virtual session to discuss their approach to homelessness.

4. *Christmas Campaigns*

As part of our commitment to give back to our communities, there is a special focus around Christmas giving. For Christmas 2023, Energia Group donated €40,000 to help foodbanks. Food banks provide essential food support for families and individuals in need all year round, but the need is particularly greatest at Christmas. Energia Group supply energy to communities all over Ireland and so we believe that we have a role to play in supporting those that might be experiencing challenges in those communities.

Energia Group also donated €30,000 to the Black Santa appeals. The annual charity event has become known as the Black Santa appeal because of the long, heavy black cloaks worn by participating clergy. All of the money donated to the appeals goes directly to a variety of charities supported by Black Santa with a focus in December 2023 on charities who catered for refugees.

5. *Supporting Sport*

Rugby for All

Energia Group works with partners to promote inclusivity in communities. In rugby, we have set a goal to help grow participation among people with physical or learning difficulties to over 1,000 players in 40 clubs in Leinster by 2028.

To help achieve this ambition, we launched the 'Rugby for All' initiative in partnership with Leinster Rugby in 2023. As proud sponsors of Leinster Rugby, Energia wants people with a love of the game who have a physical or learning disabilities to Think of the Possibilities by getting involved in 'Rugby for All' in their local communities.

To assist the programme, we conducted extensive research to better understand the landscape of the game for those with physical and learning difficulties, including the need for sensory kits which we have sent to 40 clubs to help those who may find the atmosphere overwhelming.

Women's Rugby

Energia, are commercial partners of the Ireland Men's and Women's national rugby teams and title sponsor of the Energia Men's, Women's, and Junior's All Ireland League (AIL) competitions. To help address an imbalance in support for the two teams, Energia is championing Ireland women's team for their equal dedication, commitment and devotion to the game of rugby. In FY24, we focused on promoting the Women's Six Nations Championship tournament.

6. *Supporting the Arts*

Seachtain na Gaeilge

Energia has been a proud sponsor of the Seachtain na Gaeilge festival since 2017. Seachtain na Gaeilge le Energia is an international Irish language festival and one of the biggest celebrations of our native language and culture that takes place each year in Ireland and in many other countries. The festival gives everyone an opportunity to enjoy the Irish language, whether you are fluent or a beginner. Our support

enables the festival to provide resources to schools across Ireland, and to host events for families and adults.

Wexford Opera Festival

In 2023, Energia Group continued as a supporter of the Wexford Opera Festival backing a new community opera initiative, which saw members of the local area taking to the stage alongside a professional cast. Through supporting this project, Energia Group recognises that sustainability extends beyond the renewable electricity we generate and supply to customers; it also includes our commitment to fostering vibrant sustainable communities where the arts play a pivotal role in bringing people together. This partnership demonstrates Energia Group's investment in the sustainability and wellbeing of Wexford by supporting a Festival which is a deep-rooted part of our community infrastructure.

**Microsoft**

Microsoft has invested in programmes and community collaboration in the Dublin community that focus on three key pillars: community technology skills for jobs, enabling community sustainability, and empowering communities. Since 2017, Microsoft has provided grants of over $3.5m to more than 100 community initiatives focused on the Dublin area.

Microsoft strives to serve as an asset and partner to local communities by supporting projects in regions where they can have the most positive impact: Tech Skills and Environmental Sustainability.

The below table include Microsoft's programmes and initiatives, which include benefits within the Fingal County Council administrative area.

| | |
|---|---|
| Community Tech Skills Programme | The Community Tech Skills Program seeks to develop socio-economic opportunities by advancing the technology competencies of individuals and enabling digital transformation within organizations. As a tech company, this is the most important value added that Microsoft can contribute to our communities. |
| The Community Environmental Sustainability Programme | The Community Environmental Sustainability Program is based on Microsoft's global sustainability vision and aims to create a positive impact in the communities where we operate. These programs respond to local needs through science-based and nature-based solutions to simultaneously provide community human well-being, social equity, and positive environmental benefits in the communities where we operate. |
| Community Empowerment Fund | Microsoft also deploy a Community Empowerment Fund to support local priorities. |

***Table 5: Microsoft Programmes and initiatives***

1. *Community Tech Skills Programme*

Microsoft believes everyone should have access to the skills, technology and opportunity they need to succeed in a changing economy.

The Microsoft Datacentre Academy is a workforce development program from Microsoft Community Affairs team. With this program, Microsoft help education partners in datacentre communities deliver training and certifications to enable employment in the growing cloud computing and IT sectors. Microsoft

have partnered with Technological University Dublin, Blanchardstown (within Fingal County Council) to provide local employment pathways into Microsoft, the datacentre and wider digital sectors. The program receives Datacentre Academy program support across five core pillars: curriculum, datacentre lab, scholarships and grants, mentorship and work experience. Each year Microsoft provides internships to TU Dublin programs with students having progressed to full time employment at the Grange Castle campus.

Microsoft has partnered with the TU Dublin School of Informatics Learn and Work since 2020. This is part of a number of collaborations Microsoft and TU Dublin participate in including the 2023 CyberSchools Quest delivered at the Microsoft HQ in Leopardstown.

2. *Community Environmental Sustainability Initiatives*

Microsoft has supported a range of community sustainability initiatives with a range of partners in South Dublin focused on urban tree planting and ChangeX community initiatives.

***Forests for Schools*** is a pool of funds for schools across Microsoft's Dublin datacentre community to apply for an educational forest installation on their campus. Pocket Forests and Stepping Stone Forests will complete the installations, with ChangeX as coordinator and fund manager.

**One Tree Planted** have planted 20,000+ trees as part of the Clondalkin Community Tree Planting Initiative in 2023 and 2024. This project has partnered with a range of community orgs including Áras Chrónáin, ACE Enterprise Park, Peamount Healthcare, Clondalkin Equine Club, Round Towers GAA, Grange Castle Golf Club, Peamount United Football Club and more community locations from Killinarden to near Liffey Valley. The project seeks to provide support for the local environment for climate change adaptation, including carbon sequestration, flood prevention, and shelter and shade provision. It provided ecological enhancement for urban wildlife through a network of tree cover to expand existing areas of trees, improve the scope for biodiversity support of existing green spaces, and connect new and preexisting green spaces through green corridor creation. By creating positive, inclusive tree cover projects and spaces, it improved the health and wellbeing for the people of Dublin.

With the **Solar Schools Program,** in partnership with energy providers and through a $1.1 million grant, Microsoft supported the delivery of solar PV infrastructure to 27 schools, the majority of which were in Dublin, to support their renewable energy generation opportunities and provide a supporting schools engagement program to teach students about STEM and sustainability.

3. *Empowering Communities Initiatives*

Microsoft is committed to strengthening communities and empowering the organizations that help them thrive. Microsoft also deploys a Community Empowerment Fund to support local priorities in the communities it operates. Microsoft has supported a wide range of community initiatives some of which are highlighted:

**Childhood Development Initiatives** improves outcomes for children by delivering quality, integrated, evidence-informed services and workforce development through partnership and innovation. ***The Community Restorative Practice Pilot*** (June 2023) uses Restorative Dialogue Circles in a post-COVID context for addressing and transforming intergenerational trauma in neighbourhoods in Tallaght. Restorative Dialogue Circles (RDCs) are an evidence-based methodology that support communities and groups to discuss contentious or painful issues and to devise action plans to address the issues discussed. CDI designed and implemented a facilitated and trauma-informed process that is intentionally restorative to empower communities to articulate their experiences and devise workable solutions to the issues they are currently dealing with.

**Irish Wheelchair Association** works with, and on behalf of, people with physical disabilities to drive positive change in Ireland through the influencing of public policy, the provision of quality services, and enabling accessibility to all aspects of society. ***IWA NPO Digital Transformation*** developed specific functionality to enable strong management of IWA's fundraising. With a key focus on donor care, strong data management, and robust reporting, the platform maintains and builds upon fundraising long into the future. Microsoft has also supported the purchase of a vehicle for the organisation's use.

**Peamount Healthcare** is an independent voluntary organization that operates in partnership with the HSE CH07 and the Dublin Midlands Hospital Group to provide a range of high-quality rehabilitation, residential, and community services. It helps people return home after a serious illness, provides safe and home- based residential care for those who need it, and supports people to live as independently as possible in their community. In May 2024 ***Peamount Healthcare Wellbeing Centre Sensory Room*** was completed to enhance the resources and facilities for residents and clients by providing a sensory room as part of the facilities at the Wellbeing Centre. This was supported by a grant and volunteer efforts from Microsoft datacentre employees across 2023 and at the final volunteering activity in May 2024.

## 4.2 Site Zoning and Suitability

### 4.2.1 Site Zoning

The development site is zoned 'HI – Heavy Industry' within the FCDP Plan 2023-2029. The wording of the zoning vision and zoning objective is unchanged from the 2017 County Development Plan, under which Fingal County Council assessed the application.

While the zoning vision and objective remains consistent between the 2017 FCDP and the 2023-2029 FCDP, a noted difference between these plans is that 'Data Centre' is now a defined use class.

Under the 2023-2029 FCDP, Data Centres are not listed as "permitted in principle" for **any** land use zoning classes, however, Data Centres are listed as a 'not permitted' land use within all land use zoning classes except for the following 3 classes:

- HI – Heavy Industry;
- GE – General Employment; and
- HT – High Technology.

It is considered that Data Centres are effectively 'open for consideration' within HI Zoning. This is based on the merits of the development, its alignment with policies and objectives in the FCDP, and the fact that 'Data Centres' are neither listed as 'not permitted' or 'permitted in principle'.

As per the 2017 FCDP, the 2023-2029 FCDP also includes the following note relating to uses which are not listed as 'Permitted in Principle' or 'Not Permitted':

> *'Uses which are neither 'Permitted in Principle' nor 'Not Permitted' will be assessed in terms of their contribution towards the achievement of the Zoning Objective and Vision and their compliance and consistency with the policies and objectives of the Development Plan'.*

The zoning objective and zoning objective is set out in the table below, and as noted previously remains unchanged from the 2017 FCDP.

| | |
|---|---|
| Zoning Objective | *Provide for heavy industry* |
| Zoning Vision | ***Facilitate opportunities for industrial uses, activities and processes which may give rise to land use conflict if located within other zonings.*** *Such uses, activities and processes would be likely to produce adverse impacts, for example by way of noise, dust or visual impacts. HI areas provide suitable and accessible locations specifically for heavy industry and shall be reserved solely for such uses.* |

***Table 6 – Heavy Industry zoning objective and vision***

As the zoning objective and the zoning vision set out in the FCDP 2023-20209 **has not departed** from the 2017 FCDP under which the Planning Authority assessed the application. It is submitted that the rationale and justification set out in the application documentation and accepted by Fingal County Council in their grant of permission, therefore remains unchanged. Notwithstanding the adoption of the 2023-2029 FCDP, the proposed development continues to:

- Contribute towards the achievement of the HI Zoning Objective and Vision;
- Be supported by and is consistent with all relevant policies and objectives set out in the FCDP 2023-2029 including:
    - Objective DMSO92 – Space Extensive Developments
    - Objective DMS089 – Design and Siting of Business Parks and Industrial Areas
    - Objective DMSO259 – Capture and Utilisation of Waste Heat
    - Objective DMSO261 – Climate Action Energy Statements
    - Objective EE036 – Needs of Enterprises and Bespoke Building Facilities
    - Objective IU046 – Energy Efficiency of Buildings
    - Objective EE035 – Range of Industrial/ Manufacturing Units
    - Represent the optimal land use zoning for the location of the proposed Data Centre facility.

As the zoning vision and objective remains unchanged, and for the avoidance of repetition, we refer the Board to the rationale and justification set out in the planning application documentation. In the interest of clarity and expedience, this rationale and justification is summarised below.

### 4.2.2 Site Suitability/ Zoning Alignment

There are 22 no. zoning classes set out in the FCDP. Data Centres are listed as 'not permitted' uses within all zoning classes, with the exception of HI Zoning, and two others. It is considered that 'HI' Zoning aligns with the nature and operational requirements of data centres. It is reiterated to An Bord Pleanála that 'Data Centres' are not listed as "not permitted" on 'HI' zoned lands and should be assessed in terms of their contribution towards the achievement of the Zoning Objective and Vision, and their compliance and consistency with the policies and objectives of the Development Plan'.

Given the nature of the proposal at c.75,000sqm GFA on a site area of over 13ha, the scale and size of ancillary plant required for a development of this scale including on-site power generation, cooling towers/flues, fuel tanks, transformers, substation and other electrical equipment , it is considered that the proposed development would give rise to land use conflicts referred to in HI Zoning Objective such as noise, vibrations and appearance, if located in other areas.

Table 6 below outlines how the proposed development aligns with permissible use classes under 'HI – Heavy Industry' zoning as per the FCDP 2023: 2029:

| Permissible Uses | Suitable Development |
|---|---|
| **Industry - High Impact**<br><br>**(only available in HI zoning)** | 'Industry High Impact' is defined as *"The use of a building, or part thereof, or land for any industry which required special assessment due to its potential for detrimental environmental effects."*<br>The proposed development is unique in that the site is co-located to an existing power plant, which is considered an 'industry – high impact' use.<br>The development of data centres in other land use zonings (e.g. General Employment, High Technology) would be inappropriate in the case of the subject proposal, as the necessary dispatchable power generation assets required would create land use conflicts due to noise, vibrations, fumes, appearance, etc. in business park settings. |
| **Plant Storage**<br>**(Only available in 'HI' and 'WD' zoning)** | 'Plant Storage' is defined as *"The use of buildings or land for the storage of plant machinery, equipment or appliances."*<br><br>The generator yard includes ancillary plant and 58 no. standby/back-up generators. This plant is vital to the operation of the data centre in the case of an emergency power outage on site. The plant areas contained within the proposed generator compounds equate to 15,430sqm. |
| **Utility Installations** | 'Utility Installation' is defined as *"A structure composed of one or more pieces of equipment connected to or part of a structure and/ or a facility designed to provide a public utility service such as the provision of heat, electricity, telecommunications, water or sewage disposal and/or treatment.*<br>Having regard to planning precedent set by established substation developments in the County, electricity substations and transmission lines fall under the term utility installation. This is widely accepted by Fingal County Council and An Bord Pleanála in granting similar substation applications in the administrative area of Fingal.<br>It is noted that a separate application for the proposed substation, which is deemed Strategic Infrastructure Development, was made to An Bord Pleanála, and is awaiting decision (ABP Ref. 311528). |
| **Fuel Depot/Fuel Storage** | 'Fuel Depot/Fuel Storage' is defined as "The use of land and/or structures for the storage and/or distribution of fuel." 58 diesel fuel belly tank storage (28 per building + 1 per administrative block) to serve as a back-up power source to the data centre. |
| **Office Ancillary to Permitted Use** | 'Office Ancillary to Permitted Use' is defined as *"A building or part thereof, where the office use is subordinate to, and associated with, the permitted land use on site."*<br>2,706sqm floor area offices space proposed. |

***Table 7: Heavy Industry Permissible Uses in the context of the proposed development***

In addition to the above, the statements of Fingal County Council on their assessment of the application are also noted. In assessing the application, the Chief Executive Report commented that:

> *"the nature of data centres is generally of a land intensive use with a low corresponding rate of direct employment. Thus it is considered that there are advantages in locating such development away from public transport corridors which would be more appropriate to a more intensive form of development".*

**Zoning and Site Suitability Conclusion**

In summary, it is submitted that the subject site is appropriate both in terms of the nature of the use proposed and compliance with the zoning objective based on the definitions contained in the FCDP 2023-2029.

# 5 Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022)

An Bord Pleanála have also invited comment from the applicant on the proposed development compliance with the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022).

It is noted to An Bord Pleanála that Objective DMS092 Space Extensive Developments as included in the Fingal County Development Plan 2023-2029 requires space extensive developments to show compliance with the principles for Sustainable Data Centre Development as per the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022).

The development compliance with the principles for Sustainable Data Centre Development as included within the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022) has been demonstrated in this document in section 4.1.11, in response to the Boards invitation for the applicant to comment on the development compliance with Objective DMS092 of the Fingal County Development Plan 2023-2029. To avoid repetition, we refer An Bord Pleanála to section 4.1.11 of this report for details.

# 6 Climate Action Plan 2023

An Bord Pleanála have also invited comment from the applicant to show how the proposed development aligns with the Climate Action Plan 2023, including addressing the matching of demand and supply of renewable energy.

A response to this item included within An Bord Pleanála's invitation for submission has been prepared by AWN consulting and is submitted to An Bord Pleanála for consideration as part of this response pack as a standalone document.

The prepared AWN Consulting response document outlines in detail the ways in which the development aligns with CAP23. It is noted that the Climate Action Plan (CAP24) was published in December 2023 and was approved by the government on the 21 May 2024. The emission ceilings remain unchanged from CAP23 to CAP24. In addition to demonstrating how the proposed development aligns with CAP23, the prepared report also demonstrates alignment with CAP24.

An assessment has been carried out which assesses the proposed development against the overall Carbon Budget, and more specifically, the Emission Ceiling for the Electricity Sector as set out under CAP 23 and CAP 24.

Having regard to:

- the emissions associated with proposed development relative to the Carbon Budget and the Emission Ceiling for the Electricity Sector; and
- the level of renewable additionality that will be provided under agreements between the applicant and the end user, Microsoft,

it has been assessed that the proposed development would result in a minor adverse impact (based on IEMA Methodology).

We refer An Bord Pleanála to the accompanying response document prepared by AWN Consulting, which details how the proposed development aligns with the Climate Action Plan 2023, including addressing the matching of demand and supply of renewable energy in detail.

# 7 Conclusion

The applicant welcomes the opportunity to provide confirmation of the proposal's compliance with the identified policies and trusts that the Board will now be in a position to expeditiously grant permission for the development.

We trust the Board will note that the applicant has responded in a comprehensive manner to the issues raised.

This response demonstrates the proposal complies with Objective DMS-092 – Space Extensive Developments as set out in the Fingal County Development Plan 2023, key principles of the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022) and aligns with the Climate Action Plan 2023 and Climate Action Plan 2024

It is submitted that the subject site is appropriate both in terms of the nature of the use proposed and compliance with the zoning objective based on the definitions contained in the Fingal County Development Plan.

It is also submitted that the proposed development has had regard to Section 15 of the Low Carbon Climate Action and Low Carbon Development Act 2015, as amended in 2021

**Climate Action Plan**

The Climate Action Plan 2023 states that:

> *"In the short- and medium-term, new demand growth from large energy users, such as data centres, will have to be moderated to protect security of supply and ensure consistency with the carbon budget programme."*

The Climate Action Plan 2024 States

- *The Climate Action Plan 2024 states that: Ireland aims to achieve a reduction in final energy consumption against anticipated 2030 levels, in line with the EU Energy Efficiency Directive (EED). CAP24 outlines specific 2030 energy efficiency and demand management targets spanning the buildings, industry, and transportation sectors which work towards meeting the EU EED. Examples of additional actions in energy efficiency and demand management could include: [...] Managing energy demand in the commercial sector, with a potential focus on data* centre power demand

- *The demand side strategy should accelerate the rollout of local flexibility markets by the Distribution System Operator, as required to meet renewable electricity and carbon abatement targets, and contain measures to incentivise Large Energy Users to increase the flexibility in their electricity demand*

- *Incentivise and enable large energy users to participate in flexible demand initiatives designed to enable low/zero carbon demand growth*

In order to achieve this, the Government has published a *Statement on the Role of Data Centres in Ireland's Enterprise Strategy, 2022.* The Strategy states that:

> *"The Government is of the view that the principles for sustainable data centre development articulated here will facilitate* ***the appropriate plan-led approach****."*

We refer the Board to Attachment 5 of this submission, as well as our response detailed in section 4.1.11 which demonstrates alignments with the principles set out in the Statement on the Role of Data Centres in Ireland's Enterprise Strategy, 2022.

## Ireland's Long-Term Strategy on Greenhouse Gas Emission Reduction

Ireland's Long-Term Strategy on Greenhouse Gas Emission Reduction was approved by government in April 2023

*Electricity - State of Play*

- The management of electricity **demand** will be a central part of our approach to achieving emissions reductions. Similarly, unlocking the flexibility of large electricity demand users will be a key challenge as the electricity system is decarbonised. Energy demand, including data centres, will be expected to operate within sectoral emissions ceilings **and further signals will be required to locate demand where existing or future electricity grid is available and close to renewable energy generation**. Research and development in energy storage and flexibility (such as a science challenge to industry) will be required to put Ireland on a pathway to net zero-carbon data centres.

## National Adaption Framework

The National Adaptation Framework was published in June 2024 provides:

5.9 Role of the Private Sector:

> *The private sector in Ireland holds a critical role in further enabling climate change adaptation by actively engaging in several key actions and responsibilities. Businesses and industries, being both affected by climate change impacts and contributors to adaptation efforts, are at the forefront of developing and implementing innovative technologies and practices to enhance climate resilience. This entails investments in renewable energy, sustainable agriculture, and efficient water management systems, for example. Collaborative partnerships with the government further empower businesses to fulfil their role in climate adaptation by pooling resources and expertise, innovation, fostering green job opportunities, and collectively working towards a more sustainable and resilient future for Ireland.*

3.8 Future Research Priorities:

> *Infrastructure Adaptation: Investigating how infrastructure, such as buildings, transportation, and energy systems, can be made more resilient to climate impacts, including retrofitting, sustainable design, and disaster preparedness As noted through the planning application and this response to An Bord Pleanala , a number of measures are included as part of the proposed development that supports Ireland's overall Climate Targets. The following measures demonstrate alignment with and support the* ***National Adaption Framework***

As noted through the planning application and this response to An Bord Pleanala , a number of measures are included as part of the proposed development that supports Ireland's overall Climate Targets. The following measures demonstrate alignment with and support Ireland's Long-Term Strategy on Greenhouse Gas Emission Reduction and the National Adaptation Framework.

- **Strategic Location and Collaboration with the Grid Operator:** See section 2.2.
- **Maximising the use of Renewables:** See Section 2.2 and Section 4.1.1 (2)
- **Proximity to Renewable Energy Generation:** See response under 'New Renewable Energy in Proximity to the Site' to Principle 4 of the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy, 2022
- **Grid Capacity:** (See Section 2.4)

Having regard to the above measures, it is also considered that the proposed development supports that furtherance of the national climate objective, and the objective of mitigating greenhouse gas emissions.

It is submitted that the information set out in this response was largely included in the original planning application, FI Response and Appeal Response. It is therefore considered that it is open to the Board to form the opinion that the information provided is not 'significant further information'.

## 8 Enclosures

**Attachment 1:** Letter confirming renewable energy provision arrangements between Energia Group and the End User (Microsoft)

**Attachment 2:** Map confirming the proximity of the proposed development site relative to high voltage grid connections

**Attachment 3:** Certificate of Conformity with Climate Neutral Data Centre Pact

**Attachment 4:** Decommissioning Plan

**Attachment 5:** Climate Action Plan 2023/Climate Action Plan 2024 Response

## 9 Attachment 1: Letter Confirming renewable energy provision arrangements between Energia Group and End user (Microsoft)

Microsoft

energia group

Date: Jun 12, 2024

**Re: Renewable Energy Additionality - Agreement between the Applicant and the End User (Microsoft)**

The Applicant ("Huntstown Power Company Limited") is a wholly owned subsidiary of the Energia Group ("Energia"). This letter is to confirm that Microsoft (the End User of the proposed data centre) and Energia executed a binding legal agreement to provide new renewable energy via corporate power purchase agreements ("CPPAs")[1].

Microsoft has committed to achieving 100% renewable energy supply by 2025 and becoming carbon negative by 2030. The Renewable Energy Framework Agreement ("Framework Agreement") between Energia and Microsoft, executed in January 2021, supports these goals and brings new, renewable energy to Ireland's grid in conjunction with the construction and operation of the Huntstown data centre. The Framework Agreement was specifically crafted for Energia to supply renewable energy to align with the electricity consumption of the pending data centre. As part of the parties' intent to operate a sustainable data centre, Energia has committed its renewable energy pipeline to Microsoft for the execution of CPPAs upon projects' becoming construction ready.

Energia has been actively developing renewable energy projects in the Republic of Ireland since 2008. Energia's current pipeline committed to Microsoft under the Framework Agreement includes approximately 900 MW of new generation export capacity. Renewable energy development is a multi-year endeavour and thus it has been critical for Energia to develop the assets in parallel with the Huntstown data centre development. The map in the annex to this letter shows the pipeline of projects in development by Energia under the Framework Agreement. Energia located projects in close proximity to the proposed data centre site—to provide carbon-free supply to immediate grid as well as additional economic development in this region.

Since execution of the Framework Agreement, Energia and Microsoft signed one CPPA for a wind asset that is expected to achieve commercial operations by July 2024. A second CPPA between the parties is targeted to be signed imminently. These two initial contracts – totalling 74 MW of new capacity – in *advance* of a decision on the proposed Huntstown development demonstrates the companies' commitment to ensuring data centre operations commence with renewable energy supply. The companies will enter into more CPPAs under the Framework Agreement for additional renewable energy projects.

[1] See announcement here: https://energiagroup.com/news-media/energia-group-and-microsoft-announce-corporate-power-purchase-agreement-for-new-renewable-energy-in-ireland/

Developing renewable energy projects can be challenging and it is prudent to assume a level of attrition in projects achieving commercial operations. The scale of Energia's pipeline, even allowing for attrition, should see the collective annual generation *exceed* the data centre's annual electricity use. Energia has taken a strategic approach in developing a diverse project pipeline of scale in anticipation of potential project development setbacks, while maintaining alignment with the need to match the data centre's annual power consumption with renewable energy production.

Microsoft and Energia look forward to positively contributing to Ireland's climate change and grid decarbonisation goals.

Padraig Carton (Jun 11, 2024 15:19 GMT+1)

Signature:
For and on behalf of
Microsoft Ireland Operations Limited
Padraig Carton

Uk & Irl Construction Director

Garrett Donnellan (Jun 12, 2024 09:19 GMT+1)

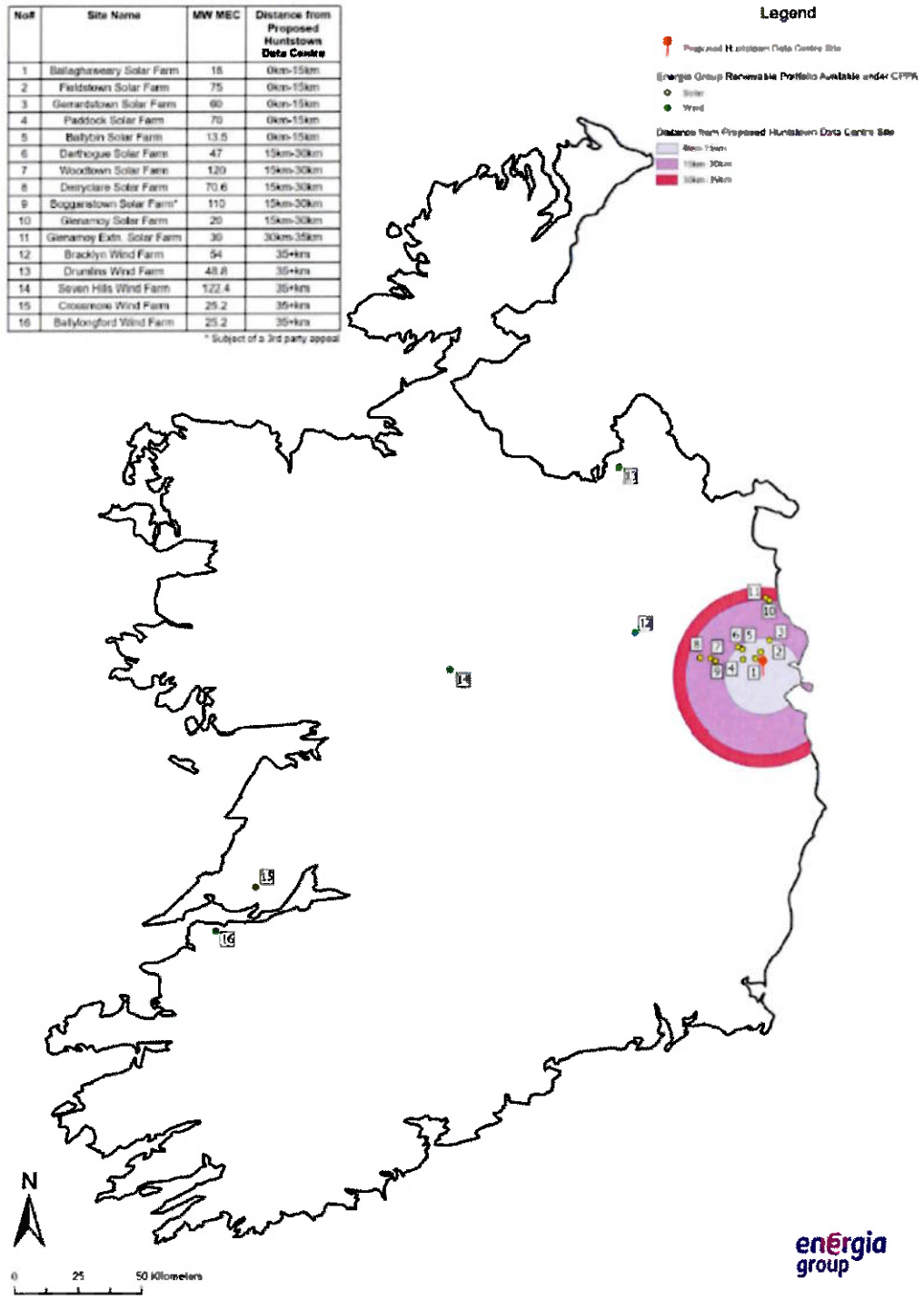
Signature:
For and on behalf of
Energia Group ROI Holdings ROI DAC
Garrett Donnellan

Chief Development Officer

## Annex: Energia Group Renewable Energy Development Pipeline as of June 2024

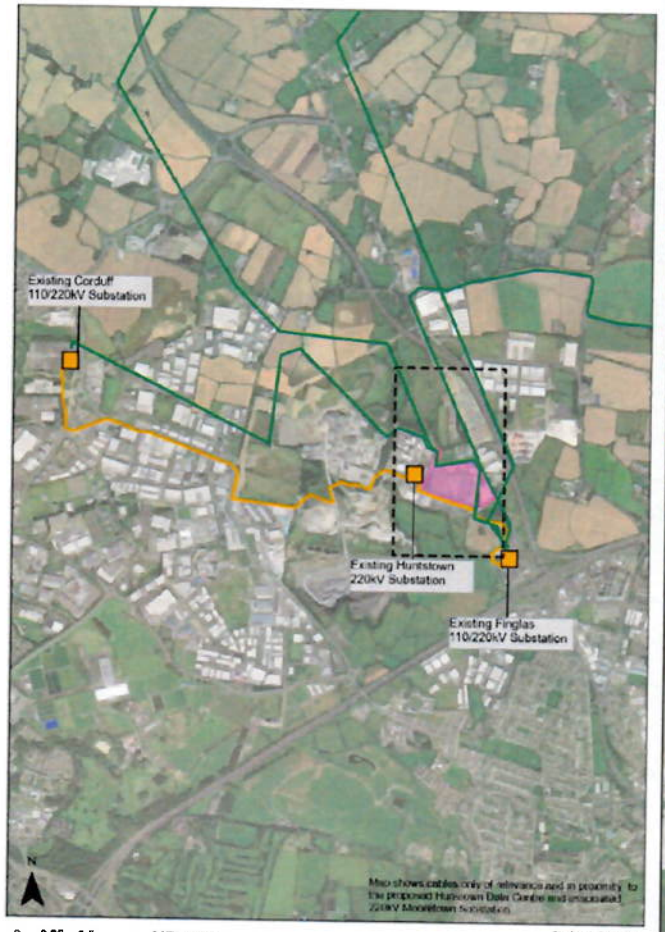
| No# | Site Name | MW MEC | Distance from Proposed Huntstown Data Centre |
|---|---|---|---|
| 1 | Ballaghaseary Solar Farm | 18 | 0km-15km |
| 2 | Fieldstown Solar Farm | 75 | 0km-15km |
| 3 | Gerardstown Solar Farm | 60 | 0km-15km |
| 4 | Paddock Solar Farm | 70 | 0km-15km |
| 5 | Ballybin Solar Farm | 13.5 | 0km-15km |
| 6 | Darthogue Solar Farm | 47 | 15km-30km |
| 7 | Woodtown Solar Farm | 120 | 15km-30km |
| 8 | Derryclare Solar Farm | 70.6 | 15km-30km |
| 9 | Boggarstown Solar Farm* | 110 | 15km-30km |
| 10 | Glenarroy Solar Farm | 20 | 15km-30km |
| 11 | Glenarroy Extn. Solar Farm | 30 | 30km-35km |
| 12 | Bracklyn Wind Farm | 54 | 35+km |
| 13 | Drumlins Wind Farm | 48.8 | 35+km |
| 14 | Seven Hills Wind Farm | 122.4 | 35+km |
| 15 | Crossmore Wind Farm | 25.2 | 35+km |
| 16 | Ballylongford Wind Farm | 25.2 | 35+km |

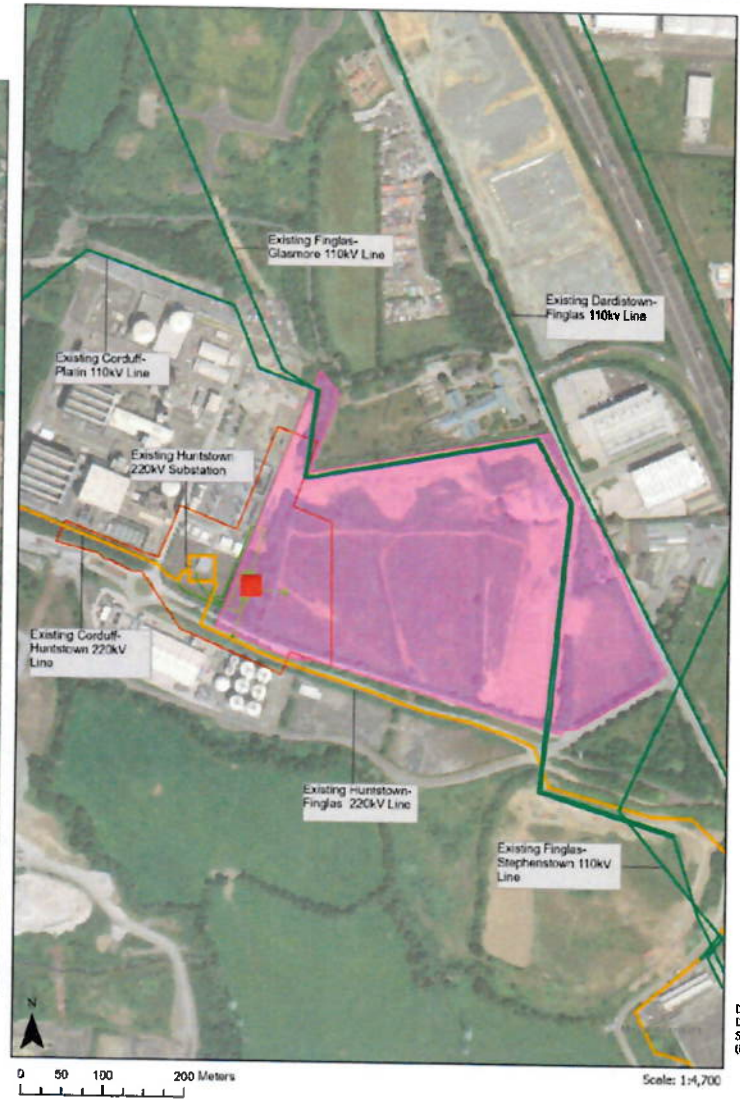
* Subject of a 3rd party appeal



## 10 Attachment 2: Map Confirming the proximity of the proposed development site relative to high voltage grid connections

Proximity of the Proposed Development to Multiple High Voltage Strategic Grid Connections




Legend

- Proposed Data Centre Site
- Proposed Moorstown 220kV Substation Red Line Boundary
- Proposed Moorstown Substation
- Proposed Cables (Ring Connection and Connection for Proposed Data Centre)

NOTE 1
A Transmission Connection Agreement (TCA) with EirGrid to provide electricity to the proposed Data Centre has been executed. The TCA confirms that there is sufficient power available from the existing grid network to facilitate the proposed Data Centre.

NOTE 2
The associated and proposed 220kV Moorstown Substation and ring connection (ABP Ref. 311528) will allow the electricity network operator to dispatch the electricity generated by Huntstown Power Station (1 and 2) to either Finglas Substation or Corduff.

NOTE 3
The design of the associated 220kV Moorstown Substation and grid connection was completed in conjunction with EirGrid as the design provides the grid services needed to strengthen the redundancy of the transmission network, making the electricity grid in the area more robust and resilient to faults.

Description: Proximity of the Proposed Development to Multiple High Voltage Strategic Grid Connections
(Page Size A3)

## 11 Attachment 3: Certificate of Conformity with Climate Neutral Data Centre Pact

Bureau Veritas Certification

# CERTIFICATE OF CONFORMITY

Microsoft

*Bureau Veritas Denmark verifies that the above organization has been audited under a limited assurance statement and found to be in accordance with*

***Standards***

*Climate Neutral Data Center Pact*

*Self-Regulatory Initiative*

*Last update December 2022*

***Scope of verification***

*Energy Efficiency*

*Clean Energy*

*Water Conservation*

*Circular Economy*

*Circular Energy System*

*Verified with comments*

| | |
|---|---|
| Ref.: | **Details in Verification Report** |
| Original cycle start date: | **1st of July 2023** |
| Expiry date: | **30th of June 2027** |

Certificate No: **BV-CNDCP-SRI-VC-0010** Version: **00** Revision Date: **29-Jun-2023**

awnconsulting

# DECOMISSIONING PLAN

PREPARED BY AWN CONSULTING
JUNE 2024

# CONTENTS

## 1.0 INTRODUCTION

This outline Decommissioning Plan has been prepared in relation to Objective DMS092 of the Fingal County Development Plan 2023-2029 and the requirement to address *"A decommissioning report which sets out the development strategy for the site if and when the data centre is no longer in use, in order to bring the site back to a future developable state."*

There is currently no formal guidance specifically tailored for the preparation of a Decommissioning Report for data centres in Ireland. Consequently, this Decommissioning Report has been prepared in accordance with established Environmental Protection Agency (EPA) guidelines to ensure completeness. The key EPA documents relied upon in the preparation of this report are:

- Ireland. Environmental Protection Agency. *Guidance on Assessing and Costing Environmental Liabilities.* Johnstown Castle: EPA, 2014.
- Ireland. Environmental Protection Agency. *Guidance to Licensees on Surrender, Cessation and Closure of Licensed Sites.* Johnstown Castle: EPA, 2012 for assessing and costing environmental liabilities.

By adhering to these established guidelines, the Decommissioning Report aims to provide a robust and reliable framework for the decommissioning process, ensuring that all activities are carried out responsibly and in accordance with best environmental practices. The overall purpose of this plan is to ensure that necessary measures are taken to avoid any risk of environmental pollution and, where pollution has been caused, to return the site to a future developable state.

It should be noted that should the site be redeveloped for alternate use, it will be subject to planning approval.

## 1.1 DECOMISSIONING SCENARIOS

This report covers a single decommissioning scenario, it has been assumed that any closure of the site will be expected and therefore will be a well-planned and well-resourced event. It has been assumed that the on-site plant and equipment will be decommissioned, but that the site infrastructure (i.e., the building and associated services/utilities) will remain and will continue to be used for a similar use or repurposed for an alternative development.

Given the nature of the proposed development, it is not envisaged that the proposed development will require closure or decommissioning in the short to medium future.

Regular maintenance and minor upgrade works will maintain the functional operation of the development over the medium to long term. Upon closure, all equipment will be removed and re-used where appropriate.

Given the multi-storey nature of the development and combined flexibility of the large floor plates within Buildings A and B, the development could be readily reconfigured for another commercial or industrial use.

Upon cessation of activities at the facility Clean Closure is expected. "Clean Closure" is a term used in environmental management and remediation to describe the process of closing a site in such a way that it leaves no environmental contamination or residual

risks that require ongoing management or monitoring. Achieving clean closure means that all hazardous substances, pollutants, and contaminants have been removed or remediated to meet regulatory standards, ensuring that the site poses no threat to human health or the environment.

The applicant has the financial and personnel resources to implement the Decommissioning Plan and will utilise staff resources to form a team to manage and execute the plan, supplemented where appropriate by external specialists. External contractors required for cleaning, waste disposal or recycling activities would be fully approved and licensed in accordance with the relevant legislation and regulations.

It is anticipated that an orderly shutdown of all the site activities would occur on a phased basis over approximately six months.

### 1.2 SCOPE OF THE PLAN

The scope of the plan includes the following primary activities:

- Setting up a management structure to oversee the closure and decommissioning,
- Cancellation of incoming raw materials and cessation of all combustion activities and ancillary processes,
- All excess raw materials run-down or removed from site,
- Full decontamination and decommissioning of all operations equipment and building surfaces,
- All storage areas fully emptied and stored material transported off-site for recovery (reuse, recycling, reclamation, etc) or disposed of. All external contractors required for disposal or recovery activities would be fully approved and licensed in accordance with the relevant legislation and regulations.
- Decontamination, decommissioning and verification of all site utility services,
- Disposal or recovery of all waste materials in a manner that complies with regulatory requirements,
- Management and retention of all relevant records relating to movement, transfer or disposal of waste throughout the closure process - available for review by the Agency; and
- Independent verification and certification of "clean closure" status.

## 2.0 SITE LOCATION AND DESCRIPTION

### 2.1 EXISTING SITE

The site is located in the townland of Huntstown, north of Finglas West and west of Dublin Airport in North-West Dublin. Dogs Trust Ireland HQ is located to the immediate North of the subject lands along with some low-density commercial development, farmland and the N2 Motorway, which also extends to the east of the lands to meet the M50 Motorway. Directly to the East of the subject lands are the R135 Road and some larger scale industrial units. The south of the site is bound to the south by a vehicular entrance leading to the Huntstown Quarry and to the south west is the Huntstown Bioenergy Plant. Huntstown Power Station and Roadstone Quarries are located to the East of the subject lands, while an associated access road is located to the immediate South.

At the time of the planning application, the site's land would be considered to have the character of an agricultural field with traditional hedgerow boundaries both around and within the site. The subject lands are bounded by existing hedgerow vegetation along all site boundaries except for a portion of the boundary with the R135. Two former residences are in this location and the perimeter boundary is formed by low garden walls.

The tree cover on the site is primarily contained within the hedgerows on the perimeter of the site and the field boundaries with the site. The trees and hedgerows on site are primarily former agricultural stock proof field boundaries. The trees are mostly Ash but with pockets of Wych Elm and Sycamore. Most of the trees in these hedgerows are considered small in stature and are therefore not visually prominent. On the western side of the site an unmanaged shelter belt is recorded to contain a mix of Beech, Oak, Ash and pine. There are no protected trees or tree groups within the subject lands listed in the Fingal Development Plan 2017-2023 and the Fingal Development Plan 2023-2029.

The topography of the site falls slightly in an east west direction (77.5AOD - 79.5AOD). An archaeological feature was identified south of the northern site boundary and was subject to 'preservation by record'. There are no known protected structures on site, nor is the site located within an architectural conservation area. A drainage ditch located on the western site boundary separates the subject site from the adjoining Huntstown Power Plant.

The potential for source pathway receptor connectivity is firstly identified and detailed information is then provided on sites with connectivity. The Overall Development and nearby European sites are listed in Table 1 below and presented in Figure 2.1 below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 30th May 2024. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHAs and European sites.

The site would have an indirect hydrological connection with the Malahide Estuary SPA/SAC/pNHA and the North West Irish Sea SPA, through the local drainage network, the Huntstown Stream and the Ward River. The internal ditches primarily drain to ground and, during extended periods of rain, into a large deep drainage ditch adjacent to the Huntstown Power Facility at the western perimeter. This larger ditch is intermittently hydraulically linked via the Huntstown Stream depending on flow rates, and eventually leads north converging with several other streams to the Ward River, which flows northeast to Malahide Estuary and eventually the North West Irish Sea over 15 river km downstream. Therefore, the proposed development site has limited connectivity to the Malahide Estuary SAC or SPA and the North West Irish Sea SPA.

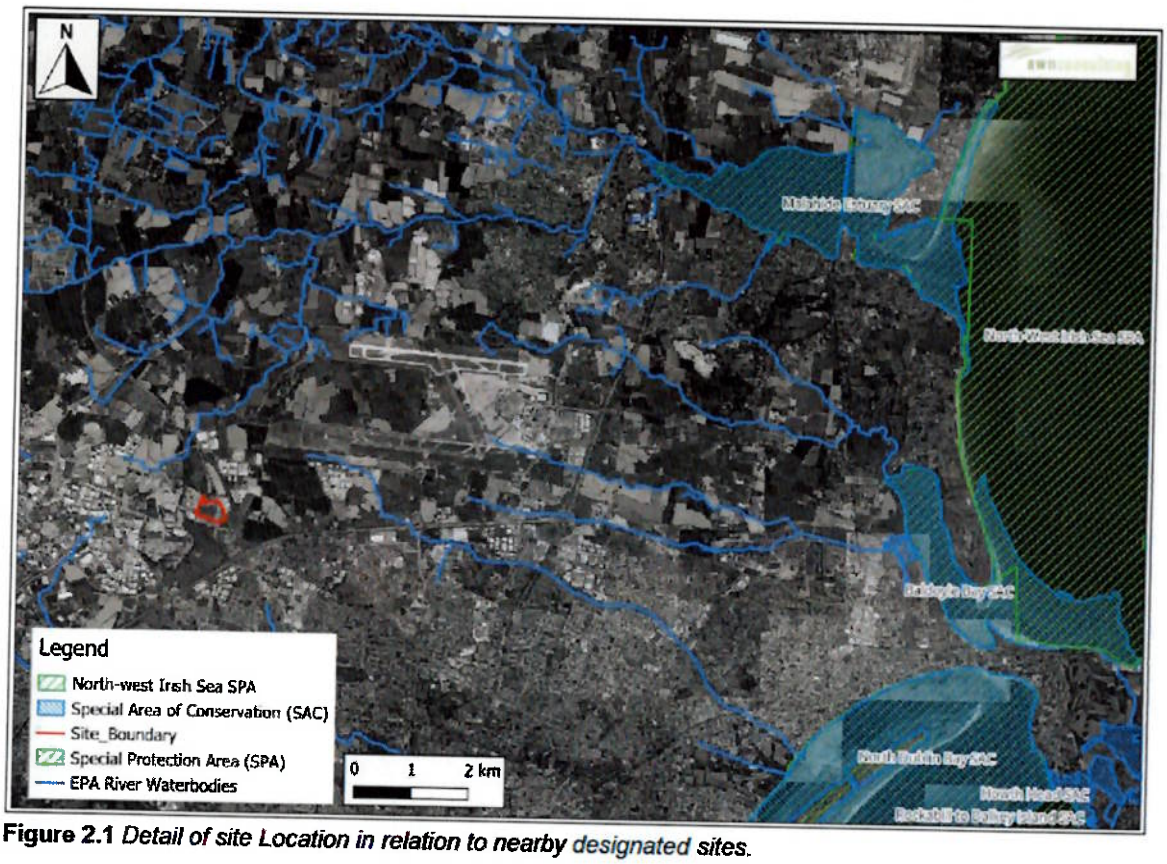



**Figure 2.1** *Detail of site Location in relation to nearby designated sites.*

| Site Code | Site name | Distance (km)[1] |
|---|---|---|
| 000199 | Baldoyle Bay SAC | 11.94 |
| 000205 | Malahide Estuary SAC | 9.76 |
| 000206 | North Dublin Bay SAC | 10.82 |
| 000208 | Rogerstown Estuary SAC | 12.83 |
| 000210 | South Dublin Bay SAC | 11.03 |
| 001398 | Rye Water Valley/Carton SAC | 11.83 |
| 004006 | North Bull Island SPA | 10.82 |
| 004015 | Rogerstown Estuary SPA | 13.44 |
| 004016 | Baldoyle Bay SPA | 11.97 |
| 004024 | South Dublin Bay and River Tolka Estuary SPA | 8.39 |
| 004025 | Malahide Estuary SPA | 9.81 |
| 004236 | North-west Irish Sea SPA | 12.7 |

***Table 1*** *European Sites located within the potential zone of impact[2] of the Project.*

[1] Distances indicated are the closest geographical distance between the Proposed Development and the European site boundary, as made available by the NPWS. Connectivity along hydrological pathways may be significantly greater.
[2] All European sites potentially connected irrespective of the nature or scale of the Proposed Development.

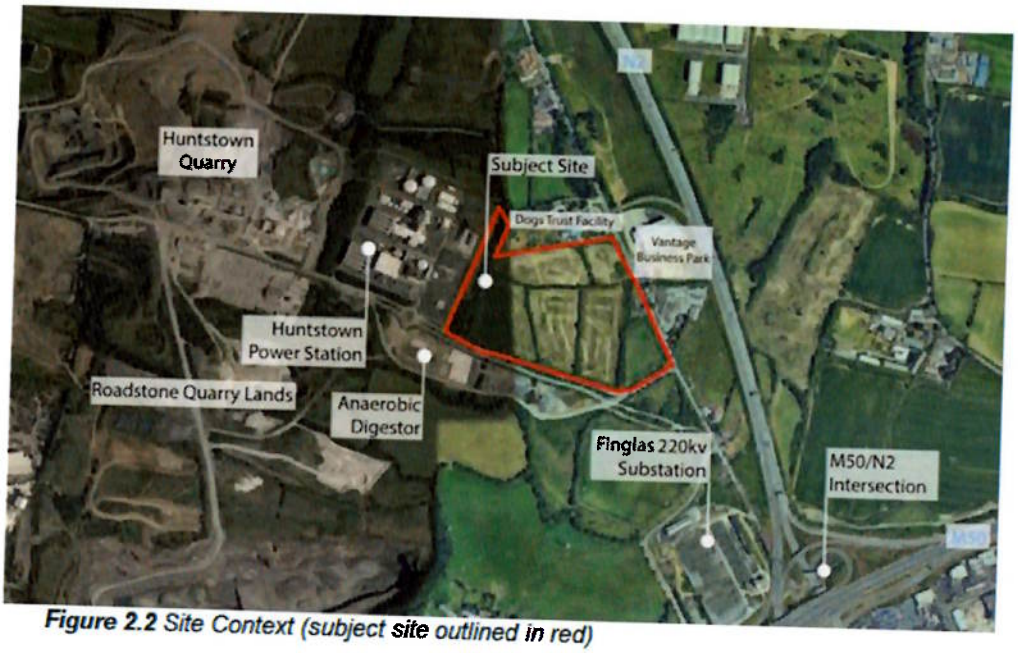



***Figure 2.2** Site Context (subject site outlined in red)*

An ecological site visit was completed in June 2024 to provide details of the site at this present time. It was found that a series of hedgerows that were located throughout the site have been subject to trimming outside of bird breeding season and the trees located within the hedgerows retained. These hedgerows are now regrowing.

Works have recently been undertaken on-site to carry out the works consented under Planning Ref. FW21A/0144 (undergrounding of overhead lines). As a result of these works, there is a gravel patch to the north east of the site with some further clearing of field margins. A large number of areas that were cleared have become reinstated, with bare grounds having recolonised and succeeding into grassland. The following habitats were identified with these presented in Figure 2.2 below.

| Number | Habitat Co | Description |
|---|---|---|
| 1 | GS | Grassland |
| 2 | ED2 | Gravel |
| 3 | ED3 / GS | Recolonising bare ground / grassland |
| 4 | WL | Scattered trees with regrowing hedgerows |
| 5 | WD1 | Mixed broadleaf woodland |
| 6 | FW4 | Drain |

***Table 2** Habitats located in Huntstown June 2024*

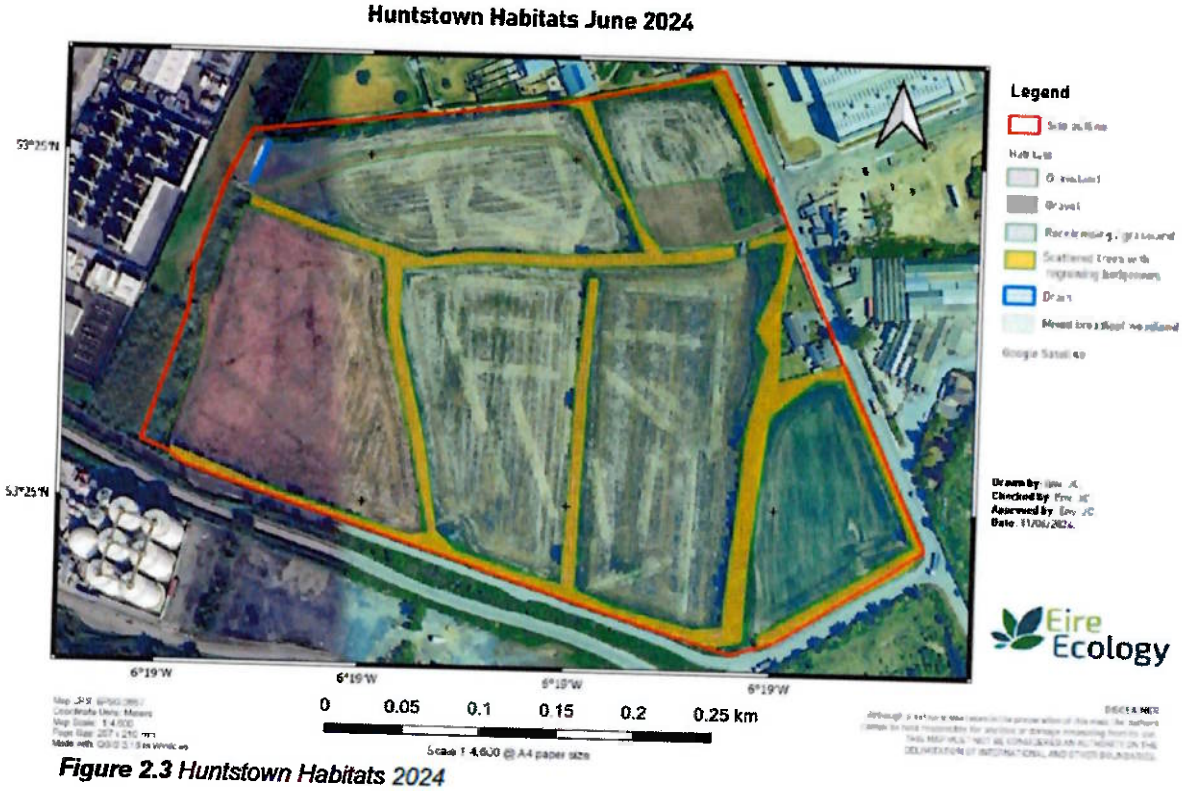



***Figure 2.3** Huntstown Habitats 2024*

The site was assessed for evidence of protected mammals, bat roost, as well as birds. It can be confirmed that the baseline environment of the site remains substantially unchanged from the baseline which informed the application submitted to Fingal County Council and response to 3rd party appeal, and their findings are unaltered as a result.

## 2.2 FUTURE SITE

Huntstown Power Company Limited intends to seek permission for the development of 2 no. data hall buildings and ancillary structures. The proposed data halls (Buildings A and B) are arranged over 3 storeys with a gross floor area of c. 37,647sqm each, and the construction of a two-storey 220kV gas insulated switchgear (GIS) building and associated external equipment located to the east of the site, oriented north-south with a gross floor area of 2,245.5 sq.m.

The Overall Development Site Layout and Boundary encompassing the combined site red line boundaries of the Data Centre Development and 220kV Substation Development as submitted with the Data Centre Development (application FW21A/0151 to Fingal County Council) and the 220kV substation (SID application SID/03/21 to An Bord Pleanala) is shown on figure 2.6 below. The Overall Development Boundary is depicted with an orange outline.

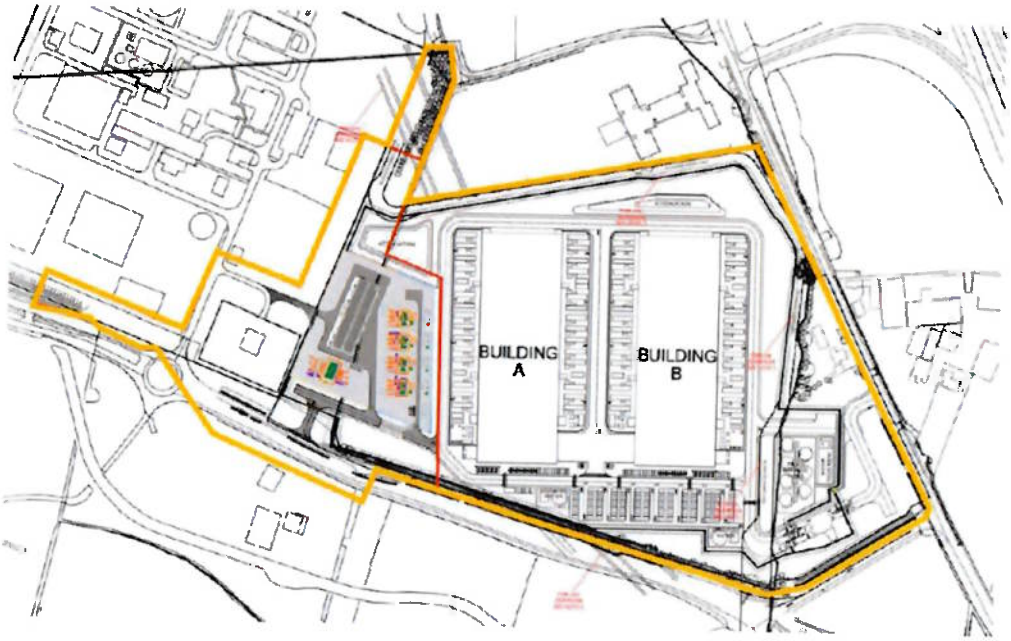



**Figure 2.4** Overall Development Site Layout Combining Data Centre Development and 220kV Substation site layout as submitted under application references FW21A/0151 to FCC and SID/03/21 to ABP respectively. The Overall Development Boundary is depicted with an Orange Line.

## 3.0 CRITERIA FOR SUCCESSFUL DECOMISSIONING

The basis of the plan is to ensure that, upon completion of the decommissioning phase, the facility would be in a suitable state for future use and would not pose a risk to public health and safety or the environment.

It is not intended to remove all structures, systems, or plant equipment from the site in this scenario. In general, specialised equipment, data servers, cabling, electronic equipment, office equipment, chattels etc. will be, where possible, sold for reuse, recycled or disposed of off-site. The facility buildings and common external utility features will remain in a suitable condition for future site users.

The benchmark criteria against which to evaluate successful decommissioning is as follows:

- The Environmental Management System at the facility will be continually implemented throughout the decommissioning process,
- All buildings, facilities, and plant equipment decontaminated and secured from unauthorised access,
- The asset is left in a condition in which there will be no constraints on future land use due to residual contamination,
- All residual materials/wastes arising from decommissioning will be handled, packaged, stored and disposed or recovered in such a manner that,
    - The equipment or decontaminated materials can be sold for re-use or sold for scrap; or
    - The contaminated materials will be disposed of using authorised hazardous waste contractors.

- All relevant documents relating to waste, material movements, transfer or disposal will be managed and retained throughout the decommissioning process,
- Sufficient funds will be available to cover the full cost of decommissioning; and
- Agreement that the site has been returned to a satisfactory state in accordance with the Decommissioning Plan requirements.

# 4.0 DECOMISSIONING TASKS AND PROGRAMMES

## 4.1 PLANT AND EQUIPMENT DECOMMISSIONING REQUIREMENTS

During the planning phase prior to closure, a comprehensive cost-benefit analysis and risk assessment will be conducted to determine the most appropriate future use of the facility, its plant, and equipment. This analysis will weigh the financial, environmental, and operational factors to make informed decisions regarding the decommissioning process. The goal is to leave the facility in a state that maximises its utility and value for future occupants or owners.

It is anticipated that all temporary fixtures and fittings will be cleaned/decontaminated and removed, and what is not recoverable will be recycled or disposed of as appropriate.

Similar to fixtures and fittings, all plant and equipment will be cleaned and decontaminated to ensure they are free from hazardous materials. Post-decontamination, the plant and equipment may be removed from the facility for use at other locations, sold to interested parties, or retained in place for use by future owners of the facility. This flexible approach allows for the optimal utilisation of assets and supports the circular economy by promoting reuse and recycling.

## 4.2 SURFACE WATER DRAINAGE PROTECTION

The following surface water drainage network protection measures will be implemented during decommissioning:

- Dismantling of equipment will take place indoors, where possible, isolated from any clean surface water collection points,
- All loading and unloading of vehicles as part of the decommissioning process will be isolated from clean surface water collection points and will be carried out at tanker delivery areas where any spills will be routed to the two proposed surface water attenuation ponds,
- All waste oils/greases drained from equipment will be stored in containers on hard stand surfaced that are either bunded or have other retention mechanisms (such as drip trays, sumps, etc) in place any to ensure any potential hazardous material spills can be quickly managed and contained,
- Spill kit equipment will be brought on site during decommissioning works.

## 4.3 DEMOLITION

It is expected that no demolition of the facility buildings and infrastructure will occur. Instead, these structures will be preserved and left intact for potential future commercial or industrial use. This approach minimises waste and preserves the

potential for future redevelopment, aligning with sustainable practices. Should demolition be required, this may be subject to planning approval.

## 4.4 RAW MATERIALS, PRODUCTS AND WASTE DISPOSAL AND/OR RECOVERY REQUIREMENTS

It is assumed that any shutdown of the site will be a well-planned event known in advance. Therefore, the process schedules and cancellation of raw material inputs will be factored in. It is anticipated that all usable raw materials (generator fuel, water treatment chemical, cleaning chemicals etc) on the site would be consumed prior to closure. However, any residual raw materials will be documented and labelled. An inventory of any materials will be taken along with the identification of materials suitable for return to suppliers, transport to other facilities, or for sale to third parties.

All waste, both non-hazardous and hazardous, will be removed off-site for re-use, recycling, recovery and/or disposal by licensed waste contractors in accordance with regulatory requirements.

## 4.5 CONTAMINATED LAND TREATMENT, REMOVAL AND/OR DISPOSAL

### 4.5.1 Existing Site

Site investigations were carried out on the Overall Development site by AWN and IGSL during May-June 2020. In total, ten (10) soil samples were collected throughout the trial pitting exercise and sent to Element Environmental Laboratory in the UK for analysis of a range of parameters to examine the soil quality and to investigate any present and/or past contamination occurred across the Overall Development site. Full laboratory result tables for the soil and groundwater samples are presented in Appendix 6.3 of the EIAR and Appendix II 6.3 of the EIAR Addendum report.

There is no known existing contamination of soil at the site.

### 4.5.2 Future Site

There will be comprehensive emergency response procedures and standard operating procedures to respond to an onsite fuel spillage during the operational lifetime of the facility. All employees should be provided with such equipment, information, training and supervision as is necessary to implement the emergency response procedures and standard operating procedures. The provision of spill kit facilities and training of operatives in use of same; should be undertaken at the operational stage in order to manage any leaks from fuel storage and vehicles resulting in soil and/or groundwater quality impacts:

The storage of fuel oil for the emergency generators shall be restricted to the generator yard. The bulk fuel tanks and belly tanks should be bunded, and the over ground delivery pipeline double lined. The final design for the diesel storage should either be contained within a bunded area or self-bunded in line with the requirements of the *Guidance to Storage and Transfer of Materials for Scheduled Activities* (EPA, 2005).

Due to these operational measures is not anticipated that there will be any contaminated soil requiring removal/treatment upon closure as a result of control measures (e.g. bunding) during operation.

### 4.5.3 Decommissioning Phase

The areas of the site where decontamination of equipment will take place are hard stand surfaced that are either bunded or have other retention mechanisms in place (such as drip trays, sumps, etc) so any potential hazardous material spills can be quickly managed and contained.

In the case that there has been a risk of soil contamination, appropriate soil testing will be undertaken by independent consultants. Based on their advice a cost benefit-analysis and risk assessment will take place to assess treatment options. If removal of the soil is required, it will be disposed of at an appropriate non-hazardous or hazardous waste disposal facility in accordance with good practice and relevant EPA guidance (e.g. *Guidance on waste acceptance criteria at authorised soil recovery facilities, 2020).*

Through the implementation of the procedures outlined in this report, it is not anticipated that any contamination will occur as a result of the decommissioning process.

## 4.6 DECOMMISSIONING PROGRAMME

This section outlines the phased procedures to be followed in the event of a site closure and decommissioning. It is anticipated that the date of closure will be known in advance and detailed closure planning and an independent closure audit will take place. After detailed planning, it is expected that the closure of the site will take place over six months. The programme and tasks involved have been summarised in the sections below.

### 4.6.1 Stage 1 – Disconnection and decommissioning of non-essential site services/utilities.

This task will involve a comprehensive disconnection process and decommissioning of various components of the facility. The aim is to isolate and decommission all equipment that will no longer serve a purpose during the closure phase, ensuring the facility is safe and ready for the final stages of decommissioning.

The scope includes disconnecting all electrical and telecommunication connections and decommissioning the data halls and servers (Buildings A and B) and associated mechanical and electrical plant equipment including the cooling systems. This initial stage is also expected to include, the disconnection of the emergency backup generators, transformers, water connections, and all other relevant operational equipment that will not be required for the decommissioning phase. Non-essential Heating Ventilation and Cooling (HVAC), fans, pumps, and motors located throughout the site will be shut down and disconnected.

Water storage tanks containing clean (mains) water including sprinkler tanks and evaporative cooling tanks will be drained down. Testing will be undertaken prior to discharge.

Mains utility connections, such as stormwater, water connections, and foul sewer, will be assessed and planned for disconnection when required (see stage 5).

Regarding disconnection and decommissioning of office areas, it is assumed that only partial administration facilities will be required for the remaining site decommissioning

operations and the successful completion of this plan. The non-essential areas will be cleared of office and kitchen equipment and furniture. Outside of the wastepaper and other recyclables, the only anticipated residuals associated with decommissioning of the administration buildings include office waste electrical and electronic equipment (WEEE).

### 4.6.2 Stage 2 – Removal of excess raw materials from site

Any excess raw materials, furniture, electronic equipment, catering equipment will be removed from the site with the following options implemented in a hierarchical format:

- Return to suppliers,
- Transfer of materials to other sites, within the ownership of the Operator or under other ownership,
- Transfer/sale to other companies in Ireland,
- Transfer to recovery/recycling companies, or
- Treating the material as a hazardous/non-hazardous waste (Stage 3).

### 4.6.3 Stage 3 – Removal of hazardous/non-hazardous wastes from site

It is assumed that any materials that can be recovered or recycled will have been done so in Stage 2. The remaining material on site will be considered waste, either hazardous or non-hazardous.

Mitigation measures proposed to manage impacts arising from wastes generated during decommissioning are summarised below.

- On-site segregation of all waste materials into appropriate categories including (but not limited to):
  - Dry Mixed Recyclables;
  - Organic food/green waste;
  - Mixed Non-Recyclable Waste;
  - Batteries (non-hazardous and hazardous);
  - Waste electrical and electronic equipment (WEEE) including computers, printers and other ICT equipment; and
  - Cleaning chemicals (solvents, pesticides, paints, adhesives, resins, detergents, etc.).
- All waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly labelled with the approved waste type to ensure there is no cross contamination of waste materials;
- All waste collected from the development will be reused, recycled or recovered where possible, with the exception of those waste streams where appropriate facilities are currently not available;
- All waste leaving the site will be transported by suitable permitted contractors and taken to suitably registered, permitted or licensed facilities; and
- All waste leaving the site will be recorded and copies of relevant documentation maintained.

Removal of both hazardous and non-hazardous waste materials will be removed and disposed of in compliance with the provisions of the *Waste Management Act 1996*, as amended, and associated regulations.

Administrative organisation of relevant paperwork will take place, according to EPA Guidelines (e.g. *Guidance to Licensees on Surrender, Cessation and Closure of Licenced Sites, 2012)*, ensuring all waste shipments during this period are accounted for. This will facilitate the requirement to have stated criteria for validation of decommissioning.

### 4.6.4 Stage 4 – Decontamination

This task specifically includes cleaning and decontamination procedures for all operational plant equipment. It is envisioned in this decommissioning scenario some on-site plant and equipment of a non-specific nature will be decommissioned but will remain in place and will continue to be used for a similar use or repurposed for an alternative development.

Contaminated solid waste arising from wipe-downs of equipment etc. will be collected in containers as hazardous waste, stored in the waste storage area, and removed and disposed of in accordance with the appropriate National and EU Legislation.

*Cleaning of tanks/vessels*

This stage is started when storage tanks are emptied, there a number of storage tanks associated with the storage of raw materials, such as emergency generator fuel oil that will be cleaned with standard procedures to ensure they are free of residual contaminants.

Liquid wastes that are not suitable for discharge to sewer will be disposed of using a licenced / permitted contractor in accordance with Section 5.6.3.

*Cleaning and decommissioning generators*

Any generators that will be used in the future facility, will be cleaned and will include the removal and recovery/disposal of engine oil, greases and coolant. Fuel will be pumped out from storage tanks to ensure that generators are safely decommissioned.

*Cleaning of ducts, vents, and pipework and decommissioning of HVAC units*

All ducts, vents, and pipework connecting various equipment and areas of the site will be cleaned and decontaminated by a specialist cleaning contractor.

*Cleaning of bunds, sumps, interceptors and drainage*

There are bunds, sumps associated with material storage areas, utilities and abatement equipment. All drainage networks, bunds, sumps and interceptors will be air flushed and cleaned by a specialist waste contractor. Liquid waste will be removed and disposed of appropriately as required.

### 4.6.5 Stage 5 – Disconnection of remaining (essential) utilities

One of the final stages of decommissioning will include the disconnection of the electrical substation and the disconnection of the mains water supply.

Electrical substation and transformers will be rendered safe, and it is assumed that decommissioning will be carried out by maintenance staff. It is anticipated that a separate sub-system needed for emergency power / lighting and security will remain live.

Decommissioning of any cables will involve decoupling the cable from the switchgear. An excavation pit of approximately 10m$^2$ will then be established. The cables to be retired will be identified within this excavation pit and spiked (to ensure that decoupling from the switchgear has been successful and the cable is not live). The cables will then be cut and capped to protect the exposed cable. The excavated pit can be reinstated using the excavated material, with no import of fill required. The retired cables can remain in situ in the ground, with the potential for it to be returned to operation should it be required in the future.

### 4.6.6 Stage 6– Removal of decommissioning waste and any residual hazardous materials

Any other waste or hazardous materials identified during the closure or required during decontamination or decommissioning will be stored in appropriate receptacles and will be disposed of by licenced / permitted contractor.

Each major area of the site will have segregated skips allocated for the hazardous and non-hazardous waste. This waste will include things like:

- Spent mechanical parts; WEEE and waste decommissioning equipment,
- Solid hazardous waste (absorbent mats, contaminated PPE) stored in sealed and labelled containers,
- Contaminated containers, contaminated empty drums, IBC's and other packaging,
- Non-hazardous solid waste (non-contaminated containers, drums, pallets, packaging and PPE); and
- General miscellaneous waste.

### 4.6.7 Stage 7 – Documentation and certification of decommissioning and decontamination

All transfers of raw materials, product and waste materials off-site will be appropriately recorded and maintained throughout the process for verification. Records of sales for value products will be kept for inspection and waste transfer documentation and consignment notes will be maintained on site for the duration of the decommissioning process and will be available after closure if required.

## 5.0 DECOMMISSIONING PLAN VALIDATION

### 5.1 ENVIRONMENTAL MONITORING

Environmental monitoring will be conducted to validify that, upon completion of the decommissioning phase of the plan, the facility would be in a suitable state for future use and would not pose a risk to public health and safety or the environment. Once operations cease and the site is decommissioned, there will be no significant emissions to atmosphere at the facility so ongoing monitoring of emissions will not be required.

In terms of the test programme, it is proposed to comprise the sampling and analysis presented in Table 4.1 as a minimum. It is anticipated that this scope will be refined and agreed with the relevant authority in advance of the assessment following confirmation of decommissioning.

*Table 5.1: Proposed sampling and analysis plan for the facility after decommissioning*

| Media | No of Samples/Parameters | Description/Locations |
|---|---|---|
| **Soil** | Samples at varying depths for soil chemistry for all known contaminants (relevant hazardous substances) used/present on site at the time of closure. | To be agreed prior to sampling. |
| **Groundwater** | Samples for chemical characterization including all known contaminants (relevant hazardous substances) used/present on site at the time of closure. | To be agreed prior to sampling. |
| **Sewer** | Sampling weekly over the closure period | To be agreed prior to sampling. |
| **Surface Water Drainage** | At minimum, weekly visual inspection during closure period. | To be agreed prior to sampling. |
| **Ambient Dust and $PM_{10}$** | Sampling at several locations (upwind and downwind) for total dust and $PM_{10}$. | To be agreed prior to sampling. |

## 5.2 DECOMMISSIONING VALIDATION AUDIT

Following completion of the site decommissioning, a validation audit will take place to ensure that the details outlined in this Decommissioning Plan have been implemented. The validation audit will also ensure recommendations raised by the approved Independent Closure Audit have been implemented.

In the case of identified residual contamination on site a further audit following the completion of corrective action would be required. However, as previously noted, it is not envisioned that there will be any residual contamination, and therefore an audit to ensure contamination does not exist is not expected.

## 5.3 DECOMMISSIONING VALIDATION AUDIT REPORT

A final validation report for the site will be submitted to the relevant Authority / stakeholders upon execution of the Decomissioning Plan. The report will present all of the information required to demonstrate that the criteria for successful closure has been achieved where appropriate.

This audit will contain the following details:

- Name of person(s) completing decommissioning/closure audit,
- Any environmental liabilities or remediation issues and how these shall be dealt with post decommissioning/closure,
- Proposal for revised sampling analysis and reporting arrangements on foot of changes on-site for agreement with the relevant Authority,
- Name of person(s) completing contaminated land/hydrogeological investigation; and
- Names of all waste handling contractors during closure i.e., waste contractors, proposed final destination etc. and waste disposal documents.

## 5.4 DECOMMISSIONING VALIDATION CERTIFICATE

The site operations staff and its consultants will carry out the above tests and investigations and submit certification, as requested to the relevant Authority / stakeholders, to confirm that there is no continuing risk to the environment.

## 6.0 CONCLUSION

This Decommissioning Plan sets out the development strategy for the site to ensure the site is brought to a future developable state if and when the data centre is no longer in use. The goal of this Decommissioning Plan is to leave the facility in a state that maximises its utility and value for future occupants or owners whilst supporting the circular economy by promoting reuse and recycling during decommissioning. Given the multi-storey nature of the development and the flexibility of the large floor plates within Buildings A and B, the site can be readily reconfigured for various commercial or industrial uses.

A thorough assessment of the site will be undertaken to create a detailed inventory of all assets, materials, and equipment. This inventory will identify items that can be reused, recycled, or need to be disposed of. Throughout the decommissioning process reuse and recycling will be prioritised to minimise waste.

Remediation efforts will focus on restoring the site to a safe and developable condition, meeting regulatory standards and facilitating future development opportunities. The existing state of the site prior to development, as set out in the Environmental Impact Assessment Report (EIAR), will serve as the baseline. Following the completion of site decommissioning, a validation audit will be conducted to ensure the decommissioning plan's details have been implemented effectively.

Through adhering to the procedures and guidelines specified in this Decommissioning Plan, the facility will demonstrate compliance with Fingal County Development Plan 2023-2029 Objective DMS092 and maximises the site's future development potential.

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# RESPONSE TO REQUEST FROM AN BORD PLEANÁLA ON HOW THE PROPOSED DEVELOPMENT ALIGNS WITH THE CLIMATE ACTION PLAN 2023

Report Prepared For

**Energia**

Report Prepared By

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Our Reference

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## Record of Approval

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| Signature |  |  |
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## 1.0 RESPONSE TO AN BORD PLEANÁLA

1.1 *An Bord Pleanála have invited the following submission:*

***2. The Board also invites observations on how the proposed development aligns with the Climate Action Plan 2023, including addressing the matching of demand and supply of renewable energy.***

**Executive Summary**

1.2 In response to the foregoing request from An Bord Pleanála which invited observations on how the proposed development aligns with the Climate Action Plan 2023 (CAP23) including addressing the matching of demand and supply of renewable energy, this report outlines in detail the ways in which the development aligns with CAP23. It is noted that the Climate Action Plan (CAP24) was published in December 2023 and was approved by the government on the 21 May 2024. The emission ceilings remain unchanged from CAP23 to CAP24. In addition to demonstrating how the proposed development aligns with CAP23, this report also demonstrates alignment with CAP24.

1.3 An assessment has been carried out which has assessed the proposed development against the overall Carbon Budget, and more specifically, the Emission Ceiling for the Electricity Sector as set out under CAP 23 and CAP 24.

1.4 In relation to Phase 1 (2027-2028) the average GHG emissions are equivalent to:

- 0.21% of the national 2030 target,
- 2.05% of the Emission Ceiling for the Electricity Sector

In relation to Phase 2 (envisaged to be fully operational in 2029), the average GHG emissions are equivalent to:

- 0.29% of the national 2030 target,
- 2.92% of the Emission Ceiling for the Electricity Sector

The average GHG emissions for Phase 1 and Phase 2 combined are equivalent to:

- 0.24% of the national 2030 target,
- 2.49% of the Emission Ceiling for the Electricity Sector

Table 1 below sets out emissions associated with the proposed development on a year on year basis relative to the overall Carbon Budget and the Emission Ceilings for the Electricity Sector.

| Development Phase | Year | Carbon Intensity (g $CO_2$/kWh) | Proposed Development $CO_2$ (tonnes) | Overall Carbon Budget ($CO_2$ Tonnes) | % of Development of Overall Cabon Budget | Electricity Emission Ceiling (CAP 23 and CAP 24) ($CO_2$ Tonnes) | % of Development against Electricity Emission Ceiling (CAP23/CAP24) | Energia Group Renewable Portfolio Available to End User | $CO_2$ Savings from Energia Group in respect of the Total Renewable Portfolio |
|---|---|---|---|---|---|---|---|---|---|
| Phase 1 (Building A) | 2027 | 168 | 88,063 | 40,000,000 | 0.22 | 4,000,000 | 2.20 | 909MW | 904,000 per annum |
| | 2028 | 145 | 76,007 | 40,000,000 | 0.19 | 4,000,000 | 1.90 | | |
| **PHASE 1 AVERAGE** | | | 82,035 | 40,000,000 | 0.21 | 4,000,000 | 2.05 | | |
| Phase 2 (Building A and B) | 2029 | 123 | 128,950 | 40,000,000 | 0.32 | 4,000,000 | 3.22 | | |
| | 2030 | 100 | 104,837 | 40,000,000 | 0.26 | 4,000,000 | 2.62 | | |
| **PHASE 2 AVERAGE** | | | 116,894 | 40,000,000 | 0.29 | 4,000,000 | 2.92 | | |
| **TOTAL AVERAGE** | | | 95,978 | 40,000,000 | 0.24 | 4,000,000 | 2.49 | | |

- Based on an 80% IT load utilisation (typical for data centres).
- The overall Carbon Budget, based on a five year total (i.e. from 2026-2030) is 200,000,000 tonnes of $CO_2$. For the purpose of this assessment, the carbon budget has been divided evenly for each year (i.e. 40,000,000 tonnes of $CO_2$ annually).
- The Sectoral Emission Ceiling for the electricity sector, based on a five-year total (i.e. from 2026-2030) is 20,000,000 tonnes of $CO_2$. There is flexibility from year to year in that it could reduce each year in a linear fashion or each year could have the same total etc. Given that is not possible to predict year to year ceilings, for the purposes of the assessment, the overall sectoral emission ceilings for the electricity sector for the years 2026-2030 has been divided evenly for each year (i.e. 4,000,000 tonnes of $CO_2$ annually)
- The $CO_2$ savings from Energia Group in respect of the total renewable portfolio is calculated assuming the successful build out of the all the projects and using the load factors for intermittent renewable generation set out in the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy which states "a data centre consuming on average 100 MW would require an additional c 230 MW of onshore wind, or 730 MW of solar to match this extra demand with sufficient renewables, accounting for their intermittency."

**Table 1** Phase 1 and Phase 2 $CO_2$ Emissions On A Year On Year Basis Relative To The Overall Carbon Budget And The Emission Ceilings For The Electricity Sector

1.5 The Applicant has entered into binding legal agreements with Microsoft to provide Corporate Power Purchase Agreements ('CPPAs') for new renewable energy. We can confirm that these agreements are in place and have been signed by both parties, These Agreements are capable of underpinning new renewable energy generation calculated to offset the energy consumed by the proposed development from the electricity grid. These arrangements provide a legal obligation for:

- Corporate Power Purchase Agreements between the applicant's group and the facility end user, Microsoft.

- The establishment of new renewable energy generation projects by the applicant's group, that will not be supported by government or consumer subsidies – these new renewable energy projects will be:
  - Located throughout Ireland;
  - Parallel development to the energy demand of the proposed development; and
  - In total, should see the collective annual generation exceed the data' centre' annual electricity use..

1.6 Through these obligations, for every unit of energy consumed by the data centre, a unit of new renewable energy generation would be despatched to the wider electricity system to off-set it. This delivers the objective of operating the proposed development on an annual net energy zero basis that would support Ireland's overall climate targets. Any associated additional renewable energy supply would also increase energy security through indigenous energy sources.

1.7 Energia Group has developed a pipeline consisting of 634 MW (MEC) of solar assets and 275 MW (MEC) of onshore wind assets, the majority of which have received planning consent.

1.8 Subject to a grant of planning permission for the proposed development, Energia Group is well positioned to deliver the renewable energy generation required to offset the energy demand of the data centre.

1.9 Having regard to:

- the emission associated with proposed development relative to the Carbon Budget and the Emission Ceiling for the Electricity Sector; and
- the level of renewable additionality that will be provided under agreements between the applicant and the end user, Microsoft,

it has been assessed that the proposed development would result in a minor adverse impact (based on IEMA Methodology).

1.10 Additionally, a Transmission Connection Agreement ("TCA") with Eirgrid to provide electricity to the proposed development has been executed by both parties (Huntstown Power Company Limited and Eirgrid) on 8 March 2021 (Ref. P28LI(1)). EirGrid as the national authority for the grid has the requirement to ensure that the connection will not impact or reduce the capacity available within the local network to support the neighbouring area. The TCA confirms that there is sufficient power available from the existing area network to facilitate the proposed development. The Proposed Data Centre is not considered to be "new demand" and will therefore not place any further burden on the local grid that is not already forecast by the grid operator.

1.11 In the context of the Sectoral Emission Ceilings, and in circumstances where the Proposed Development is included under existing electricity demand forecasts, with a transmission connection agreement (TCA) dated to 8th March 2021, there is no evidence that the Proposed Development would contribute to an exceedance of the

Electricity Emission Ceiling. Thus, the risk of an exceedance of the sectoral emission ceiling is associated with an expansion of demand including additional data centres not already in receipt of a TCA rather than data centres already in receipt of a TCA.

**Response**

1.12 The energy generated by the national grid and associated GHG emissions to power the proposed development will fall within the scope of the EU Emissions Trading System (ETS) either indirectly as a result of electricity from the national grid or directly from onsite backup diesel generators (used infrequently when power from the grid is not available) and thus will require a Greenhouse Gas Permit in order to operate.

1.13 Recent changes to national legislation will also be addressed in this response in the context of GHG emissions associated with the development. The 2024 Climate Action Plan (CAP) (Government of Ireland, 2023) provides a detailed plan for taking decisive action to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting us on a path to reach net-zero emissions by no later than 2050. This is identified as the national climate objective in section 3 of the Climate Action and Low Carbon Development Act 2015 (as amended by the Climate Action and Low Carbon Development (Amendment) Act 2021) as follows:

*"3. (1) The State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy…"*

1.14 Both CAP 23 and CAP24 outlines the current status across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture and outlined the various broadscale measures required for each sector to achieve ambitious decarbonisation targets. CAP24 also detailed the required governance arrangements for implementation including carbon-proofing of policies and establishment of Sectoral Emission Ceilings and carbon budgets.

CAP 23 and CAP24 has outlined the path towards the electricity target by 2030 of a 75% reduction in GHG emissions compared to 2018. The core measures set out in the CAP24 are unchanged from CAP23, and are outlined below in Table 2:

| SECTOR | CAP23 | CAP 24 |
|---|---|---|
| **Renewable Electricity Share** | Increasing the share of renewable electricity to 80%, | Increasing the share of renewable electricity to 80%, |
| **Onshore Wind** | Indicative Onshore Wind Capacity of up to 9GW, | Indicative Onshore Wind Capacity of up to 9GW, |
| **Offshore Wind** | Indicative Offshore Wind Capacity of at least 5GW, | Indicative Offshore Wind Capacity of at least 5GW, |
| **New Flexible Gas Plant** | New Flexible Gas Plant of at least 2 GW, | New Flexible Gas Plant of at least 2 GW, |
| **Solar** | Indicative Solar PV Capacity of 8GW. | Indicative Solar PV Capacity of 8GW. |

**Table 2** CAP23 and CAP24 Core Sectoral Targets

1.15 In addition, CAP23 and CAP 24 outlines a suite of measures and market incentives which will be developed to meet electricity demand with renewable energy generation. These include, as shown in Table 3:

| CAP23 | CAP24 |
|---|---|
| The EU ETS is an important measure for reducing industry GHG emissions. The Fit for 55 proposals for the reformed EU ETS will increase emissions reductions in this sector from the current 43% to 61%, in the period 2005 to 2030. Changes include a steeper annual reduction in the emissions ceiling and reductions in free allowances, alongside the corresponding introduction of a carbon border adjustment mechanism." (CAP23, page 155). | The EU ETS is an important mechanism to drive emissions reductions in Ireland. Revisions for the EU ETS proposed under the EU Fit for 55 package were formally approved in April 2023 and include significant changes that aim at strengthening the decarbonisation incentive in industry. EU ETS emissions are set to reduce by 62% (previously 43%) compared to 2005, further tightening the cap on all participants. In addition, while industrial emitters currently receive a proportion of free allocation of emissions permits, the updated EU ETS will see free allocation for many industries phased out from 2026, adding further upward pressure to the carbon price. (CAP24, page 189) |
| Develop policies that support extra-large energy users to achieve cabon-free demand in Ireland so that electricity decarbonisation, demand efficiency and flexibility, and enterprise growth can go hand in hand. To include connection agreements; hybrid connections; non-firm connections where appropriate; onsite dispatchable generation; onsite storage; emissions reporting; and renewable PPAs in particular within the scope of this work | The demand side strategy should accelerate the rollout of local flexibility markets by the Distribution System Operator, as required to meet renewable electricity and carbon abatement targets, and contain measures to incentivise Large Energy Users to increase the flexibility in their electricity demand; |
| In line with the Roadmap on Corporate Power Purchase Agreements, the SEAI, the CRU, and the System Operators, will work with Large Energy Users (LEUs) and enterprise development agencies to increase the demand flexibility of LEUs through enhanced reporting and matching of demand with usage of lower carbon energy sources, including increased transparency of emissions data, and regulatory incentives and disincentives | The SEAI's Excellence in Energy Efficient Design (EXEED) programme will support large energy users with developing exemplar energy efficiency approaches to new and existing assets, including energy efficiency design and capital support |
| | Incentivise and enable large energy users to participate in flexible demand initiatives designed to enable low/zero carbon demand growth |
| | The SEAI will provide enhanced support partnership to a cross section of 10-15 large energy users to demonstrate and support ambitious action in key sectors |
| | The overarching objective of managing electricity demand growth is to ensure, through a combination of energy efficiency and flexible electricity demand, that economic growth can be supported by low-carbon or no-carbon energy demand growth |

**Table 3** CAP23 and CAP24 Core Sectoral Targets

EU Legislation

1.16 GHG emissions from electricity generation used to power data storage facilities in Ireland, either from the national grid or from onsite generation (where the thermal input is greater than 20MW), are included in the ETS. Thus, they are not included in the Effort Sharing Regulation which covers all non-ETS emissions and thus any necessary increase in electricity generation due to data storage facility demand will have no impact on Ireland's obligation to meet the EU Effort Sharing Regulation[1].

1.17 In order to meet the commitments under the Paris Agreement, the European Union (EU) enacted '*Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030, contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013*' (the Effort Sharing Regulation).

1.18 These Regulations aim to deliver, collectively by the EU in the most cost-effective manner possible, reductions in GHG emissions from the Emission Trading System

[1] Available at: https://ec.europa.eu/clima/policies/effort_en

(ETS) and non-ETS sectors amounting to 43% and 30%, respectively, by 2030 compared to 2005. The ETS is an EU-wide scheme which regulates the GHG emissions of larger industrial emitters including electricity generation, cement manufacturing and heavy industry. The non-ETS sector includes all domestic GHG emitters which do not fall under the ETS and thus includes GHG emissions from transport, residential and commercial buildings and agriculture. Ireland's obligation under the Regulations is a 30% reduction in non-ETS GHG emissions by 2030 relative to its 2005 levels.

1.19 The EU, in May 2023, published Directive (EU) 2023/959 Amending Directive 2003/87/EC Establishing A System For Greenhouse Gas Emission Allowance Trading Within The Union And Decision (EU) 2015/1814 Concerning The Establishment And Operation Of A Market Stability Reserve For The Union Greenhouse Gas Emission Trading System. As part of this Directive, the cap on emissions has been tightened again to reduce emissions covered by the EU ETS by 62% by 2030 compared to 2005.

1.20 As outlined in European Commission publication "*Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment*" (EC, 2013) the assessment of the impact of the project on climate should be context specific. Within the context of global or EU-wide emissions, the GHG emissions associated with the project are small. The approach that has been adopted at EU level is the EU Climate and Energy Package. In this regards, this publication (EC, 2013) has stated that:

*"The EU Emissions Trading System, the backbone of the EU mitigation effort, which sets a cap on emissions from the most polluting sectors including over 11,000 factories, power plants and other installations, including airlines. By 2020, the cap should result in a 21% reduction relative to 2005 levels. The EU ETS covers about 40% of all EU emissions." (EC, 2013).*

1.21 The assessment in the EIAR was undertaken in compliance with this approach outlined in the "*Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment*" (EC, 2013).

1.22 The ETS is a "cap and trade" system where an EU-wide limit, or cap, is set for participating installations. Thus, the geographical location of a given development within the EU is not relevant as there is only one EU-wide target which is applicable to the ETS and thus the cumulative direct and indirect climate assessment of relevance in this context is the GHG emissions associated with the EU under the ETS. When viewed in this context, on an EU-wide basis, where the ETS market in 2023 was approximately 1,064 million tonnes $CO_{2eq}$, the impact of the emissions from the proposed development, either from electricity generation from the national grid or from onsite generation, will be less than 0.03% of the total EU-wide ETS market.

1.23 As shown in Figure 1, the ETS has had mostly a year-on-year reduction trend (with the exception of 2020 due to COVID) since 2007. As outlined in the EU publication "*The EU Emissions Trading System in 2020: trends and projections*" (EU, 2020), the European Union's energy system is decarbonising rapidly. The report states:

*"Total ETS emissions from stationary installations declined by 9.1% between 2018 and 2019, the largest drop in a decade, driven by a strong decrease in coal use for power production*" (EU, 2020)

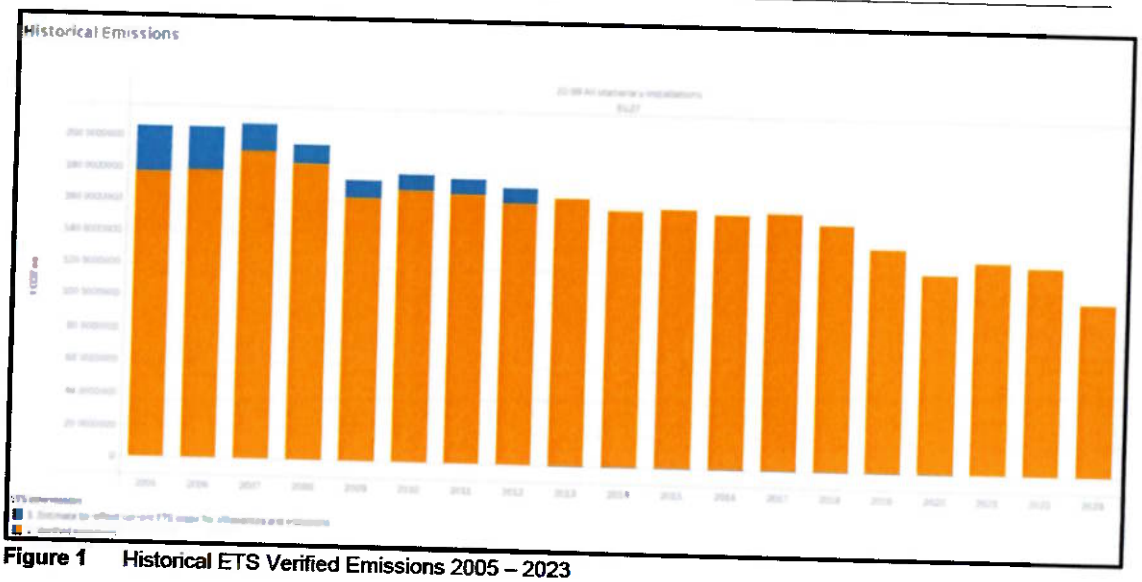



**Figure 1** Historical ETS Verified Emissions 2005 – 2023

1.24 The European Topic Centre on Climate report entitled "Trends and projections in the EU ETS in 2020" (ETC, 2020) in reference to additional electricity capacity states:

> *"In the revised ETS Directive 2018/310, Article 10(c) now requires that "where an investment leads to additional electricity generation capacity, the operator concerned shall also demonstrate that a corresponding amount of electricity-generation capacity with higher emission intensity has been decommissioned by it or another associated operator by the start of operation of the additional capacity". This clause aims at ensuring that overall electricity generation capacity becomes less carbon intensive over time."*

1.25 The report (ETC, 2020) further indicates that the reduction in GHG emissions is predicted to continues up to at least 2030 due to current policies in place. As shown in Figure 2, both the energy industries and "other industries" are predicted to decrease significantly by 2030.

**Figure 3.1** **EU ETS historic and projected emissions between 2005 and 2030 for EU-27, by inventory category**

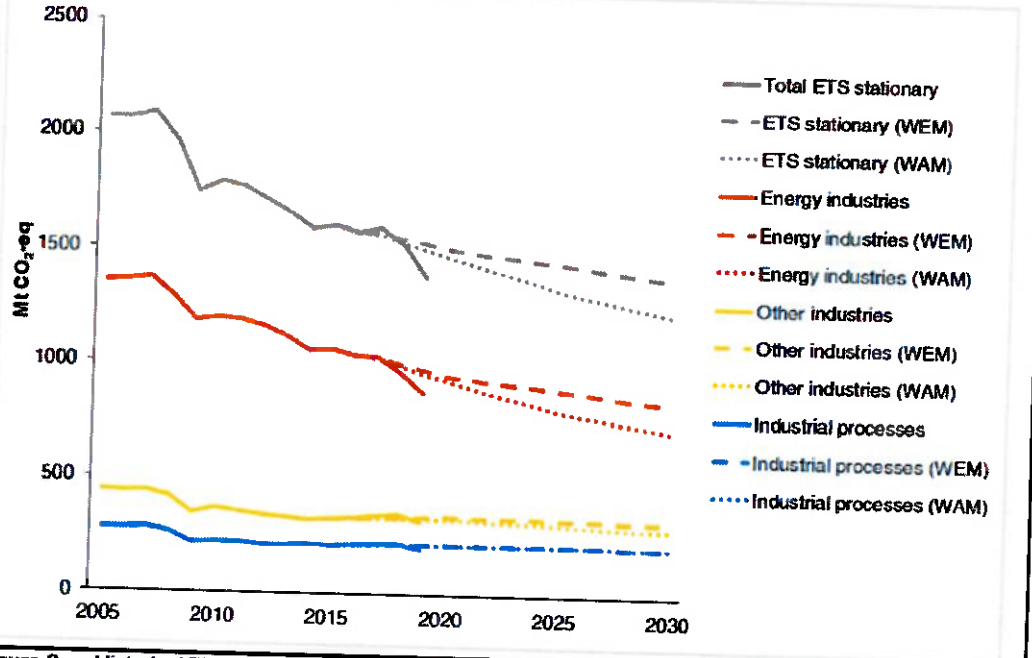



**Figure 2** Historical ETS Verified Emissions & Project Emissions 2005 – 2030 (WEM = with existing measures, WAM = with additional measures)

1.26 The European Climate Law[2] was published in 2021 as part of the EU's "Fit for 55" legislative package where the EU has committed to a domestic reduction of net greenhouse gas emissions by at least 55% compared to 1990 levels by 2030, the Effort Sharing Regulation has also been strengthened with increased ambition by the year 2030. The regulation[3] for Ireland increases the GHG emission reduction target from 30% to 42% relative to 2005 levels. Thus, it is likely that the actual emissions reduction by 2030 will be greater than the projections outlined in Figure 2.

National Legislation

1.27 The 2021 Climate Action and Low Carbon Development Act outlines a series of specific actions including:

- To make a strategy to be known as the 'National Long Term Climate Strategy' not less than once in every five-year period with the first to be published for the period 2021 to 2035 and with each subsequent Strategy covering the next three five-year carbon budgets and also include a longer-term perspective of at least 30 years;
- To adopt a system of carbon budgets which will be determined as part of a grouping of three five-year periods calculated on an economy-wide basis, starting with the periods 2021 to 2025, 2026 to 2030, and 2031 to 2035;
- To introduce a requirement for Government to adopt "sectoral emission ceilings" for each relevant sector within the limits of each carbon budget;

[2] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')
[3] Regulation (EU) 2023/857 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement, and Regulation (EU) 2018/1999

- To request all local authorities to prepare climate action plans for the purpose of contributing to the national climate objective. These plans should contain mitigation and adaptation measures that the local authority intends to adopt;
- Increasing the power of the Advisory Council to recommend the appropriate climate budget and policies;
- Requiring the Minister to set out a roadmap of actions to include sector specific actions that are required to comply with the carbon budget and sectoral emissions ceiling for the period to which the plan relates; and
- Reporting progress with the CAP on an annual basis with progress including policies, mitigation measures and adaptation measures that have been adopted.

1.28 The first carbon budget programme was published in November 2021 and comprises three successive 5-year carbon budgets. In relation to carbon budgets, the Climate Action and Low Carbon Development (Amendment) Act 2021 states 'A carbon budget, consistent with furthering the achievement of the national climate objective, shall be proposed by the Climate Change Advisory Council, finalised by the Minister and approved by the Government for the period of 5 years commencing on the 1 January 2021 and ending on 31 December 2025 and for each subsequent period of 5 years (in this Act referred to as a 'budget period')'. The carbon budget is to be produced for 3 sequential budget periods with the third carbon in draft format. The carbon budget can be revised where new obligations are imposed under the law of the European Union or international agreements or where there are significant developments in scientific knowledge in relation to climate change. The total emissions allowed under each budget is set out below in Table 4, as well as the average annual reduction for each 5-year period.

| Period | Mt $CO_2eq$ | Emission Reduction Target |
|---|---|---|
| 2021-2025 | 295 Mt $CO_2eq$ | Reduction in emissions of 4.8% per annum for the first budget period. |
| 2026-2030 | 200 Mt $CO_2eq$ | Reduction in emissions of 8.3% per annum for the second budget period. |
| 2031-2035 | 151 Mt $CO_2eq$ | Reduction in emissions of 3.5% per annum for the third provisional budget. |

**Table 4** 5-Year Carbon Budgets 2021-2025, 2026-2030 and 2031-2025

1.29 The Sectoral Emission Ceilings were published in July 2022 for each Sector as shown in Table 5. It should be noted that 5.25 $MtCO_2eq$ of annual emissions reductions are currently unallocated on an economy-wide basis for the second carbon budget period (2026-2030). These will be allocated following a mid-term review and identification of additional abatement measures. The electricity sector emitted approximately 10.5 $MtCO_2eq$ in 2018 and has a carbon budget of 40 $MtCO_2eq$ between 2021-2025, 20 $MtCO_2eq$ between 2025-2040 and a ceiling of 3 $MtCO_2eq$ in 2030.

1.30 The CAP24, published in December 2023 and approved by the government on the 21 May 2024, reiterates the Sectoral Emission Ceilings and outlines the current status across key sectors including electricity, transport, built environment, industry and agriculture and outlines the various broadscale measures required for each sector to achieve the decarbonisation targets. CAP24 also details the required governance arrangements for implementation including carbon-proofing of policies, establishment of carbon budgets, a strengthened Advisory Council and greater accountability to the Oireachtas.

| Sector | Baseline ($MtCO_2e$) | Carbon Budgets ($MtCO_2e$) | | 2030 Emissions ($MtCO_2e$) | Indicative Emissions % Reduction in Final Year of 2025- 2030 Period (Compared to 2018) |
|---|---|---|---|---|---|
| | 2018 | 2021-2025 | 2026-2030 | | |
| Transport | 12 | 54 | 37 | 6 | 50 |
| Electricity | 10 | 40 | 20 | 3 | 75 |
| Built Environment - Residential | 7 | 29 | 23 | 4 | 40 |
| Built Environment - Commercial | 2 | 7 | 5 | 1 | 45 |
| Agriculture | 23 | 106 | 96 | 17.25 | 25 |
| LULUCF | 5 | TBC | TBC | TBC | TBC |
| Industry | 7 | 30 | 24 | 4 | 35 |
| Other (F-gases, waste, petroleum refining) | 2 | 9 | 8 | 1 | 50 |
| Unallocated Savings | - | 7 | 5 | -5.25 | - |
| **Total** | **68** | **TBC** | **TBC** | - | - |
| **Legally Binding Carbon Budgets and 2030 Emission Reduction Targets** | - | **295** | **200** | - | **51** |

**Table 5** Sectoral Emission Ceiling 2030

1.31 In relation to the Proposed Development, it should be noted that the projected CO2 emissions (as quoted in Section 9.7.2.7 of the EIAR Addendum) associated with the proposed development were calculated based on the 2020 grid mix . However, the national fuel mix will decrease in carbon intensity as the grid reaches the 80% in renewables predicted for 2030 (see Figure 3 below). Therefore, the powering of both Phase 1 and Phase 2 from the national grid will allow for a reduction in the GHG emissions associated with the proposed development over time. It has also been assumed that both Phase 1 and Phase 2 utilisation will be 80% which reflects the assumption in the DECC report (DECC, 2022) which has an average load factor of 80% for data centres as shown in Figure 5.

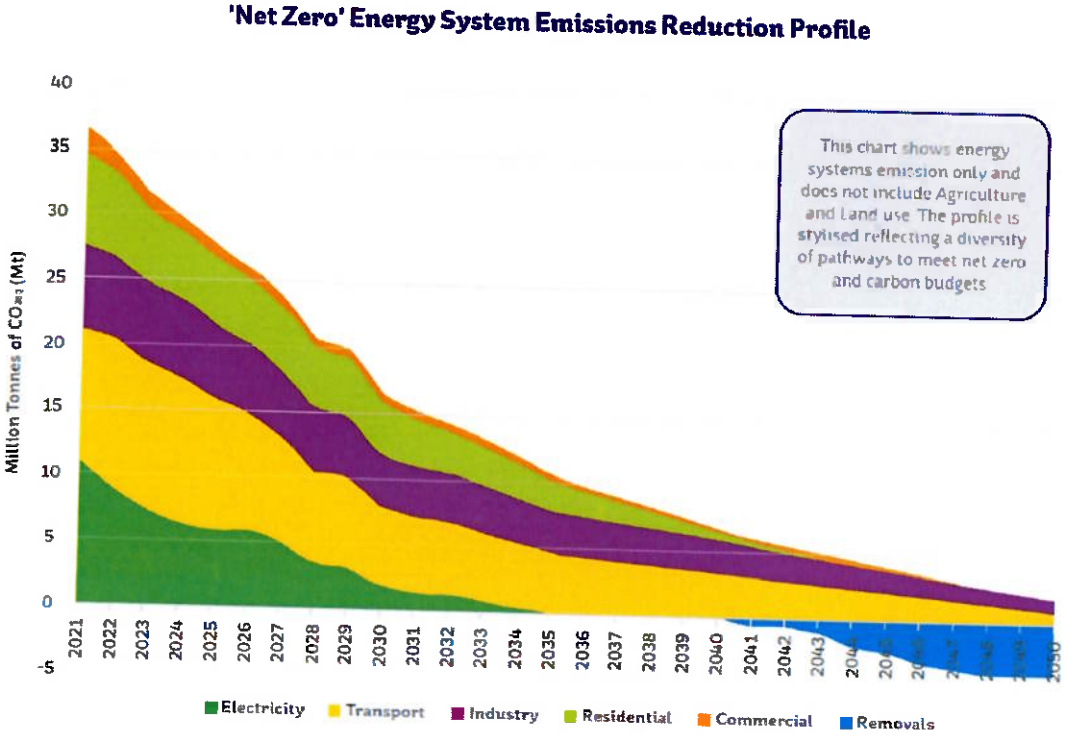



**Figure 3** Net Zero Energy System Emissions Reduction Profile (UCC / MaREI) (ESB Networks, 2023)

1.32 The proposed development will have a maximum operational energy demand of 150MW (for assessment purposes). The proposed development seeks a 10 year planning permission and therefore the ramping up of its energy consumption will occur over period of several years. The development is therefore not capable of consuming its maximum energy capabilities until the proposed development becomes fully operational.

1.33 For the purposes of this assessment, commencement years have been assigned for Phase 1 and 2. Table 6 below sets out the assumed phases, the total GWh (operating at maximum annual energy consumption), the total GWh (operating at the estimated annual energy consumption) and the fuel usage.

| Phases | Anticipated operational year | Maximum annual energy consumption (for assessment purposes) (absolute worst case) | Estimate annual energy consumption GWh – (reasonable worst case) | Fuel |
|---|---|---|---|---|
| Phase 1 | 2027 | 655GWh | 524GWh | Electricity |
| Phase 1 & 2 | 2029 | 1310GWh | 1046GWh | Electricity |

**Table 6** Proposed Development - Data Centre Phases

1.34 In accordance with the methodology outlined above, the emission calculations presented in the EIAR Addendum have been updated to reflect the actual GHG emissions associated with electricity in the relevant year of operation and has taken into account the estimated annual energy consumption per table 6.

1.35 Thus, for Year 2027, the GHG emissions from electricity will be based on the expected GHG emission rate in 2027. The expected values for each year from 2025 to 2030 is shown below in Table 7.

1.36 The GHG emission factor of electricity is based on current reported levels (Year 2023) with the assumption that the GHG emission factor will decrease in a linear fashion to reach 100 $gCO_2/kWh$ by 2030 in line with government policy as shown in Table 7 below.

| Year | Electricity[Note 1] ($g\ CO_2$ / kWh) |
|---|---|
| 2025 | 214 |
| 2026 | 191 |
| 2027 | 168 |
| 2028 | 145 |
| 2029 | 123 |
| 2030 | 100 |

Note 1 Based on a carbon intensity of 259 g CO2 / kWh in 2023 and assuming linear interpolation to 100 g CO2 / kWh by 2030.

**Table 7** Carbon Intensity of Electricity From 2025 - 2030

1.37 A number of conservative approaches in this reasonable worst-case assessment are as follows:

- It was assumed in the EIAR that the load factor for Phase 1 & Phase 2 of the Proposed Development would be 100%. In reality, data centres usually operate closer to 80% utilisation on an annual average and the data below reflects the 80% load factor which will occur in reality.
- The power generation mix in 2030 is forecast by EirGrid to be 83% renewable rather than the assumed 80% renewable generation.
- It is assumed that net zero electricity would not be achieved until 2050, whereas recent data from the ESB and UCC/MaREI suggests that this is likely to be achieved by 2040 at the latest as outlined in "*Networks For Net Zero – Delivering the Electricity Network for Ireland's Clean Electric Future*" (ESB Networks, 2023).
- UCC / MaREI have also separately published the report "*Our Climate Neutral Future – Zero by 50*" (UCC / MaREI, 2021) which details how the energy system can achieve net zero by 2050 by using technologies, concepts and interventions will already exist today. As shown in Figure 4, the report predicts that the energy system will be dominated by renewable energy in 2050.
- Although the pathway may vary somewhat depending on future policy decisions, it is likely that net zero electricity (shown in green in Figure 3) will be achieved by 2040.

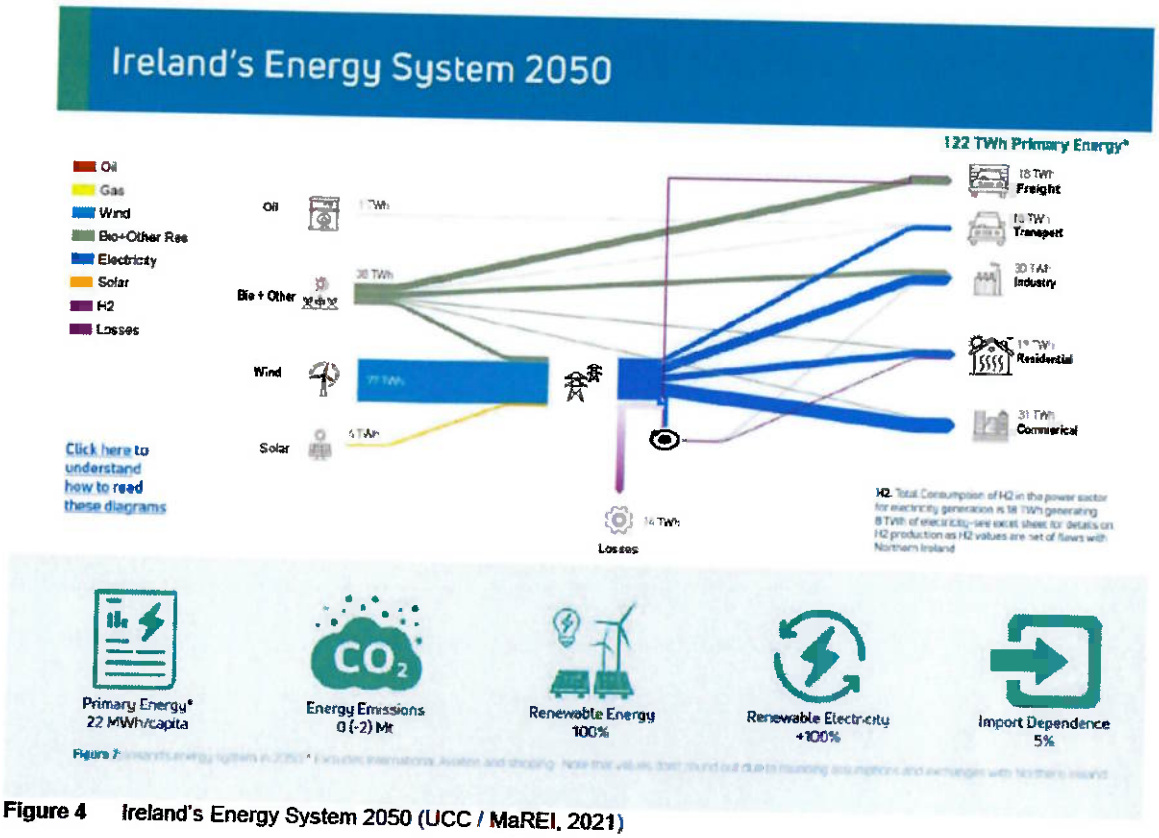



**Figure 4** Ireland's Energy System 2050 (UCC / MaREI, 2021)

1.38 Specific to the Electricity Sector, CAP24 sets out that "*Delivery and integration of onshore and offshore wind and solar PV is the best-performing mitigation measure to deliver emissions abatement at scale and at speed. Already under the first Climate Action Plan in 2019, reaching 70% renewables by 2030 provided the core of emissions reduction in the sector. Increasing renewables to 80% of demand under Climate Action Plan 2021 and beyond this to the CAP23 capacity targets of 22 GW of wind and solar achieves a further 16% emissions reductions over the first two carbon budgets. No other supply side measure comes close to the emissions abatement achieved by the early and rapid deployment of unprecedented wind and solar capacity*".

1.39 The recent DECC publication "*Summary of Analysis to Support Preparation of the Sectoral Emissions Ceilings*" (DECC, 2022) outlines the assumptions which have been used to derive the Sectoral Emission Ceilings. The "proposed scenario" (Figure 5) adopted by DECC takes into account the EirGrid Generation Capacity Statement for 2020-2029 which set out a median overall demand in 2029 of 1,250MVA for Data Centre and Large Industrial User Demand by 2029[4].

1.40 With a growth rate of 65-70% in electricity demand by 2030 inherent in the DECC analysis, the assessment undertaken for the Sectoral Emission Ceilings has concluded that the 2030 target of 3 Mtonnes of $CO_2$eq is attainable as shown in Figure 6 below.

[4] https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Generation-Capacity-Statement-2020-2029.pdf

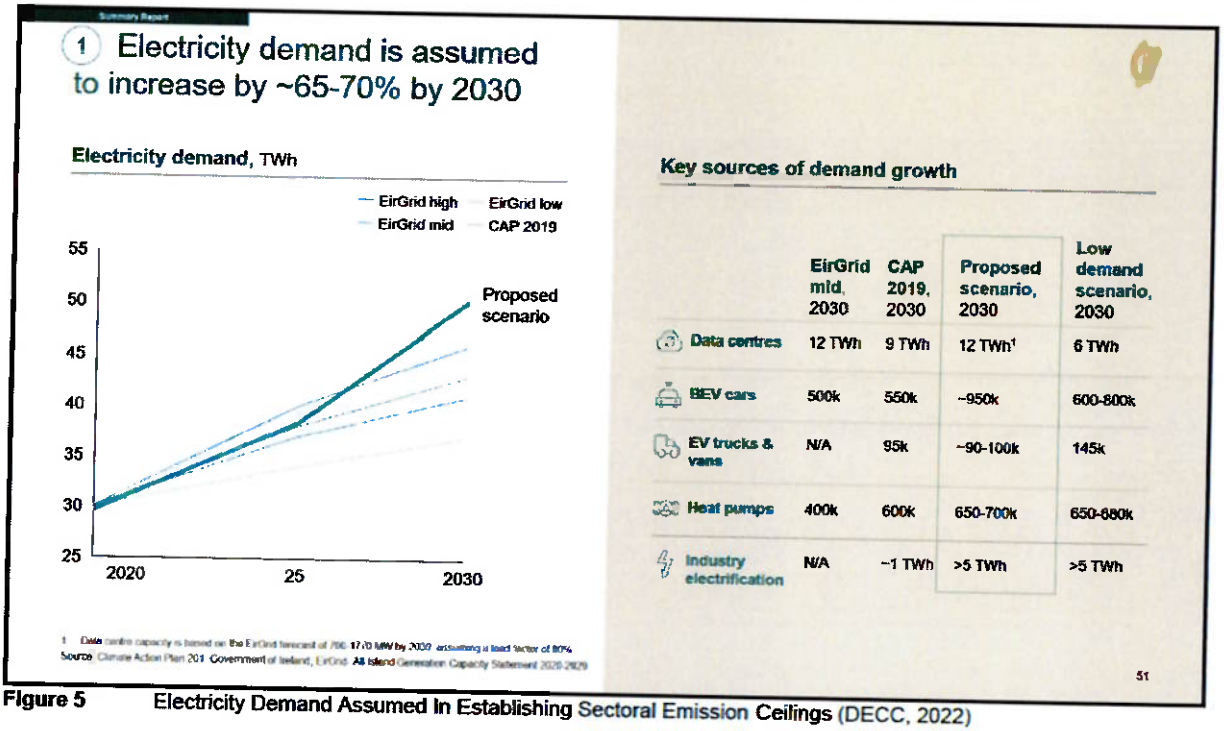



**Figure 5** Electricity Demand Assumed In Establishing Sectoral Emission Ceilings (DECC, 2022)

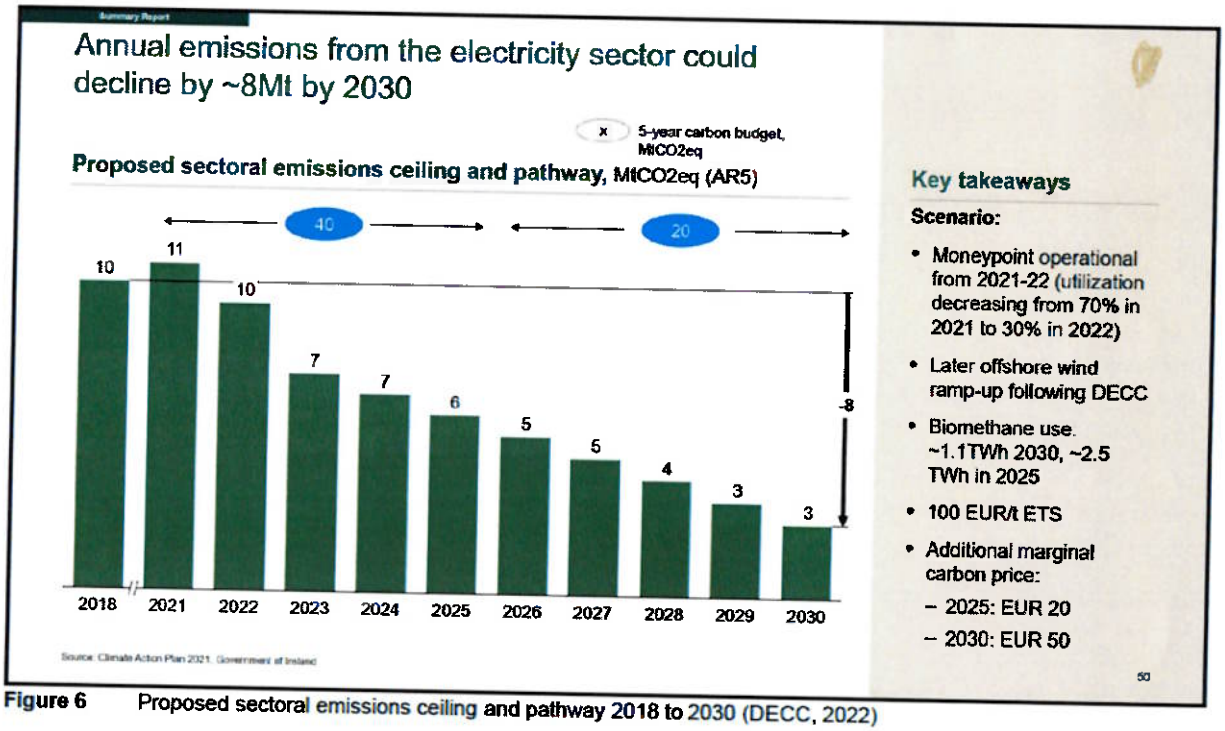



**Figure 6** Proposed sectoral emissions ceiling and pathway 2018 to 2030 (DECC, 2022)

1.41 The EPA has recently reported that the 2022 energy industries GHG emissions have decreased from 10.26 Mtonnes in 2021 to 10.08 Mtonnes in 2022[5]. Comparing the 2022 reported data to the projected data undertaken for the Sectoral Emission Ceiling in Figure 6 indicates that the actual emissions are similar to the target value in 2022. Thus, in the context of the Sectoral Emission Ceilings, and in circumstances where the

[5] https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/#

Proposed Development is included under existing electricity demand forecasts, with a transmission connection agreement (TCA) dated to 8th March 2021, there is no evidence that the Proposed Development would contribute to an exceedance of the Emission Ceiling. Thus, the risk of an exceedance of the sectoral emission ceiling is associated with an expansion of demand including additional data centres not already in receipt of a TCA.

1.42 As shown in Table 8, in relation to Phase 1 (which is assumed to be fully in operation in 2027) the GHG emissions are equivalent to 0.21% of the overall 2026-2030 carbon budget; 2.05% of the electricity sectoral ceiling 2026 - 2030 and 0.012% of the ETS 2030 Stationary Installations Cap based on the average emissions over 2027 - 2028.

1.43 In relation to Phase 1 & 2 combined (which is assumed to be fully in operation in 2029) the GHG emissions are equivalent to 0.29% of the 2026 – 2030 carbon budget; 2.9% of the electricity sectoral emission ceiling 2026 – 2030; and 0.017% of the ETS 2030 Cap based on the average emissions over 2029 - 2030. It has been assumed that both Phase 1 and Phase 2 utilisation will be 80% which reflects the assumption in the DECC report (DECC, 2022) which has an average load factor of 80% for data centres as shown in Figure 5.

| Phases | Total $CO_{2eq}$ Emissionsl | % Of 2026-30 Carbon Budget | % Of 2026-2030 Electricity Sectoral Ceiling | % Of EU ETS 2030 Cap |
|---|---|---|---|---|
| **Phase 1 – Year 2027 / 2028 (655GWh)[1]** | 88,497 | 0.21% | 2.1% | 0.012% |
| **Phases 1 & 2 – Year 2029 / 2030 (1310GWhh)[2]** | 129,632 | 0.29% | 2.9% | 0.017% |

Note 1 75MW is equivalent to 524 GWh based on 80% IT load utilisation
Note 2 150MW is equivalent to 1,046 GWh based on 80% IT load utilisation
**Table 8** GHG Emissions Associated With Each Phase Of The Development

Assessment Of Significance

1.44 The Institute of Environmental Management and Assessment (IEMA) guidance note on "*Assessing Greenhouse Gas Emissions and Evaluating their Significance*" (IEMA, 2022) states that "*the crux of significance regarding impact on climate 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*".

1.45 The assessment aims to quantify the difference in GHG emissions between the proposed project and the baseline scenario (the alternative project/solution in place of the proposed project). This is based on calculating the difference in whole life net GHG emissions between the two options. During the assessment IEMA recommend use of a reasonable worst-case scenario rather than an absolute worst-case scenario.

1.46 The 2022 Guidance (IEMA, 2022) document identifies three principles:

1. When evaluating significance, all new GHG emissions contribute to a negative environmental impact; however, some projects will replace existing development or baseline activity that has a higher GHG profile. The significance of a project's emissions should therefore be based on its net impact over its lifetime, which may be positive, negative or negligible;

2. Where GHG emissions cannot be avoided, the goal of the EIA process should be to reduce the project's residual emissions at all stages; and

3. Where GHG emissions remain significant, but cannot be further reduced, approaches to compensate the project's remaining emissions should be considered.

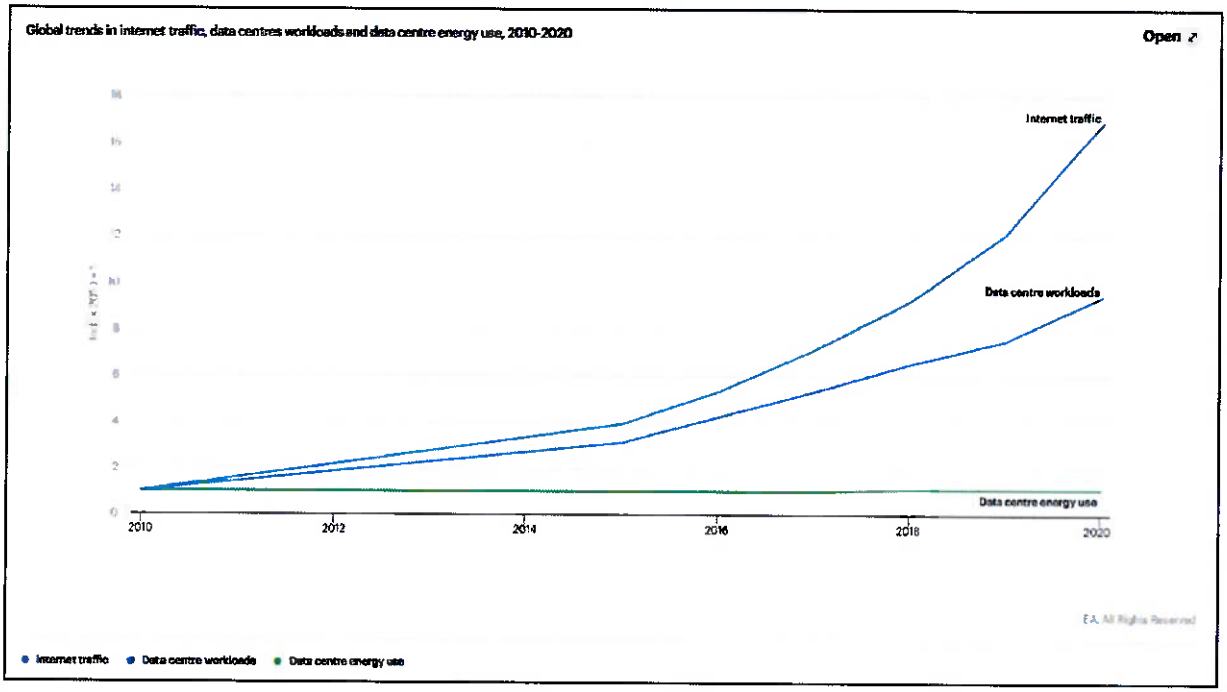
***Princple 1***

1.47 The project will replace activities which have a higher GHG profile. Data storage facilities represent a significantly more efficient means of data storage when compared to a distributed model of enterprise data storage by individuals and companies (or 'enterprise sites').

1.48 Data centres are more energy efficient than enterprise sites due to comprehensive efficiency central to the design of the proposed development. In a June 2020 report, the International Energy Agency noted: *"Hyperscale data centres are very efficient large-scale cloud data centres that run at high capacity, owing in part to virtualisation software that enables data centre operators to deliver greater work output with fewer servers. The shift away from small, inefficient data centres towards much larger cloud and hyperscale data centres is evident in the shrinking share of data centre infrastructure in total energy demand..."*[6].

1.49 A study published in 2020 by Science[7] Magazine, found that while cloud computing productivity has grown globally by 550% between 2010 and 2018, energy consumption rose in tandem during the same period by just 6%, demonstrating the energy efficiency improvements of the industry, most notably by hyperscale data centres.

1.50 A report from IEA entitled "Data Centres & Data Transmission Networks (IEA, 2021) found that while global internet traffic surged by more than 40% in 2020, this strong growth in demand for data centre services continues to be mostly offset by ongoing efficiency improvements for data centre infrastructure as shown in Figure 7.




[6] IEA Data Centres and Data Transmission Networks – June 2020

[7] Masanet, Eric; Shehabi; Arman, Lei; Nuoa, Smith, Sarah; Koomey, Jonathan; "Recalibrating global data center energy-use estimates", Sciencemag.org, February 28, 2020, Vol. 367, Issue 6481; ("Expressed as energy use per compute instance, the energy intensity of global datacenters has decreased by 20% annually since 2010....").

**Figure 7** Global Trends In Internet Traffic, Data Centres Workloads & Data Centre Energy Use, 2010 – 2020 (IEA, 2021)

***Principle 2***

1.51 Arange of mitigation measures, during both the construction and operational phases, will be employed which is in line with "best practice" as outlined in IEMA (IEMA, 2022) including:

- Advancing Low Carbon Material - to help drive progress industry-wide, the end user, Microsoft, is seeking to advance progress is by helping to accelerate markets for low-carbon building materials. As a sector, building materials such as steel and cement are currently some of the highest contributors to the carbon cost of new construction, together producing an estimated 13.5% of global carbon emissions. Innovations in green steel and lower-carbon cement are rapidly emerging, however, these markets are still nascent and need significant investment to scale up and bring supply online.
- With Microsoft's $1 billion Climate Innovation Fund, they are investing to hasten the development and deployment of new climate innovations, especially for underfunded sectors and supply-constrained markets like lower-carbon building materials. For example, Microsoft are investing in solutions such as H2 Green Steel to expand market supply of near-zero carbon steel which can deliver up to 95% lower $CO_2$ emissions than conventional steel. Microsoft are also evaluating use of near-zero carbon steel in their own building materials and equipment supply chains.
- Microsoft is also working to broaden availability of low-carbon concrete and other construction materials through commercial projects and collaboration with the largest datacentre companies in the world. Microsoft pilot programs use concrete alternatives like biogenic limestone and fly ash and slag with the goal of lowering the embodied carbon in concrete by more than 50% compared to traditional concrete mixes. With these investments, Microsoft aim to facilitate the commercialization of materials that can make an outsized impact on carbon reduction, for their own construction and the broader industry.
- The installation of solar panels – 50kWp of Roof Mounted Solar PV are proposed for each building. In addition, the proposed development also includes 640m² of roof mounted solar arrays that will assist with on-site power use within the office area;
- Strategic location – adjoining Huntstown Power Station which will minimise the need for national grid network improvements and will minimise electrical losses which occur when transferring electricity longer distances,
- Rainwater harvesting – water storage is proposed to be provided for 48 hours for the evaporative cooling system,
- Passive solar design and natural ventilation – designed in line with Section 1.3.5 of Part L (2017) "Limiting the effects of solar gain in summer",
- Building Fabric – design to limit heat loss and heat gain through the fabric of the building,
- Building Envelop Air Permeability – designed to limit the air permeability,
- Thermal Bridging – designed to ensure continuity of insulation to avoid excessive heat loss,
- High Efficiency HVAC System – mechanical HVAC system ill minimise energy associated with space conditioning,
- Variable Refrigerated Flor (VRF) – VRF is an air source heat pump that increases operational efficiency by modulation of cooling capacity at room/zone level,
- It has been calculated that the heat captured from the data centre will be between 25°C and 30°C. The applicant and end user are supportive of the development of a waste heat recovery and district heating scheme in conjunction with Fingal and have reserved space on site to accommodate the

associated plant should a design be feasible. The design and construction of the Data Centre buildings to accommodate waste heat supply is contingent on the existence or the parallel development of a waste heat receptor system.,

- The backup generators units are specified to run on Hydrotreated Vegetable Oil (HVO) as well as Diesel or a blend of the two, and
- Climate Neutral Data Centre Pact signatory. The end user of the facility, Microsoft has been a certified member of the Climate Neutral Data Centre Pact since 29-Jan-21. Se. As per Certificate of Conformity number BV-CNDCP-SRI-VC-0010 for the period 1-Jul-23 to 30-Jun-27, Bureau Veristas Denmark have verified that Microsoft has been audited under a limited assurance statement and found to be in accordance with the Climate Neutral Data Centre Pact including in respect of energy efficiency, clean energy, water conservation, circular economy and circular energy system, confirming Microsoft's credentials.

***Principle 3***

1.52 The applicant will implement measures in line with "best practice" as outlined in IEMA (IEMA, 2022).

1.53 The Applicant has entered into binding legal agreements with Microsoft to provide Corporate Power Purchase Agreements ('CPPAs') for new renewable energy. We can confirm that these agreements are in place and have been signed by both parties. These Agreements are capable of underpinning new renewable energy generation calculated to offset the energy consumed by the proposed development from the electricity grid. These arrangements provide a legal obligation for:

- Corporate Power Purchase Agreements between the applicant's group and the facility end user, Microsoft.

- The establishment of new renewable energy generation projects by the applicant's group, that will not be supported by government or consumer subsidies – these new renewable energy projects will be:
  - Located throughout Ireland;
  - Parallel development to the energy demand of the proposed development; and
  - In total, should see the collective annual generation exceed the data' centre' annual electricity use..

1.54 Through these obligations, for every unit of energy consumed by the data centre, a unit of new renewable energy generation would be despatched to the wider electricity system to off-set it. This delivers the objective of operating the proposed development on an annual net energy zero basis that would support Ireland's overall climate targets. Any associated additional renewable energy supply would also increase energy security through indigenous energy sources.

1.55 Energia Group has developed a pipeline consisting of 634 MW (MEC) of solar assets and 275 MW (MEC) of onshore wind assets, the majority of which have received planning consent.

1.56 Subject to a grant of planning permission for the proposed development, Energia Group is well positioned to deliver the renewable energy generation required to offset the energy demand of the data centre.

**Criteria for Determining the Significant of Effects**

1.57 The criteria for determining the significance of effects are a two-stage process that involves defining the magnitude of the impacts and the sensitivity of the receptors. In

relation to climate, there is no project specific assessment criteria, but the project should be assessed against the recommended IEMA (IEMA, 2022) significance determination. This takes account of any embedded or committed mitigation measures that form part of the design which should be considered:

- **Major or moderate adverse impact (significant):** A project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the net zero trajectory by 2050 or sectoral based transition to net zero targets, results in a significant adverse effect.

- **Minor adverse impact (not significant):** A project that is compatible with the budgeted, science based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect that is not significant. A 'minor adverse' or 'negligible' non-significant effect conclusion does not necessarily refer to the magnitude of GHG emissions being carbon neutral (i.e. zero on balance) but refers to the likelihood of avoiding severe climate change and achieving net zero by 2050.

- **Negligible Impact (not significant):** A project that achieves emissions mitigation that goes substantially beyond the reduction trajectory, or substantially beyond existing and emerging policy compatible with that trajectory, and has minimal residual emissions, is assessed as having a negligible effect that is not significant.

- **Beneficial Impact (significant):** A project that causes GHG emissions to be avoided or removed from the atmosphere has a beneficial effect that is significant. Only projects that actively reverse (rather than only reduce) the risk of severe climate change can be judged as having a beneficial effect.

## Assessment

1.58 Using the methodology outlined in the IEMA Guidance (IEMA, 2022) the significance can be assessed by a comparison between the GHG emissions of the project with the thresholds in Table 4 and Table 5 above. The significance of each phase of the development is outlined in Table 9 below based on this comparison with the overall carbon budget and the emission ceilings for the electricity sector. As shown below, based on the IEMA Guidance (IEMA, 2022) methodology, the impact of the project is **minor adverse** in all phases.

1.59 Also included in Table 9 is the significance of the assessment when compared to emission under the Emission Trading System which has set a cap for 2030 based on the approach set out in IEMA guidance (IEMA, 2022). Again, as shown in Table 9, based on the IEMA methodology, the impact of the project is minor adverse for all phases.

| Phases | % Of Carbon Budget 2026 - 2030 | Significance (Based On Thresholds In Table 4 & 5) | % Of EU ETS Cap | Significance (Based on IEMA Methodology) |
|---|---|---|---|---|
| Phase 1 – Year 2027 (655GWh) | 0.21% | Minor Adverse | 0.012% | Minor Adverse |
| Phases 1 & 2 Year 2029 (1310GWh) | 0.29% | Minor Adverse | 0.017% | Minor Adverse |

**Table 9** GHG Emissions Associated With Each Phase Of The Development

1.60 Table 10 shows the significance of the project when compared to the overall Carbon Budger and the Emission Ceilings for the Electricity Sector based on the approach set out in IEMA guidance (IEMA, 2022). The assessment is presented both prior to and post mitigation. As shown in Table 10, the impact of the project prior to mitigation would be deemed to be a moderate, significant, adverse impact. Although the project prior to mitigation is better than the "do-nothing" scenario of enterprise computers, the impact would still be significant in the absence of appropriate mitigation.

1.61 Also presented in Table 10 is the impact post mitigation. As outlined above the project will use "best practice" adaptive design measures (solar panels, rainwater harvesting, facilitating district heating, signatory to the Climate Neutral Data Centre Pact etc) and by using long term power purchase agreements. With the implementation of these measures the impact of the proposed project, in line with the IEMA methodology (IEMA, 2022), is reduced to a minor adverse, non-significant impact.

| Phases | % Of Electricity Emission 2030 Ceiling | Significance (Prior to mitigation) | Significance (After mitigation) |
|---|---|---|---|
| Phase 1 – Year 2027 (655GWh) | 2.1% | Moderate Adverse | Minor Adverse |
| Phases 1 & 2 Year 2029 (1310 GWh) | 2.9% | Moderate Adverse | Minor Adverse |

**Table 10** GHG Emissions Associated With Each Phase Of The Development

1.62 In relation to Phase 1 (2027-2028) the average GHG emissions are equivalent to:

- 0.21% of the national 2030 target,
- 2.05% of the Emission Ceiling for the Electricity Sector

1.63 In relation to Phase 2 (envisaged to be fully operational in 2029), the average GHG emissions are equivalent to:

- 0.29% of the national 2030 target,
- 2.92% of the Emission Ceiling for the Electricity Sector

1.64 The average GHG emissions for Phase 1 and Phase 2 combined are equivalent to:

- 0.24% of the national 2030 target,
- 2.49% of the Emission Ceiling for the Electricity Sector

1.65 The Institute of Environmental Management and Assessment (IEMA) guidance document – Pathways to Net Zero - Using the IEMA GHG Management Hierarchy (Nov 2020) revised the IEMA GHG Management Hierarchy as shown in Figure 8 below to include CPPAs under the category of "substitution" within the Hierarchy:

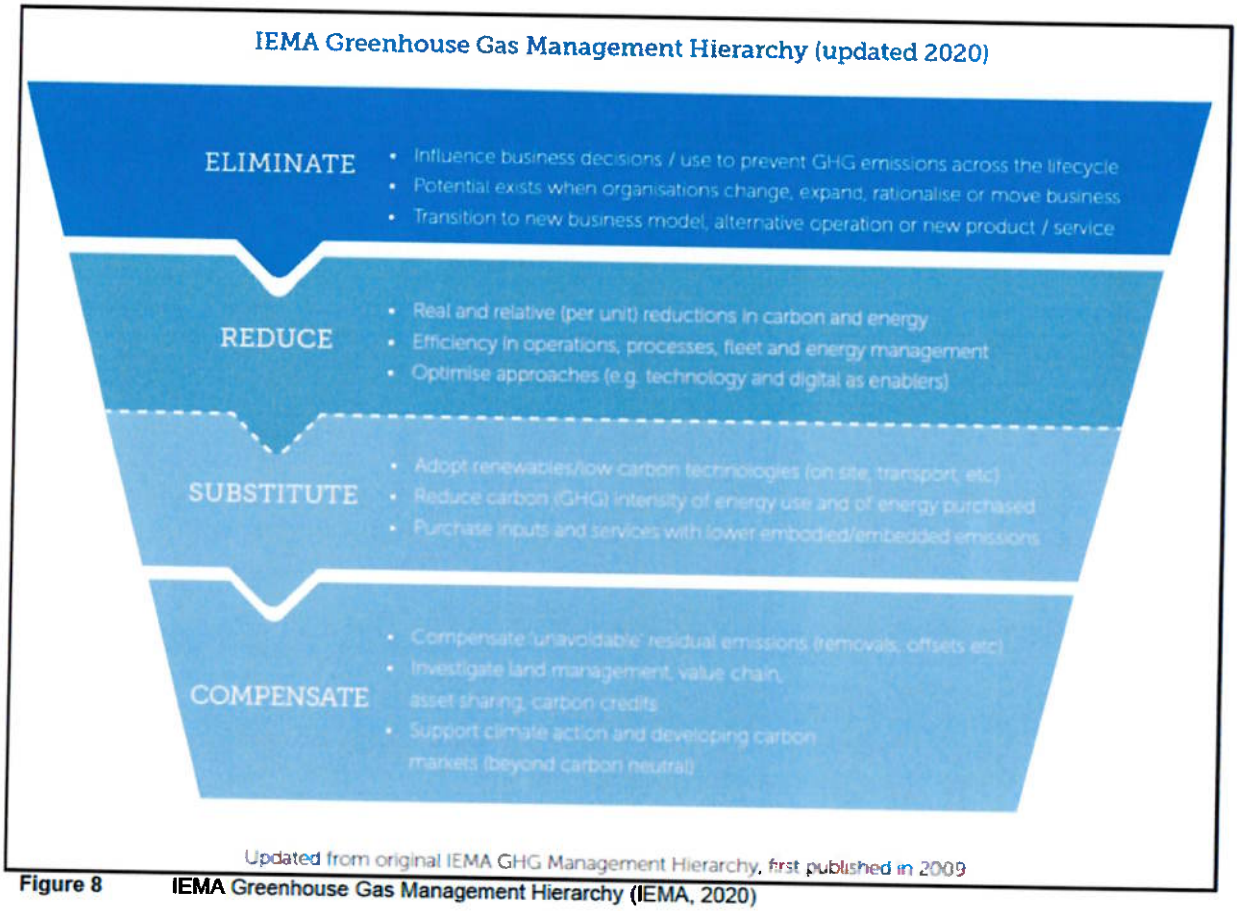



**Figure 8** **IEMA Greenhouse Gas Management Hierarchy (IEMA, 2020)**

1.66 The In relation to the use of CPPAs, the IEMA 2020 guidance states, on Page 5, the following (bold added):

*"Purchased green electricity tariffs (also green gas) are increasingly being considered within net-zero approaches. In earlier versions of the Hierarchy these tariffs only appeared within COMPENSATE. This is still the case for market-based approaches that use certificates where additionality or quality thresholds are poor, or hard to substantiate. The hierarchy does now allow for higher quality energy tariff purchases within the SUBSTITUTE line, reflecting developing practice and some improved purchasing arrangements (e.g. higher quality procurement or quasi-investments via power purchase agreements)."*

1.67 Thus, CPPAs are now recommended by IEMA (IEMA, 2020) as an appropriate project-specific "*Substitution*" mitigation measure alongside measures such as adopting renewable technologies and reducing the carbon intensity of energy used.

1.68 For further clarity on the position of IEMA regarding CPPAs and mitigation, the *IEMA Assessing Greenhouse Gas Emissions and Evaluating their Significance 2nd Edition* (IEMA, Feb 2022) has recently stated, on Page 9, that:

*"GHG mitigation is best achieved by taking a planned and focused approach following the IEMA GHG management hierarchy principles."*

1.69 Consideration of the alternative should also be made, with the rising demand for data storage there is a requirement for this service. Section 01.50 noted that the use of large-scale data storage facilities, such as the proposed development, represent a significantly more efficient means of data storage when compared to a distributed model of local data storage. Therefore, the alternative to large scale data storage centres will have a likely more significant impact than the proposed development.

1.70 IEMA states that a minor adverse impact is a project that is compatible with the budgeted, science based 1.5°C trajectory – as shown in Figure 5 the energy demand projections include for an increase in data centres and this has been "budgeted" into future projections which align with the 1.5°C trajectory. The project also must comply with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect. With a reduction in residual emissions through best practice and the implementation of a series of adaptive design measures, the net impact of the Proposed Development is not significant. Given that the use of electricity to power the facility will achieve net zero by 2050 and the commitment to meet all interim fossil fuel derived GHG emissions associated with the Proposed Development by the purchase of Corporate Power Purchase Agreements (CPPAs) the predicted impact to climate is deemed to be ***indirect, long-term, negative and minor adverse***. Thus, the impact of the Proposed Development, in line with the IEMA methodology (IEMA, 2022), is a ***minor adverse, non-significant*** impact.

1.71 The CAP24 states that "*The overarching objective of managing electricity demand growth is to ensure, through a combination of energy efficiency and flexible electricity demand, that economic growth can be supported by low-carbon or no-carbon energy demand growth*". As previously detailed, Energia has entered into binding legal agreements with the End User to provide CPPAs for new renewable energy that will, subject to receipt of a grant of planning, exceed the amount of energy consumed by the data centre from the electricity grid. By entering these CPPAs the proposed development aligns with this CAP24 overarching objective of "low-carbon or no-carbon energy demand growth". The CPPAs will provide the support needed to build out the element of the excess capacity needed and further contribute to Ireland meeting its energy policy targets.