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For a fossil free future for Ireland

Fingal County Council
County Hall, Main Street, Swords
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Planning Application Reference Number: FW23A/0007
Applicant: SDC Piperstown II Limited
Location: Bay Lane, Piperstown, Dublin 11

Description:
"SDC Piperstown II Limited, intend to apply for full planning permission for development on a site within the townlands of Kilshane and Bay, on lands located primarily to the north of Bay Lane, Piperstown, Dublin 11. The site is primarily bound to the south by Bay Lane, and to the north, east, and west by greenfield lands. The site also takes in a portion of the public road to the west and northwest of the main site area, and a further portion of the public road and adjoining lands to the east of the main site area, to provide for services and road improvements. The site has an area of c. 8.1 hectares.

The proposed development consists of the following:

- *Demolition of the existing structures on site (including an existing dwelling house and outbuildings) and all site clearance works;*
- *Construction of a proposed two storey data centre building (with two mezzanine levels), with plant at roof level, and with a gross floor area (GFA) of 30,526 sq.m. The data centre building is located in the western portion of the site and will accommodate data halls, associated electrical and mechanical plant rooms, a loading bay, maintenance and storage space, office administration areas, with plant and solar panels at roof level and with a main parapet height of c. 19.8 metres;*
- *Emergency generators and associated flues will be provided within a compound adjoining the data centre building (26 no. in total);*

- *Construction of a single storey district heating centre building (with a GFA of 343 sq.m) to the south of the proposed data centre building to enable the future re-use of waste heat;*
- *Construction of an energy centre building with a GFA of 7,834 sq.m and a main parapet height of c. 21.7 metres, to accommodate generator areas, a switchgear / control room, and ancillary space including workshop space, battery rooms, office, and storage areas. The energy centre building will be located in the eastern portion of the site and will provide electricity to the proposed data centre, with potential to also operate as a future grid peaking plant. A black start generator and fire water tanks will be provided to the south of the energy centre building;*
- *Construction of a gas AGI compound to the south of the proposed energy centre, to serve the energy centre;*
- *Construction of two transformer compounds (each containing 5 no. transformers), and a battery array (over two levels) to the west of the energy centre building;*
- *Provision of a security building (with a GFA of 50 sq.m) and a sprinkler pumphouse (with a GFA of 80 sq.m) to the south of the data centre building;*
- *Entrance arrangements, provision of upgrades to and realignment of Bay Lane and Kilshane Road, including provision of a new three-arm roundabout to the southeast of the main site area, along with associated cycle and pedestrian facilities;*
- *Provision of car parking, motorcycle parking, and bicycle parking, diesel storage, hard and soft landscaping and planting (including provision of landscaped buffers to all site boundaries), sustainable urban drainage systems, sprinkler and fire water tanks, lighting, boundary treatments, and all associated and ancillary works including underground foul and storm water drainage network (including services connections along Bay Lane to the west of the main site area), gas supply connections, and utility cables.*

An Environmental Impact Assessment Report (EIAR) will be submitted to the Planning Authority with the planning application and the EIAR will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority.

An EPA-Industrial Emissions Directive (IE) licence will be applied for to facilitate the operation of the proposed development."

This submission is made on behalf of Not Here Not Anywhere (NHNA), a nationwide, grassroots, non-partisan group campaigning to end fossil fuel exploration and the development of new fossil fuel infrastructure in Ireland. To avoid the most severe impacts of climate change, global temperatures must be kept below 1.5°C above pre-industrialised levels, and we will need rapid and deep action to decarbonise our

energy systems. Burning fossil fuels is the single biggest cause of climate change, and taking climate action means newly built infrastructure in Ireland must be fossil free. Planning is a key area of influence, and County Councils have a major role in establishing the transition from fossil fuels to renewable energy. This encompasses processes for carbon-proofing major decisions, programmes, and projects.

Regarding the application to Fingal County Council for the construction of a data centre spanning 30,526 sq.m., we would like clarification on the following:

Clarification Sought

In the EIAR, Chapter 15, page 23, both Scenario A and B are noted as having the same annual power usage of 545.1 GWh. Yet scenario B is stated as having higher annual emissions - approximately 222,413 tonnes CO2eq versus approximately 216,581 tonnes CO2eq for scenario A, despite both approximations being based on “the likely gas emission rate in 2026”.

Please clarify this with the applicant.

Recommendations

We make the following recommendations in regard to this application:

1. **New data centres must be powered entirely by onsite or new off site renewable energy in order to reduce, rather than increase, Ireland’s CO_2 emissions, consistent with the Climate Action Plan and commitments under the Paris Agreement.**

This planning application features natural gas engines, back-up generators, and fuel tanks, which will result in fossil fuels being used to both power the data centre and act as a back-up energy source. While the application mentions plans for solar panels to contribute renewable energy to the grid, we observe no details on how much of the required energy from the grid these solar panels would be able to compensate for.

The applicant should be required to either provide for its own renewable energy generation (on or off site) and/or use fuel from renewable sources for storage or back-up generation. The EIAR states that “Consideration has been given to the energy centre engines to be compatible with renewable fuels.” It adds that “the engines will be selected to be able to run with renewable, low or carbon neutral fuels such as Biomethane, Hydrogen and Hydrotreated Vegetable Oil.” Being “able to run” or

“compatible with” does not preclude the engines from being run using fossil (“natural”) gas and lacks any commitment to generating power for the data centre without new fossil fuel generation. Indeed, based on the usage of carbon intensity factors of pipeline gas (from Table 15.8 of the EIAR) in calculating the potential GHG emissions caused by this development, it appears that the applicant fully intends to use fossil gas for on-site power generation.

The government has acknowledged that “data centres pose considerable challenges to the future planning and operation of Ireland’s power system” (Department of Business, Enterprise and Innovation, 2018). These challenges include higher electricity costs for consumers (Taylor, 2018). The Danish Council on Climate Change recommended in April 2019 that the Danish government legally binds data centre owners and developers to contribute to the infrastructure required to supply the centres with renewable energy, such as wind and solar farms (Irish Examiner, 2019).

According to the proposed development’s EIAR, the data centre will be powered by its own natural gas engines from Quarter 1 (Q1) 2026 until Q1 2028, when the applicant plans to connect it to the national grid. However, even after this point, the applicant states that they will likely use up to 7 out of 10 gas engines for up to 500 hours a year to provide electricity during peak times.

In cases of emergencies, power failure, and during testing and maintenance, the applicants plan to use generators fuelled by hydrogenated vegetable oil (HVO), a biofuel.

The applicant states that solar panels and battery storage will be part of the proposed development. However, they do not specify how much of the development’s energy requirements will be fulfilled by this new onsite renewable generation, or how much electricity will be stored in batteries during peak demand from the grid.

The EIAR states varying amounts of CO_2 emitted yearly, but is stated to be a minimum of 216,581 Tonnes CO2eq for 2026, 210,813 Tonnes CO2eq for 2027, 70158 Tonnes CO2eq for 2028, 58126 Tonnes CO2eq for 2029, and 46095 Tonnes CO2eq for 2030.

Assuming the grid is “ready to connect data centres” by 2028, over a 5-year average, this development alone will at minimum result in emissions comprising 1.9% of the 2030 electricity sector emissions ceiling.

	Scenario A	Scenario B	Scenario C
2026	216,581	222,413	N/A
2027	210,813	216,346	N/A
2028	205,045	210,279	70158
2029	201,584	206,639	58126
2030	198,123	202,999	46095

Table 15.9 GHG Emissions (CO2eq) For Each Modelling Scenario (Tonnes CO2eq)

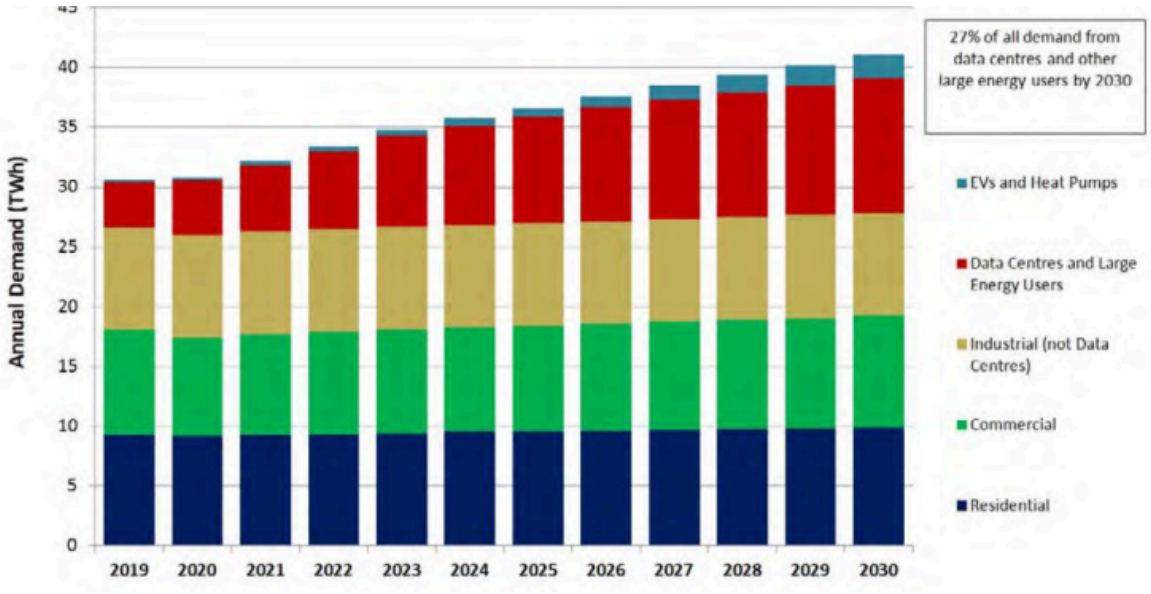
If the plant cannot be powered by renewable energy, it will lead to an increase in Ireland's greenhouse gas emissions between now and 2030, contravening the Climate Act, Climate Action Plan and National Planning Framework. Thus, in the event that powering the data centre with new onsite or offsite renewable energy would not be feasible, permission for its development should be refused.

The EIAR assumes in their calculations of the project's climate impacts that by 2030, 80% of Ireland's electricity will be generated by renewable energy. However, Ireland's CO2 emissions are currently still increasing rather than decreasing, and even if all ambitious measures were implemented, we are likely to still miss required emissions reductions goals by 2030 given the current plan (RTÉ, 2022a). Additionally, the proposed development, along with the other data centres for which permission is being sought, will jeopardise Ireland's goals for renewable generation and decarbonisation further by dramatically increasing demand for electricity. Thus, the GHG emissions of the proposed development are likely higher than their calculations.

The applicant states that they will seek a biogas Power Purchase Agreement. Currently, many companies claim to operate data centres powered by 100% renewable energy. However, the energy is largely sourced indirectly through Renewable Energy Certificates or Purchase Power Agreements (Chernicoff, 2016), which means that the energy is sourced from the grid, which in Ireland is 69% fossil fuel-powered (Sustainable Energy Authority of Ireland, 2019). If we continue to allow companies to virtually purchase clean energy where it is cheapest to create, while actually using and increasing demand for dirty energy in Ireland, we allow them to profit while our real emissions continue to rise.

It is crucial therefore that data centres are powered directly by onsite renewable energy generation such as rooftop solar farms or genuinely new offsite generation such as offshore wind or solar farms. The applicant should also provide for sufficient battery storage to account for weather-dependent variability of electricity supply from the grid.

Eirgrid estimates that data centres could account for up to 27% of Ireland's electricity demand by 2028, and up to 50% of new electricity demand growth (Eirgrid, 2021).



Source: EirGrid, All-Island Generation Capacity Statement 2021-2030

The Irish Academy of Engineering (2019) predicts that data centre development will add at least 1.5 million tonnes to Ireland's carbon emissions by 2030, a 13% increase on current electricity sector emissions, and will require an investment in energy generation and storage of €9 billion by 2027.

For example, if Amazon's eight centre project in Mulhuddart, Dublin 15, is realised, by 2026 it would use c. 4.4% per cent of the State's entire energy capacity, the equivalent of Galway city, but employ only 30 people post-construction, largely in facility maintenance (Lillington, 2018). The Apple data centre proposed for Athenry, Co. Galway, would have ultimately used "over 8% of the national capacity [...], more than the daily entire usage of Dublin", and "would require 144 large diesel generators as back-up" (Climate Home News, 2017).

To meet the greenhouse gas emissions targets set out in the Paris Agreement, and in the recently published Climate Bill, it is paramount that Fingal County Council examines the impact that energy supply of data centres will have on net emissions. Furthermore, it is crucial that Fingal County Council takes into consideration the **cumulative impact of data centres' energy demand on a nationwide basis**, as opposed to examining impact solely on a case-by-case basis. This is particularly relevant to Fingal County Council, given the high number of applications for data centres in the area.

2. **Where technically possible, heat generated from a data centre should be utilised for district heating systems.**

We welcome that the applicant is intending to install technology to capture waste heat from the data centre. Denmark's Ramboll Group (2019) recommends that the large quantities of waste heat generated by data centres should be utilised in district heating systems. However, until there is provision to use the waste heat in a district heating system, the data centre's heat will continue to go to waste. The permission to construct the data centre should be conditional on a concrete agreement between the applicant and Fingal County Council to enable the waste heat to be used in district heating systems.

3. **Water usage**

The water demand of the proposed development is stated as 2,081 m3 per year (domestic water demand of 946m3 /yr plus industrial water demand of 1,135 m3 /yr) with mains water to be supplemented by rainwater harvesting and groundwater supply.
The water demand will divert a valuable resource away from the local community, a situation which is likely to get worse as water scarcity becomes more of a problem and population increases. Rainwater collection cannot be relied upon, due to uneven patterns of precipitation which will become even more erratic as the climate changes. A region with ample water today may become water-stressed in 10 to 30 years. We have recently witnessed that protracted periods of temperatures above 26°C with no precipitation are becoming more frequent in Ireland. The UN expects water demand to outpace supply by almost 40% as soon as 2030 (United Nations Environment Programme, 2016). Greater consideration needs to be given to how available resources are going to be used.

4. **Risk of blackouts**

In the middle of an energy crisis, with Ireland's electricity grid at risk of failure in winter, large, wasteful energy users like data centres simply cannot be allowed to use any more of the nation's gas and electricity. Blackouts from data centre pressure on energy demand is a real risk (The Irish Independent, 2022). With Eirgrid already banning electricity connections for data centres in Dublin and Minister Eamon Ryan calling for a ban on gas connections for data centres, it is evident that this development is not future-proof and goes against the best interests of the country (Business Post, 2022; RTÉ, 2022b)

Thank you in advance for your consideration.

Regards,

[redacted]

On behalf of
Not Here Not Anywhere

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