

Planning Department  
South Dublin County Council  
County Hall  
Tallaght  
Dublin 24

14<sup>th</sup> July 2021

Dear Sir/Madam

**RE: Further Information Request – Planning Ref SD21A/0042**

Further to the following items raised in Section 2 of the further information request dated 20<sup>th</sup> April 2021 we would like to respond as follows on behalf of our client.

(1) Justification for the form of energy production proposed in relation to climate change and renewable energy policy.

*To meet the resilience requirements of a data centre a utility connections are coupled with appropriate technologies to achieve the required availability at server level. Ultimately the site will be provided with a connection to the electrical grid via a new substation. Given the current policy of the Transmission System Operator (TSO), Eirgrid, the grid connection will be flexible in nature. Current indications are that 90% flexibility will be required by the TSO which means that for period of time during grid events that up to 90% of the sites demand will be required to be met by on-site generation. The only viable technology to meet this demand for up to 15 hours at a time is via connection to the gas transmission network. All other forms of technology would require vast quantities of equipment energy storage which would not be viable within the footprint of the site.*

*The applicants preference would be to provide this using 100% renewables but the likely run time required by the TSO make this prohibitive to provide up to 15 hours run time.*

(2) Provide more detail regarding the alternative sources of power generating assessed as part of the alternatives.

*Many alternative sources of energy were evaluated during the process but deemed not viable for a number of different reasons:*

- *Battery Energy Storage – the quantum of battery storage required to meet the flexible demand simply could not fit in the foot print of the site.*
- *Solar Technology – The requirement of 90% of the sites capacity could not be met for 15 hours by solar*
- *Wind – The amount of wind capacity required (22MW ) cannot be accommodated on the site and on-site storage or the equivalent capacity in terms of natural gas generation would be required.*
- *Gas Fired Fuel cells- a proven product has not been identified to meet the requirements of the site and a similar sized gas connection would be required to that currently envisaged.*

(3) Consider whether it is possible to incorporate a portion of renewable energy generation.

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*It may be possible and it can be investigated during detailed design to incorporate some renewable technologies once a solution is found to be feasible for the scale of the site.*

*Where possible and in areas where the reliability requirements of the data centre do not have to be met we are proposing to install renewable sources of energy, for example PV to the administration block.*

(4) Information on whether the existing site is serviced in terms of utilities and if not the proposals for undertaking the development required to facilitate servicing.

*The site is not current serviced by power, water and gas utilities but the applicant is currently in the process of finalising connection agreements for these utilities with the various providers (Eirgrid, Gas Networks Ireland, Irish Water). The Eirgrid connection agreement for the site has been executed and the contribution paid to progress design.*

(5) Information on proposals to connect the power plant and site to the national grid and the source of gas proposed.

*It is not proposed to connect the power plant to the national grid. The TSO has issued a policy document, namely the Data Centre Connection Offer Process and Policy, in July 2019 which stipulates that in constrained regions that any connection offers will be flexible and that during 'grid events' that sites may be asked to reduce demand on the national grid. As data centre sites cannot shed load this means that the flexible portion of the connection offer will have to be powered using an alternative source which in this case is on-site generation. In this scenario it is proposed to operate the site in island mode i.e. not connected to the national grid. There will however be a connection to the Gas Networks Ireland transmission network via new AGI (pressure reducing station) as indicated on the planning drawings. An extension to the gas transmission network is required to make the connection to existing transmission pipeline on the Nangor Road.*

(6) The mitigation measures associated with the gas generators at this sensitive site should be listed and justified.

The primary concerns when evaluating the location of the gas generation are noise and emissions. The design of the plant has carefully considered the impact of noise and emissions and this is clearly set out in the Environmental Impact Assessment Report (EIAR) that accompanied the application when it was made to SDCC.

(7) A rationale detailing why this application is not premature pending alternative energy supply should be submitted.

*In the context of the provision of an alternative energy supply the application cannot be considered premature.*

*The applicant has received a connection agreement from the TSO, Eirgrid and has planning permission for the construction of a 110kV substation.*

*The challenge which is presented by Eirgrid policy is that a significant on site generation capacity will be required although the actual usage of this will be expected to be very infrequent but requires the construction of the generation plant as proposed. However given the difficulties currently being experienced in the region by Eirgrid there is uncertainty in terms of the completion date for the new connection so our client simply wants to allow the gas plant to be utilised as designed in the event that*

*the substation completion by Eirgrid is not achieved in time to meet the site demand. All avenues within the applicants control will be explored to avoid the gas plant being utilised. However the planning and construction timelines of the TSO are outside of the applicants control.*

*The current CRU Data Centre consultation process will now result in on-site generation being a more permanent arrangement in either a peak shaving (demand reduction) scenario or the provision of a dispatchable capacity to the grid. Given that the application has a connection agreement in place with Eirgrid and are provisioning in this application for the requisite infrastructure to meet the requirements of the flexible connection the application cannot be considered premature.*

Yours Sincerely



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Gary O'Keeffe  
Director  
Ethos Engineering