MARSTON

PLANNING CONSULTANCY

Senior Administrative Officer,
Planning Department,
South Dublin County Council,
County Hall,
Town Centre,
Tallaght,
Dublin 24

Our Ref: 16008

13th December 2021

Re : Planning and Development Act 2000-2021 and the statutory regulations (as amended). Application by EdgeConneX Ireland Limited for development at this site within the townland of Ballymakaily to the west of the R120 (Newcastle Road), Lucan, Co. Dublin. The development will consist of the construction of two no. single storey data centres with associated office and service areas; and three no. two storey gas powered generation plant buildings with an overall gross floor area of 24,624sqm

Reg. Ref. SD21A/0042

Date of additional information request: 20th April 2021

Date of three month extension to: 27th January 2022

ADDITIONAL INFORMATION

Dear Sir / Madam,

We, Marston Planning Consultancy, 23 Grange Park, Foxrock, Dublin 18 are instructed by EdgeConneX Ireland Limited to submit this formal response to the request for Clarification of Additional Information that was dated the 29th September 2021 in relation to the planning application for the development as described above.

This response and accompanying reports and drawings, have comprehensively addressed all the elements of the Clarification of Additional Information (CAI) request in a reasonable manner fully justifying the development. Our response is submitted fully within the three month extension issued by South Dublin County Council on the 15th October 2021 to the six month response time for dealing with such issues. This extended the period for responding to the Clarification of Additional Information up to the 27th January 2022.

The response is undertaken following consultation with Waterways Ireland, Weston Aerodrome and South Dublin County Council. The response is accompanied by the following:

- 6 no. copies of Energy Statement prepared by Ethos Engineering Ltd. addressing part of poin1 of the CAI request;
- 6 no. copies of letter and drawings by Pinnacle Consulting Engineers addressing points 3, 4 and 5 of the CAI request (Drawings no. 201 and 202);
- 6 no copies of technical note by AWN Consulting Ltd. addressing point 5 of the CAI request;
- 6 no. copies of drawings addressing the biodiversity park and wetland sections by Kevin Fitzpatrick Landscape Architecture addressing points 2 and 8 of the CAI request; and
- 6 no. copies of arborist response that includes an Arboricultural Impact Assessment, Tree Protection Plan and Arboricultural Method Statement by The Tree File Ltd. to point 6 of the AI request

Given the complexities of the energy issue, which has been primarily addressed under this point, 6 no. copies of this covering report are also included.

Addressing the Clarification of Addition Information request

This response has comprehensively addressed the concerns of the Planning Authority in terms of all elements but particularly in relation to balancing the development with climate action and resilience. We can confirm that the applicant has received and executed a grid connection agreement with Eirgrid and, therefore, the long-term primary supply of electricity will come from the national grid infrastructure. Eirgrid have stipulated under the Data Centre Connection Policy 2019 that in order for the data centre to receive a firm grid connection, it must install on-site generation to match its load. Therefore, to get a connection to the national grid, the data centre must install on-site generation and Eirgrid have stipulated that this generation must be capable of running continuously for an extended period of time not limited by fuel reserves. This would be in multiple individual intervals during peak daily usage in winter that is estimated up to 500 hours per annum, to meet this requirement, gas engines have been chosen because no other renewable or storage technology can provide this at a commercial scale.

Regarding the need for grid reinforcements and large demand connections in this area, as stated by the planning authority, the installation of gas engines supports the resilience of the grid through the provision flexible and dispatchable generation.

By making high efficiency flexible gas generation available at scale at the immediate point of demand, this actually reduces the requirement for future grid reinforcements and relieves congestion in the locality, thus reducing cost to consumer through lower transmission reinforcement costs. The Climate Action plan also recognises the need for a diversified portfolio of generation up to 2030 and beyond in order to deliver grid stability and system services arising from increasing renewable energy penetration. High efficiency gas engines, along with storage and interconnection are recognised as contributing to this solution and facilitating greater levels of intermittent renewables.

We respectfully submit that it is not the case that there is an absence of power supply available via Eirgrid and this is an incorrect interpretation of current system issues. Grid constraints (as opposed to grid reinforcements) are created through a combination of factors, including the lack of any new conventional generation being added to the grid over the past decade. By bringing new flexible generation to the point of demand, not only does this ease grid constraints, it will also provide much needed flexible capacity on the grid to facilitate the increased level of renewables aspired to in the Climate Action Plan 2021.

Our written response, which should be assessed in conjunction with the submitted details listed above and in the cover letter, is provided below in respect of each point raised in the Council's request.

ADDITIONAL INFORMATION RESPONSE

1. Following the further information response, the Planning Authority considers that there is a need to balance the demand for development with climate action and resilience as well as the capability of the national grid to provide for such developments. The Planning Authority is concerned with the current proposal to partially power the data centres with a gas generator due to the absence of capacity in the national grid.

The applicant is advised that the Planning Authority has concerns in relation to the number and extent of large demand connections in this area and the demand for future grid reinforcements. It is noted that Action 20 of the Climate Action Plan, 2019 states:

'Implement energy actions under the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy to ensure that large demand connections are regionally balanced to minimise grid reinforcements'.

The absence of power supply via Eirgrid appears to demonstrate that the proposed development will contribute to a future demand for grid reinforcements in this area. In this context, the applicant is advised that the proposed development may be premature pending a stable connection to the national grid and the use of gas powered generators conflicts with the macro policies in the Development Plan around Energy and Climate Action.

In relation to Item 2 of the Additional information request, the applicant is requested to provide clarification by provision of the following:

- **Justification for the form of energy production proposed in relation to climate change and renewable energy policy.**
- **More detailed information on the feasibility of renewable energy technology. The applicant states that it may be possible to incorporate measures at the 'detailed design stage', however, the Planning Authority is of the opinion that it should be provided at the planning stage.**

- **Details and evidence of connection agreements of power and gas. Correspondence from Eirgrid indicating the flexible connection agreements must be provided. The applicant should also clarify what would happen should a separate infrastructure application not receive permission.**
- **A list of mitigation measures associated with the gas generators, along with detailed justification of each measure and the details of operations.**

Response

This part of the response has been undertaken in collaboration with the applicant EdgeconneX Ireland Ltd. and Ethos Engineering Ltd.. This application is now running concurrently with a Pre-Application Consultation Request for a Strategic Infrastructure Development (SID) that will facilitate 2 no. underground 110kV transmission lines between the permitted Kishoge 110kV GIS substation in Ballymakaily and the permitted Aungierstown – Castlebaggot underground 110kV transmission lines at Grange Castle South Business Park, Baldonnel, Dublin 22 (ABP Ref. VC06S.311907).

This application will almost certainly, subject to ABP decision, be determined as a SID application, and is due to be determined by the Board in Q3, 2022. It is currently projected to be built and operational in Q1, 2024. This will ensure that the proposed development is fully connected to, and powered from, the National Grid.

We respectfully submit that prior to addressing the four questions requested under this part of the Clarification of Additional Information (CAI), it is important to clarify the function of the proposed gas plant.

The gas plant is dual purpose as follows:

1. to provide continuous power to the permitted and proposed data centres should the Eirgrid connection not be realised at the time of commissioning of the facility. This is expected to be a maximum of two years.

2. once the Eirgrid connection is realised the gas plant will only ever be utilised to reinforce the national grid. In that scenario the plant is only envisaged to run at the request of Eirgrid in response to a grid event as per their flexible demand policy.

The plant will therefore provide security of supply to the national grid as a whole by providing additional capacity under the terms of the flexible connection agreement.

Currently all Data Centre connections being offered by Eirgrid in the Dublin region are being offered on a flexible basis. Flexible demand is electrical load for a data centre that must be reduced on instruction from Eirgrid via the National Control Centre (NCC).

Eirgrid have also noted the following in relation to Data Centre Connections:

1. Flexible demand will be available to customers seeking to connect in constrained areas.
2. Capacity review to be performed following the annual T-4 capacity auction to determine if additional firm access can be been made available.
3. Firm capacity will be provided for data centres where on-site dispatchable generation is made available to Eirgrid.
4. Finalised agreements for connections are based on a site achieving planning permission.
5. Flexibility will be allowed for MIC ramping in constrained areas.

These policies are driving the need for on-site generation on data centre sites to ensure security of supply for the grid as a whole, until such time as transmission and generation capacity short-falls are addressed. Eirgid have published plans to increase the available capacity on the grid by 50% by 2030 that takes into consideration both the existing number and expected future data centres that will come on stream during this period as well as the aim to move significantly towards more renewable sources of energy generation during the period to 2030.

Based on the policies above, to get a connection to the national grid, the stipulation of Eirgrid is that a data centre must install on-site generation. This on-site generation must be capable of running continuously for an extended period of time not limited by fuel reserves. This would be in multiple individual intervals during peak daily usage in winter that is estimated up to 500 hours per annum.

Due to this stipulation, the applicant is required to utilise gas to provide back-up power, as no other renewable or storage technology can provide this at a commercial scale and to the degree of certainty to ensure Eirgrid of the back-up that they require. Further details on this are provided in the technical note on this issue by Ethos Engineering Ltd. that accompanies this response.

Changing policy

Policy in terms of both climate change and data centres has significantly altered over the last few years. This has led to the publication of the Climate Action Plan 2021 at the start of November 2021; and the publication on the 23rd November 2021 by the Commission for Regulation of Utilities (CRU) of their "*Direction to the System Operators related to Data Centre grid connection processing*". Both of these document are the most up to date policy documents governing climate action and grid connections for data centres.

We respectfully submit that the applicant, in making this response, recognises the need to balance the demand for development with climate action and resilience that is reflected in both the Council's own Climate Action Plan 2019; as well as the recently published national Climate Action Plan 2021. This more recent Climate Action Plan has replaced the Climate Action Plan 2019, that contained Action 20 relating to data centres. A far broader policy approach now applies to data centres under Climate Action Plan 2021.

The policies and long term aims of Climate Action Plan 2021 are based on continuing to facilitate data centre development, subject to certain criteria, and future reviews, up to 2030. The Plan recognises, and takes account of the changes in demand for electricity over the next 10 years; and that this will alter the profile for demand and recognises that the forecast growth in data centres will represent a challenge to Ireland's emissions targets.

The Government policy set out under the Climate Action Plan 2021, states that the strategy on data centres will be reviewed to ensure that growth of such users can only happen in alignment with our sectoral emissions ceilings and renewable energy targets. There are currently no planned reviews and this document and the recent CRU policy document clearly set out that each data centre must be considered on its own individual merit, and must, due to Eirgrid's requirement, have an on-site back-up power source.

We respectfully submit that it is in this context that the current application must be considered by the Planning Authority. Having regard to this, the proposal has been considered as worthy of a connection agreement from Eirgrid, and the details of this, in the form of a redacted version of the applicant's contract with Eirgrid, accompanies this response.

These documents provide greater clarity to the Planning Authority in terms of the justification for the form of energy production and how that ties into the medium and long term Government and Eirgrid strategies in terms of energy production and capacity, and added detail on the feasibility of renewable energy technology being used in the development. Before addressing the points raised, it is incumbent that the roles and functions of the statutory bodies involved in energy production, and policy changes, and how the proposal falls into these are outlined.

What is the CRU's role in energy policy and data centre connections?

The Commission for Regulation of Utilities (CRU) mission is to protect the public interest in Water, Energy and Energy Safety and one of their four strategic objectives is to deliver sustainable low-carbon solutions with well-regulated markets and networks. In their decision paper of the 22nd November, the CRU have confirmed that it will work with Eirgrid and ESB Networks, government and wider industry to facilitate the delivery of an electricity generation fleet that can meet Ireland's Climate Action Plan 2021 (CAP) target of up to 80% of electricity demand from renewable energy sources by 2030, whilst ensuring Ireland's energy needs are met. These targets align with the *National Development Plan 2021 – 2030* which commits to increasing the share of renewable electricity up to 80% by 2030.

We respectfully submit that these changes to a greater reliance on renewable electricity are clearly outside the control of the applicant, but are strongly welcomed as the applicant already sources 100% renewable power through a supplier via the national grid. The CRU in their decision paper have outlined criteria that both Eirgrid and ESB Networks will need to consider in assessing data centre connection applications to determine whether to make a connection offer. In this regard we note that the application already has a Flexible Demand Connection Agreement with Eirgrid, a copy of which accompanies this response.

Irrespective of this, and for the clarification of the Planning Authority we have provided an assessment of the current proposal having regard to the four criteria set out by the CRU in their decision paper issued on the 22nd November. This has directed EirGrid and ESBN to assess future applications for the connection of data centres by reference to the following assessment criteria to determine whether a connection offer can be made within the system stability and reliability needs of the electricity network:

The location of the data centre applicant with respect to whether they are within a constrained or unconstrained region of the electricity system

It is clear that the Greater Dublin Area has been identified as a constrained region in terms of the national grid following the publication by Eirgrid of the *'Data Centre Connection Offer Process and Policy'* Document published in July 2019. As the Eirgrid offer to the applicant was made subsequent to this date it is reasonable to conclude that the offer was made with full regard to this constraint, and that the application as now proposed fully meets the conditions of that connection agreement.

The ability of the data centre applicant to bring onsite dispatchable generation (and/or storage) equivalent to or greater than their demand, which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.

The proposed gas plant that forms part of this application will provide onsite energy production that will supply and reinforce the national grid that will ensure the security of supply of electricity to the wider national grid if and when required.

The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO in times of system constraint through the use of dispatchable on-site generation (and/or storage) which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.

The proposed gas plant that forms part of this application will enable the applicant to provide flexibility in their demand for power by reducing consumption from the wider national grid when requested to do so in times of system constraint. The nature of the gas plant is designed to meet the appropriate availability and other technical requirements in order to reinforce the national grid that will ensure the security of supply of electricity to the wider national grid if and when required.

The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO, in times of system constraint, in order to support security of supply.

We can confirm that the applicant, through the provision of the gas plant, will be able to reduce their requirement of power from the national grid when requested to do so by having the back-up power gas plant on site.

Summary

We refer the Planning Authority to the fact that the CRU has not afforded priority to these criteria and that Eirgrid and ESB Networks need to be afforded flexibility in considering the assessment criteria to decide whether it is appropriate to make a connection offer; and that each connection must be considered on its own merits.

We respectfully having regard to these new criteria the applicant clearly meets the new requirements. Irrespective of this, they already have a Flexible Demand offer from Eirgrid and a gas connection offer from Gas Network Ireland to provide power to the gas plant. These offers were made in the context of the full knowledge of Eirgrid working to a greater reliance on renewable power by 2030.

Eirgrid offer to Edgeconnex

We respectfully submit that in this instance the applicant is already in receipt of a connection offer from Eirgrid to connect their permitted substation (known as Kishoge) into the national grid. This offer was made by Eirgrid on the 21st August 2020 in the full knowledge of the constraints within the Greater Dublin area. Given this was made following both the *'Data Centre Connection Offer Process and Policy'* Document published in July 2019 by Eirgrid and the National Climate Action Plan 2019; it is only reasonable to

conclude that the locational requirements and other criteria in place at the time, were considered to have been met. The nature of this offer is that it will facilitate the gas plants proposed under this application to supply and reinforce the national grid in c. Q1, 2024.

The absence of power supply via Eirgrid appears to demonstrate that the proposed development will contribute to a future demand for grid reinforcements in this area.

We respectfully submit that it is not the case that there is an absence of power supply available via Eirgrid and this is an incorrect interpretation of the current system issues. Grid constraints (as opposed to grid reinforcements) are created through a combination of factors, including the lack of any new conventional generation being added to the grid over the past decade. By bringing new flexible generation to the point of demand, not only does this ease grid constraints, it will also provide much needed flexible capacity on the grid to facilitate the increased level of renewables aspired to in the Climate Action Plan.

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

The policy relating to climate change and renewable energy policy is set out under the South Dublin County Council Climate Change Action Plan 2019; and the recent Government publication of published Climate Action Plan 2021: Securing Our Future. We note that the Climate Change Action Plan 2019 was prepared having regard to the wider *A Strategy towards Climate Change Action Plans* for the Dublin Local Authorities, published in 2017; and must therefore be considered to be in accordance with this strategy.

We respectfully submit that the subject development is fully in accordance with the principles and targets of the South Dublin County Council Climate Change Action Plan 2019, which seeks to improve the energy efficiency and reduce greenhouse gas emissions; whilst making South Dublin a more climate-resilient region. Having regard to this, we note that the applicant has incorporated energy efficiency into its buildings and use of plant; has sought to maximise transport accessibility by non-car users wherever possible; ensured flood resilience; is proposing Sustainable Urban Drainage Systems and proposes an 80m wide biodiversity strip created from existing farmland, that includes a public park, adjacent to the Grand Canal. These all add to providing a more climate-resilient county.

Energy production

There are two energy production elements to consider having regard to the above that relates to energy production from the national grid and the use of gas to directly power the power plant on site.

The site is currently provisioned to utilise PV panels above the Administration block, as part of this submission the developer now plans to maximise the use of PV throughout the entire roof area of the data centre and the energy centre. It is also proposed to erect PV panels on the roof of the office element of the permitted data centre under Ref. SD19A/0042 (this would be subject to a separate planning application).

The applicant seeks to implement a cooling system design for its data centres that minimises use of water. The cooling system will place practically no demand on the local water network with minimum demand for system top up. This is a much more sustainable approach than has been taken by other data centres.

Climate Action Plan 2021 seeks to increase the proportion of renewable electricity by up to 80% by 2030, and therefore the applicant will be drawing from this reserve and this significant shift to a more renewable based electricity production to serve the national grid. The aim to also increase the capacity of the national grid to take account of data centres already subject to connection agreements is fully allowed for under the Climate Action Plan 2021. These strategies are to run parallel to each other to ensure that future connections of data centres is in alignment with sectoral emissions ceilings and support these renewable energy targets.

The use of renewables as a fuel source for heating and cooling the building was examined, along with other options to reduce the reliance on fossil fuel use on-site given the increased levels of wind farm connectivity. However, none of the other options explored were considered to adequately meet the requirements of Eirgrid that gas can provide.

In that regard, the applicant proposes to utilise new, high-efficiency gas engines within the back-up power plant. These plants are required, irrespective of data centres, as they supply grid balancing services which

in turn facilitate greater levels of renewables to connect to the grid; and to replace older, less efficient and higher carbon intensity fossil fuel generators, such as coal, peat and oil generation that are currently operating but with a plan to de-commission them over the coming years. This will aid the move across to a more renewable energy production as we move to 2030.

In addition, the Irish gas grid operator, Gas Networks Ireland, in its Vision 2050 strategy from 2020, sets out a clear trajectory for transitioning the Irish gas grid to net zero over the coming decades, which includes increased volumes of green renewable gas, carbon capture and storage along with green hydrogen production, all of which are recognised and supported in the Climate Action Plan. Therefore, as the gas grid transitions to lower carbon intensity, so too will the flexible gas generation deployed onsite for the benefit of the wider grid, including potential carbon capture and storage along with corporate power purchase agreements for the supply of renewable natural gas.

High efficiency gas, as is proposed to be used for the power plant in this instance, is a lower carbon generation solution (compared to coal, peat and oil generators currently on the Irish grid) which balances the grid and provides stability and flexibility during times of low wind / solar (addressing the unreliability and intermittency of renewables), along with critical inter-seasonal capacity over a longer duration that storage, for example.

Having such flexible low carbon generation facilitates greater levels of renewable penetration, along with supporting the decarbonisation of the Irish gas grid through carbon capture and storage, green biomethane, and green hydrogen going forward. The gas plant has the capacity to operate under other fuel sources going forward that will enable it to continue to reinforce the grid on fully green fuel supplies such as green biomethane and green hydrogen. The gas plant is therefore future proofed to utilise more renewable sources of fuel when they become readily available in Ireland.

The Climate Action Plan also notes the requirement for an additional 5000MW of new generation by 2030 at least 2000 MW coming from conventional and primarily gas fired power generation plants. By making high efficiency flexible gas generation available at scale at the immediate point of demand, this actually reduces the requirement for future grid reinforcements and relieves congestion in the locality, thus reducing cost to consumer through lower transmission reinforcement costs. The Climate Action Plan also recognises the need for a diversified portfolio of generation up to 2030 and beyond in order to deliver grid stability and system services arising from increasing renewable energy penetration. High efficiency gas engines, along with storage and interconnection are recognised as contributing to this solution and facilitating greater levels of intermittent renewables.

Furthermore, we note that it is established Government policy (as stated in the Policy Statement on Security of Electricity Supply that is dated November 2021) that it is a national priority to construct (and therefore by default grant permission for) gas fired power plants to combat the squeeze on electricity supplies in the short to medium term. The latest bid auction has identified several suppliers that will add capacity through operating on gas. The focus on gas as a short to medium term solution will enable the closure of coal and peat burning plants; and will bridge the gap to renewables achieving 80% by 2030. The Policy Statement by Minister Ryan is fully in accordance with CRU policy, and whilst recognising the significant projected growth in energy demand, which is only partly due to data centres concludes that:

- *"the development of new conventional generation (including gas-fired and gasoil/distillate-fired generation) is a national priority and should be permitted and supported in order to ensure security of electricity supply and support the growth of renewable electricity generation;*
- *it is appropriate that existing conventional electricity generation capacity, including existing coal, heavy fuel oil and biomass fired generation, should be retained until the new conventional electricity generation capacity is developed in order to ensure security of electricity supply;*
- *the connection of large energy users to the electricity grid should take into account the potential impact on security of electricity supply and on the need to decarbonise the electricity grid;*
- *it is appropriate for additional electricity transmission and distribution grid infrastructure, electricity interconnection and electricity storage to be permitted and developed in order to support the growth of renewable energy and to support security of electricity supply; and*
- *it is appropriate for additional natural gas transmission and distribution grid infrastructure to be permitted and developed in order to support security of electricity supply."*

This Policy Statement supports the Commission for Regulation of Utilities (CRU) and EirGrid as they carry out their statutory roles to ensure security of electricity supply in Ireland. It provides clarity to investors and

planning authorities that the Government fully supports the actions being taken by the CRU and EirGrid, including the need to develop new gas-fired generation capacity. The proposed Multi-Fuel Generation Plant, will support the further decarbonisation of the grid as more renewable sources are brought on line.

The Climate Action Plan also notes the requirement for an additional 5000MW of new generation by 2030 at least 2000MW coming from conventional generation. By making high efficiency flexible gas generation available at scale at the immediate point of demand, this actually reduces the requirement for future grid reinforcements and relieves congestion in the locality. The Climate Action Plan also recognises the need for a diversified portfolio of generation up to 2030 and beyond in order to deliver grid stability and system services arising from increasing renewable energy penetration. High efficiency engines, along with storage and interconnection are recognised as contributing to this solution and facilitating greater levels of intermittent renewables.

We respectfully submit that the energy strategy set out by the applicant is governed by Eirgrid who operate under and in accordance with Government policy and strategy that is set out under Climate Action Plan 2021.

More detailed information on the feasibility of renewable energy technology. The applicant states that it may be possible to incorporate measures at the 'detailed design stage', however, the Planning Authority is of the opinion that it should be provided at the planning stage.
We respectfully refer the Planning Authority to the stand alone report by Ethos Engineering that has undertaken an assessment of the current feasibility of using renewable energy technology that accompanies this CAI submission.

As outlined above the gas plant has the capacity to run off green gas and/or hydrogen in the future. At present, the quantities of green gas and hydrogen produced in Ireland are low, however, GNI and the Climate Action Plan / Government policy, anticipate these volumes increasing materially up to 2030. The green gas / hydrogen produced can be injected into the grid and therefore we would not need to retrofit the existing infrastructure to convert the gas engines from natural to renewable gas, with the intention to use renewable when sufficient volumes are available.

We respectfully submit that the applicant will source 100% of their energy from the national grid through renewable sources. There is the opportunity to facilitate a mix of technologies, however, at present Eirgrid does not facilitate hybrid grid connections (i.e. connections that combine two different types of technologies such as gas engines and batteries / wind / solar), and the later are not sufficiently reliable to utilise currently. As already outlined above there are significant renewable benefits to the use of gas as back-up energy source to the national grid.

We note that it is established Government policy (as stated in the Policy Statement on Security of Electricity Supply that is dated November 2021) that it is a national priority to construct (and therefore by default grant permission for) gas fired power plants to combat the squeeze on electricity supplies in the short to medium term. The latest bid auction has identified several suppliers that will add capacity through operating on gas. The focus on gas as a short to medium term solution will enable the closure of coal and peat burning plants; and will bridge the gap to renewables achieving 80% by 2030.

We refer the Planning Authority that a district heating system may be available in the region in the future and we can confirm that there is sufficient space on site to connect to a waste heat recovery building in such a scenario. The development of the Clonburris SDZ Planning Scheme is recognised in the SDCC Climate Change Action Plan as having been developed in conjunction with the Clonburris Energy Master Plan. This Master Plan identifies a range of delivery mechanisms that include the creation of local heat networks. It is notable that the Planning Scheme boundary runs to the new bridge over the Grand Canal to the immediate north-east of the site. The implementation of such a scheme within Clonburris, or elsewhere, would enable heat rejected by the processes on the application site, to be provided to the surrounding area should sufficient demand exist for this.

The use of the VRF heat pump provides the opportunity to provide all heating and cooling efficiently using electricity. This reduces the reliance on fossil fuels and is a 'green' technology under the TGD Part L 2021, listed as one renewable energy option to meet the requirements of NZEB.

Details and evidence of connection agreements of power and gas. Correspondence from Eirgrid indicating the flexible connection agreements must be provided. The applicant should also clarify what would happen should a separate infrastructure application not receive permission.

We attach with this CFI submission the details and evidence of the connection agreements between the applicant with Gas Network Ireland and Eirgrid. Some elements of these agreements are redacted from a commercial sensitivity perspective but we can confirm that all deposits required from the applicant as part of these agreements are paid and each connection agreement has been executed. A letter from BCEI Ireland Ltd. who act on behalf of Edgeconnex in Ireland, and dated the 23rd November accompanies this response that sets out each of the agreement references, and that the agreements have been officialised by both parties under both agreements. This letter also confirms that the nature of the offer of the connection agreement for the planned substation "Kishoge" is one that is a "Flexible Demand Arrangement".

As already set out above in this response, this application is now running concurrently with a Pre-Application Consultation Request for a Strategic Infrastructure Development (SID) that will facilitate underground 110kV transmission lines between the Kishoge 110kV GIS substation in Ballymakaily and the permitted Aungierstown – Castlebaggot underground 110kV transmission lines at Grange Castle South Business Park, Baldonnel, Dublin 22 (ABP Ref. VC06S.311907). This application will almost certainly, subject to ABP decision, be determined as a SID application, and is due for a final decision on the application in Q3, 2022. It is currently projected to be built and operational in Q1, 2024.

We respectfully submit that under the currently planned timeline it is envisaged that Gas Plant 1 and 2 will operate as the sole source of power on a temporary basis. The applicant has already executed its connection agreement with Gas Network Ireland to support the proposed and already permitted data centre. This does not alter the consideration of the application as has been made to the Council, and the response to the Clarification of Further Information in this instance.

This will ensure that the proposed development is fully connected to, and powered from, the National Grid. The proposed Gas Plant, that is subject of this application will supply and reinforce the national grid once this connection is achieved.

A list of mitigation measures associated with the gas generators, along with detailed justification of each measure and the details of operations

We respectfully submit that a range of mitigation measures have been utilised in the design of the gas generators. These include emission and acoustic measures that mitigate the impact on the local environment. These were fully considered within the EIAR that was submitted with the application. The acoustic assessment undertaken as part of the EIAR undertook several scenarios. This assessment included the acoustic consultants working with the design team to reduce noise levels associated with the gas plant. This included the housing of the gas plant within noise insulated buildings that significantly reduces the noise levels associated with the gas plant. It is also propose to mitigate the generator exhaust stacks associated with the gas plant. The details of all this design mitigation is included in detail within Appendix 9.4 of the EIAR submitted with the application.

Furthermore, we submit that the design of the gas plant is a lower carbon generation solution (compared to coal, peat and oil generators currently on the Irish grid) which balances the grid and provides stability and flexibility during times of low wind / solar (addressing the unreliability and intermittency of renewables), along with critical inter-seasonal capacity over a longer duration that storage, for example.

The gas plant has been designed to be future proofed so that it has the capacity to operate under other fuel sources going forward that will enable it to continue to reinforce the grid on fully green fuel supplies such as green biomethane and green hydrogen. The gas plant is therefore future proofed to utilise more renewable sources of fuel when they become readily available in Ireland.

Having such flexible low carbon generation facilitates greater levels of renewable penetration, along with supporting the decarbonisation of the Irish gas grid through carbon capture and storage, green biomethane, and green hydrogen going forward.

2. The response to Item 6 of the Additional Information request is not considered to be satisfactory. The applicant is requested to clarify whether the Irish Aviation Authority is satisfied with the proposed development.

Response
In accordance with point 6 of the original Additional Information, and this point of the Clarification of Additional Information, contact was made both with the Irish Aviation Authority and Weston Aerodrome. A response was received from Weston Aerodrome on the 6th December 2021, following their comprehensive review of the application. This letter and the email that it was attached to, is attached to the rear of this response (Appendix A) and confirms that the Aerodrome is satisfied that the proposed development will not negatively impact upon the operation of the aerodrome, thus fully addressing Item 6 of the original Additional Information request. At the time of making this response no response has been received from the Irish Aviation Authority. However, given that the originally response raised related to the Weston Aerodrome, we submit that this Item has now been comprehensively addressed.

3. The response to Item 8 of the Additional Information request is not considered to be satisfactory.
(a) The applicant is requested to provide details of intervening features such as swales, channel rills, rain gardens to treat and convey water to the attenuation pond. SuDS are limited to permeable paving and tree pits with the intervening part of the treatment train, prior to discharge to the attenuation pond, missing and detailed proposals are requested that include SuDS features that convey and treat runoff in the intervening ground between the building/car park zone and the attenuation basin. The profile of the attenuation pond should be stepped and planted in zones to provide greater ecological diversity and access for wildlife.
The drawings submitted shall highlight the location and detail section view of all SuDS features, shall also highlight available surface water attenuation capacity within each feature and demonstrate how these features are linked to the on site surface water drainage system.
- **Swales/Filter Drains to drain surface water run off from Roads**
- **Tree pits**
- **Bio Retention Rain Gardens**
- **Rainwater Harvesting for use within data halls where possible**

(b) Initial attenuation assessments carried out by Water Services indicate that the overall proposed attenuation volumes for the 1 in 100 year storm (2645m³) is potentially undersized by 20%. The applicant is requested to submit a drawing showing an additional overall attenuation volume of 20% is provided for the site by way of the use of Sustainable Drainage features (SuDS).

Response
A detailed response from Pinnacle Consulting Engineers accompanies this submission. Their accompanying cover letter, and drawings have incorporated 2 no. bio-retention rain gardens; a bio-retention swale and weirs. These measures, as per the CFI request, will treat and convey water from the building / car park zone to the proposed attenuation pond. These details are shown on Drawing no. 201107-PIN-ZZ-DR-202 and how it connects into the surface water drainage system is shown on Drawing no. 201107-PIN-ZZ-DR-201. The drawings also show sections through each of the new SUDS measures being proposed in this instance as per the CFI request.

In addition, the drawings show the surface water attenuation capacity of all SUDS measures. The Consulting Engineers have also reviewed the question of the overall attenuation volumes for the 1 in 100 year storm plus 20% climate change. We can confirm that the attenuation volume now proposed amounts to a volume of 3,207m³. This will be provided in the form of 2 no. bio-retention rain gardens (225m³) and surface water attenuation pond (2,982m³) and is above the 3,174m³ requested by the Water Services Department of the Planning Authority. This is comprehensively addressed under the response from Pinnacle Consulting.

4. The response to Item 10 of the Additional Information request is not considered to be satisfactory. In order to assess the feasibility of a connection to public waste water infrastructure further information is requested as follows; The applicant is requested to engage with Irish Water through the submission of a Pre-Connection Enquiry (PCE) in order to determine the feasibility of connection to the public waste water infrastructure. Please note this is required for indirect connections to the public system also. The Confirmation of Feasibility (COF) must be submitted to the planning

department as the response to this further information request. Pre-connection enquiries can be made at https://www.water.ie/connections/get-connected/.

Response
Further to the above request, the applicant, through the project consulting engineers – Pinnacle; and have made an Irish Water Pre-Connection Enquiry (Ref. no. CDS21008013). We refer the Planning Authority that the Confirmation of Feasibility is likely to take some 16 weeks from the date of lodgement and a copy of the correspondence from Irish Water, and dated the 1st December 2021, is attached to the response from Pinnacle Consulting Engineers. As noted in this letter the proposed wastewater connection for this development connects to the Irish Water network via private infrastructure. It is only at connection application stage that written confirmation from the owner of the infrastructure (SDCC) is required by Irish Water. The applicant would welcome a suitable condition being attached to the decision that requires this consent prior to commencement of development.

5. The response to Item 11 of the Additional Information request is not considered to be satisfactory. The applicant has indicated that there is water present in some of the ditches on the site and that culverts are also present. The applicant is requested to provide a strategy for removing the culverts and also for reinstating any potential watercourses. The filling in of any ditches should be justified in terms of how it would not impact the wider network negatively.

Response
An addendum to the AWN Consulting Ltd. report that was previously submitted with the Additional Information response is included with this response. While there is water present in some of the ditches these are manmade ditches that drain the existing fields and generally marking the field boundaries; these are not 'streams' as such and contain no natural portions from its headwaters to the confluence with the Griffeen River. Furthermore, the EPA Maps do not show these ditches as watercourses.

The proposed development will create new hardstanding areas over existing ditches that will be infilled. The designed stormwater network by Pinnacle Consulting Engineers replicates the existing drainage regime; by directing stormwater to an attenuation pond, that restricts outflow at Qbar rural greenfield rates and discharges to an existing stormwater main below the R120. The existing stormwater main ultimately outfalls to the Griffeen River. The sustainable urban drainage systems designed into the site will ensure that there is a negligible impact on water quality and quantity.

To clarify in respect of the culverts, the identified Culverts 2, 4, 5, are beyond the site and effectively in 3rd party ownership and it is not proposed to modify or remove these culverts. This has been confirmed by the georeferenced site boundary provided by the project Architect Henry J Lyons and project Civil Engineers Pinnacle Consulting Engineers.

There is only 1 no. culvert within the site boundary (see below). The culvert inlet is within the boundary and the outlet located at the boundary. To the north of Culvert 1, the eastern Field Ditch 6 lies outside of the property boundary (redline).

While it is acknowledged that Objective 4 of Policy G3 is to uncover existing culverts and restore the watercourse to acceptable ecological standards and for the passage of fish, where possible. The proposed landscaping berms will be located at Culvert 1, and therefore it is not possible to replace this culvert. Culvert 1, which serves a field drain, will be replaced by an extended culvert suitably sized to current Office of Public Works (OPW) guidance in accordance with Section 50 of the Arterial Drainage Act 1945.

The CFI Response prepared by Pinnacle Consulting Engineers addresses the detail on the culvert design (one only) along the north-eastern boundary of the site that will be a precast box culvert that will be 2.1m (w) x 600mm (h) x c. 9m in length. Its locations is shown on the previous page as an excerpt from the AWN report.

6. The response to Item 13 and 15 of the Additional Information request is not considered to be satisfactory. An arborist report and tree constraints plan has been prepared by The Tree File Consulting Arborist. An Arboricultural Impact Assessment, Tree Protection Plan and Arboricultural Method Statement is also required. The applicant is requested to provide this

Response
We refer the Planning Authority to the Tree Impact Plan and Tree Protection Plan that now accompanies the previously submitted Tree Constraints Plan, and now an updated Aboricultural Report from The Tree File Ltd. that also includes a Method Statement for the protection of trees during the proposed construction process. We respectfully submit that this response fully meets the requirements of this part of the CFI request.

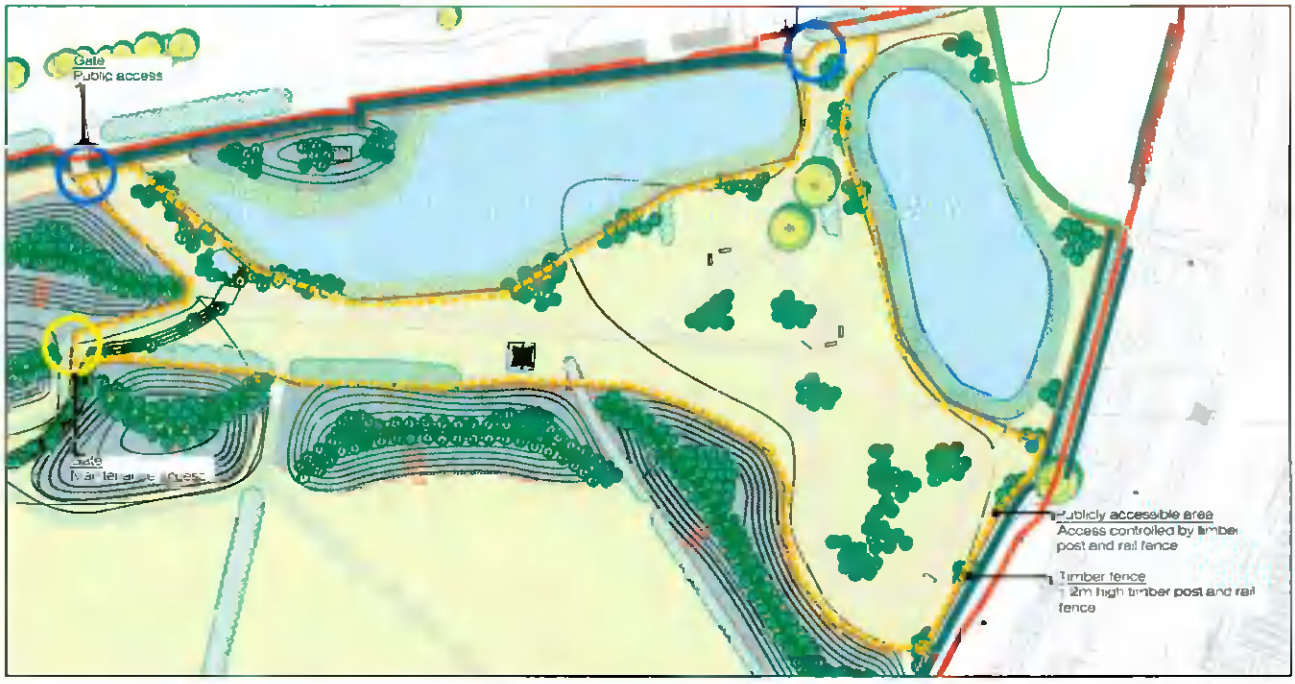
7. The response to Item 14 of the Additional Information request is not considered to be satisfactory. The applicant is requested to provide correspondence with Waterways Ireland indicating they are satisfied with the proposed boundary along the canal.

Response
We refer the Planning Authority to Appendix B of this CFI response that sets out correspondence with Waterways Ireland indicating that they are fully satisfied with the proposed boundary plan along the canal.

8. The response to Item 1 of the Additional Information request is not considered to be satisfactory. The applicant is requested to provide a plan clearly indicating the extent of the public park and boundary treatments, with access points, in the interests of clarity.

Response
We refer the Planning Authority to Drawing no. 201 prepared by Kevin Fitzpatrick Landscape Architecture (KFLA) that accompanies this CFI submission. The drawing (copied below) indicates the full extent of the public park (outlined in dashed orange line on the image below) and boundary treatments with access points. The boundary of this public park will be defined by a 1.2m high timber post and rail fence.

The full extent of this boundary treatment is marked by a brown line around the public park as well as along the boundary with the Grand Canal. A detail drawing and section through this fence is included on Drawing no. 201 by KFLA. The public entrances (2 no.) into the park from the Grand Canal are shown clearly on this drawing and will be formed by a swing 1.1m high timber gate that can be locked outside of daylight hours. A maintenance access gate into the public park from the rest of the landscape area to the north of the site is also shown – this will be strictly for maintenance purposes only. As outlined previously the applicant will be responsible for the opening and closing of the public park.



Excerpt from Drawing no. 208 from Kevin Fitzpatrick Landscape Architecture indicating the extent by orange dashed line of the public park

CONCLUSION

It is our respectful submission that this response has comprehensively addressed all the issues raised by the Planning Authority in the Clarification of Additional Information request.

In conclusion, for all of the foregoing arguments, reason and considerations, South Dublin County Council are invited to assess the subject scheme and our Clarification of Additional Information response on its own individual merits and to grant planning permission for this development on the basis that by its nature and extent, the proposal would accord with the proper planning and sustainable development of this area including the preservation and improvement of amenities thereof.

We trust that everything is in order and look forward to a favourable decision in due course.

Yours faithfully,

Anthony Marston (MIPI, MRTPI)
Marston Planning Consultancy

Appendix A - email correspondence from Weston Aerodrome

Weston Airport

Leixlip

County Kildare.

To:

Anthony Marston

23 Grange Park

Foxrock

Dublin

D18 T3Y4

Dear Anthony,

Reference the development by Edgeconnex Ireland Ltd at Ballymakaily west of Newcastle Road, we have no objections to this development subject to the information provided and the heights of the proposed structures as per your email.

Regards

_____

Aidan Fox

Air Traffic Manager

Weston Airport

Leixlip

County Kildare

WESTON AVIATION ACADEMY
BACKWESTON, LEIXLIP, CO. DUBLIN W23XHFR
EMAIL: INFO@WESTONAIRPORT.COM WEB: WESTONAIRPORT.IE

From: Aidan Fox [mailto:afox@westonairport.com]
Sent: Tuesday 7 December 2021 13:07
To: 'Anthony Marston' <anthony@marstonplanning.ie>
Subject: RE: Planning Ref. SD21A/0042

Hi Anthony
Please see attachment re the proposed development.

Kind regards
Aidan Fox
Air Traffic Manager
Weston Airport

From: Anthony Marston [mailto:anthony@marstonplanning.ie]
Sent: Thursday 14 October 2021 17:25
To: 'planning@iaa.ie' <planning@iaa.ie>
Cc: 'ops@westonairport.com' <ops@westonairport.com>
Subject: Planning Ref. SD21A/0042

To whom it may concern

We act as planning consultants for EdgeconneX Ireland Ltd. in relation to the above planning application.

We have been requested to consult with the Irish Aviation Authority in relation to Weston Airport under a Clarification of Further Information request. This follows an initial request which stated:.

6. The applicant is requested to consider the impacts of the proposed development on the operations of Weston Aerodrome.

The Council were not satisfied with our response and have requested Clarification of Further Information on point 6 that states.

2. The response to Item 6 of the Additional Information request is not considered to be satisfactory. The applicant is requested to clarify whether the Irish Aviation Authority is satisfied with the proposed development.

The link to the data centre planning application is below. I have also attached our planning report that accompanied the initial application that was made. The additional details are set out on the planning file.

http://www.sdublincoco.ie/Planning/Details?p=1&r=sd21a%2F0042&regref=SD21A%2F0042

The site is located to the immediate south of the Grand Canal and to the west of the R120 some 3kms south-east of Weston Aerodrome. The application side is located within the outer conical surface of the Weston Aerodrome that is listed as being 146.3m OD. The flues of the proposed data centre and gas plants are at a height of 92.48m OD and therefore significantly below this height.

In addition, we have reviewed the planting and attenuation ponds having regard to the potential for them to attract additional birds. The proposed attenuation ponds / wetlands reflect the existing environment (next to canal) and do not present a significant probability of increasing bird presence. It is also suggested that the planting palette used for landscaping will not exceed 15% berry bearing bushes; will ensure that they are not attractive to birds. Given the timelines involved in responding to the Further Information request, I would be grateful if you could revert back to me as soon as possible.

Many thanks in anticipation

Regards

Anthony Marston
Marston Planning Consultancy

Appendix B – correspondence with Waterways Ireland

From: Stephen Deegan [mailto:Stephen.Deegan@waterwaysireland.org]
Sent: Wednesday 10 November 2021 12:42
To: Anthony Marston <anthony@marstonplanning.ie>
Cc: 'Barry English' <barry@winthrop.ie>; 'David Gilligan' <david.gilligan@hjlyons.com>; 'Jason Murphy' <jason.murphy@hjlyons.com>; 'Jordan Vos' <Jordan.Vos@bcei.com>; Paul Kealy <paul.kealy@waterwaysireland.org>
Subject: RE: interface with Waterways Ireland and Edgeconnex development GG

Hi Anthony,

Thanks for the email. Waterways Ireland are satisfied with the boundary proposals as described / shown in the latest drawings,
If you need any further comments, please feel free to get in touch,

Kind regards

Stephen Deegan
Senior Engineer
Grand Canal Metropolitan Area

From: Anthony Marston <anthony@marstonplanning.ie>
Sent: 02 November 2021 16:02
To: Stephen Deegan <Stephen.Deegan@waterwaysireland.org>
Cc: 'Barry English' <barry@winthrop.ie>; 'David Gilligan' <david.gilligan@hjlyons.com>; 'Jason Murphy' <jason.murphy@hjlyons.com>; 'Jordan Vos' <Jordan.Vos@bcei.com>
Subject: RE: interface with Waterways Ireland and Edgeconnex development GG

HI Stephen

Further to our meeting earlier this year in relation to the interface between our client's site to the south of the Grand Canal that is located to the west of the R120, we have recently been requested to seek Clarification of Further Information in relation to seeking correspondence with Irish Waterways Ireland indicating that you are satisfied with the proposed boundary treatment along the canal. At this initial meeting you outlined that the red line boundary was incorrect on our drawings; and we addressed this under the Further Information response to SDCC (please see attached revised drawing attached – Drawing no. P1-03).

You also raised concerns about our fence and boundary treatment being too industrial in nature. I can confirm that the boundary with the canal will be either formed by existing hedgerow or new hedgerow planting to the boundary between Waterways Ireland and our client's lands, with a new 1 2m high timber post and rail fence to be erected to the south side of the existing / proposed hedgerow (see Drawing no. 0401_105). Identical fencing will be used to demarcate the attenuation ponds within this northern area; and the area being provided to be accessible to the public (see Drawing no. 0401_102).

I would therefore be grateful for a response on this in order to address this matter as a matter of urgency. Your confirmation via email would of course be sufficient. Many thanks for your assistance.

Please feel free to call me to discuss if required.

Regards

Anthony Marston
Marston Planning Consultancy
m:086-3837100
23 Grange Park, Foxrock, Dublin, D18 T3Y4.
www.marstonplanning.ie