

PINNACLE

CONSULTING ENGINEERS

Grosvenor Court

87a Patrick Street

Dublin, D08H1A0

Dublin

Phone

+353 1 231 8041

Email

dublin@repinnacle.com

Website

www.pinnacleconsultingengineers.com

Thursday 18 November 21

Planning Department

South Dublin County Council

County Hall, Tallaght

Dublin 24

D24 A3XC

Ref: P201107

RE: EdgeConneX Ireland Ltd., Construction of two single storey Data Centres,

Ballymaikaily, West of the Newcastle Road, (R120), Lucan, Co. Dublin

Planning Reg. Ref. No. SD21A/0042

Further to the Clarification of Additional Information request pertaining to Items 3 – 5, in respect of the above development, as received from the Local Authority, dated 2nd September 2021, we would respond as follows:-

Item 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.

DIRECTORS: Mr. Paddy Lynch (01) 231 8041, Mr. John O'Connell (01) 231 8041, Mr. David O'Connell (01) 231 8041, Mr. David O'Connell (01) 231 8041

REGISTERED IN IRELAND: Company Number 20291 REGISTERED OFFICE: 87a Patrick Street, Dublin 8, D08H1A0

OFFICES: Dublin, London, Cork, Galway, Belfast, Glasgow

- 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) Refer to Dwg. No.'s 201107-PIN-ZZ-ZZ-DR-DR-201 & 202 Rev. P04, for the surface water drainage layouts, which have been updated to include for a treatment train from the northern end of the data hall, through the open landscape, prior to the ultimate surface water discharge into the attenuation pond. The following elements of treatment have been catered for in order to convey the aforementioned run-off:-

- Bio retention rain gardens – 2 No.
- Bio retention swales
- Weirs

Details of the rain gardens will be provided by the Landscape Architect, Kevin Fitzpatrick (KFLA) and a typical detail of the proposed bio retention swale has been indicated on the aforementioned drawings, i.e. a 1m wide base with side slopes being 1.5m in width, providing for an overall swale width of circa 4m. A typical section has also been provided through the rain garden feature.

In addition to the above SuDS elements, we will be providing permeable paving, tree pits and rain water harvesting, all as stated under Item 8 (c), in response to the request for Additional Information, summarised below:

"All parking spaces, circa 34 No., along the western elevation of the data hall will constitute permeable paving. In addition, tree pits will be positioned in accordance with the Landscape Architect, Kevin Fitzpatrick and details of same will be included with the landscape package. Furthermore, it is proposed to install rain water harvesting in conjunction with Ethos (M&E Consultants), in order to serve the office building area of the data centre."

(b) As per the submitted MicroDrainage calculations which formed part of the planning submission, we would be of the opinion that the attenuation volume as specified, i.e. 2,645m³, is totally adequate to accommodate a 1:100yr storm event + 20% climate change.

As Water Services have stated that there is a potentially a shortfall in the overall attenuation volume of circa 20%, which equates to circa to 529m³, with an overall volume required of 3,174m³, we have accommodated the additional storage volume within the following features:-

PINNACLE

CONSULTING ENGINEERS

- 2no. Bio Retention rain gardens - total storage volume of 225m³
- Surface water attenuation pond – storage volume increased to 2,982m³

We have now provided a total storage volume of 3,207m³, which is an overprovision of storage in the order of 33m³. In order to provide the required attenuation volume, in addition to the rain gardens, the surface water attenuation pond has been increased in depth by 130mm, with the plan area remaining the same.

Item 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:-

A PCE was previously submitted and a response (Irish Water Pre Connection Enquiry Ref Number: CDS21008013 dated 15th November 2021), has been received from IW in respect of same. From a statutory perspective, it can take up to 16 weeks in order to receive a COF from IW. however, due to permission being granted on numerous phases in which our client has been involved in and whereby we have discharged into the same network, which has actually been laid on SDCC's behalf through our clients lands, we do not foresee any issues with the application.

In addition and further to the above, as with similar previous schemes as mentioned, in which this client has had involvement in and whereby connections into Grange Castle Business Park Pumping Station have been utilised, there has been no requirement to submit a PCE to IW in respect of waste water. as the connecting infrastructure laid from the subject site and ultimately into the aforementioned pumping station, does not fall under the jurisdiction of IW and is solely under the control of SDCC.

[REDACTED]

Item 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:-

Refer to the Technical Note as prepared by AWN Consulting dated 26th November 2021. Ref. No. LB/20/11901TN02 in response to the above item.

In addition to the above and as indicated as Culvert 1 in this report, this ditch passes beneath the private roadway leading up to the abandoned dwelling, which is now under the applicants ownership. As alluded to in the above report, we would propose installing a precast box culvert, 2.1m (w) x 600mm (h) x circa 9m in length. This would replicate the current ditch width in this location and would more than adequately convey any water which may be conveyed at this location, although any flows would be minimal as per the above report, in conjunction with on-site construction works pertaining to the existing permitted data centre and the current application under adjudication.

Furthermore and as touched upon, the ditches as identified in the aforementioned report, will essentially be infilled during the construction stage, if the footprint of the data hall and ancillary buildings and infrastuctural works. impact on the location of these ditches, in their current state.

These ditches will be infilled with suitable material and compacted in accordance current specifications and regulations, in order to provide the required bearing strata for the various buildings and/or suitable material will be imported and regulated in layers, in order to form pipe trench and road build-up layers, as and when it may be required.

We trust that the above meets with your requirements, however should you require any further information, or copies of drawings, please do not hesitate to contact us.



Shaun O'Reilly

Pinnacle

shaun.oreilly@iepinnacle.com

+353 (1) 231 1044

Encl. (12)

APPENDIX A
Irish Water PCE Response
Ref: CDS 21008013

Pinnacle Consulting / Shaun O' Reilly

Grosvenor Court
67A Patrick Street
Dun Laoighaire
Co. Dublin

2 December 2021

UISCE ÉIREANN
ÉIREANN IRISH
WATER
Oifis Sheoladh / Office
Customer Theory
Cathal Dinnia

Irish Water
PO Box 111
South City
Delaney Drive
Dublin City

www.water.ie

Re: CDS21008013 pre-connection enquiry - Subject to contract | Contract denied

Connection for Business Connection of 1 unit at Ballymakailly Lands to the west of the Newcastle Road, Lucan, Co. Dublin

Dear Sir/Madam,

Irish Water has reviewed your pre-connection enquiry in relation to a Wastewater connection at Ballymakailly Lands to the west of the Newcastle Road, Lucan, Co. Dublin (the **Premises**). Based upon the details you have provided with your pre-connection enquiry and on our desk top analysis of the capacity currently available in the Irish Water network(s) as assessed by Irish Water, we wish to advise you that your proposed connection to the Irish Water network(s) can be facilitated at this moment in time.

SERVICE	<p style="text-align: center;">OUTCOME OF PRE-CONNECTION ENQUIRY</p> <p style="text-align: center;"><u>THIS IS NOT A CONNECTION OFFER. YOU MUST APPLY FOR A CONNECTION(S) TO THE IRISH WATER NETWORK(S) IF YOU WISH TO PROCEED.</u></p>
Wastewater Connection	Feasible without infrastructure upgrade by Irish Water
SITE SPECIFIC COMMENTS	
Wastewater Connection	<p>The proposed wastewater connection for this development connects to the Irish Water network via private infrastructure. Please be advised that at connection application stage you have to provide written confirmation from the owner of the infrastructure that you have received legal permission to connect to and that the infrastructure has capacity to cater for the additional load from the Development.</p> <p>A new connection to the existing network is feasible without Irish Water network upgrade on the condition that the existing (privately owned) Grange Castle Pumping Station does not increase maximum output flow rate of Phase 2 PS set up (55l/s).</p>

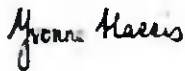
The design and construction of the Wastewater pipes and related infrastructure to be installed in this development shall comply with the Irish Water Connections and Developer Services Standard Details and Codes of Practice that are available on the Irish Water website. Irish Water reserves the right to supplement these requirements with Codes of Practice and these will be issued with the connection agreement.

General Notes:

- 1) The initial assessment referred to above is carried out taking into account water demand and wastewater discharge volumes and infrastructure details on the date of the assessment. **The availability of capacity may change at any date after this assessment.**
- 2) This feedback does not constitute a contract in whole or in part to provide a connection to any Irish Water infrastructure. All feasibility assessments are subject to the constraints of the Irish Water Capital Investment Plan.
- 3) The feedback provided is subject to a Connection Agreement/contract being signed at a later date.
- 4) A Connection Agreement will be required to commencing the connection works associated with the enquiry this can be applied for at <https://www.water.ie/connections/get-connected/>
- 5) A Connection Agreement cannot be issued until all statutory approvals are successfully in place.
- 6) Irish Water Connection Policy/ Charges can be found at <https://www.water.ie/connections/information/connection-charges/>
- 7) Please note the Confirmation of Feasibility does not extend to your fire flow requirements.
- 8) Irish Water is not responsible for the management or disposal of storm water or ground waters. You are advised to contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges
- 9) To access Irish Water Maps email datarequests@water.ie
- 10) All works to the Irish Water infrastructure, including works in the Public Space, shall have to be carried out by Irish Water.

If you have any further questions, please contact Marina Byrne via email mzbyrne@water.ie For further information, visit www.water.ie/connections.

Yours sincerely,



Yvonne Harris

Head of Customer Operations