

ENVIRONMENTAL HEALTH - PLANNING MEMO

Date: 22nd of July 2022

Register Reference: SD21A/0217

Development: 10 year permission for development consisting of removal of an existing unused waste water treatment facility on site and the erection of two data centre buildings, gas powered energy generation compound, and all other associated ancillary buildings and works; the two data centre buildings, DUB 15 and DUB 16, will comprise a total floor area of c. 33,577sq.m over two storeys; the first 2 storey data centre building (DUB15), located to the southwest of the site, will comprise 16,865sq.m data storage use, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space; a second 2 storey data centre building (DUB16), located to the southeast of the site, will comprise 16,712sq.m data storage areas, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space; both data centre buildings will reach a height of 20m; emergency generators and associated emission flues and plant are proposed in compounds adjacent to each data centre building; gas powered energy generation is proposed to the north east corner of the site to provide electricity for the proposed development; the application proposes to re-route and widen an existing watercourse constructed following an earlier planning permission; it is proposed to reroute this watercourse along the eastern and southern boundary of the site; landscaping is proposed to the south of the site to screen the buildings; fencing and security gates are proposed around the site; new access roads within the site are proposed along with 71 car parking spaces and 26 cycle spaces, bin stores, site lighting, and all associated works including underground foul and storm water drainage attenuation and utility cables and all other ancillary works; a Natura Impact Statement will be submitted to the planning authority with the application.

Location: Profile Park, Nangor Road, Clondalkin, Dublin 22

Applicant: Digital Netherlands VIII B. V.

App. Type: Permission

Planning Officer: SARAH WATSON

Date Received: 05-Jul-2022

Decision Due: 01-Aug-2022

Comments

The subject development seeks permission for the following components:

- Two new data centre buildings
- Energy centre with gas turbines to power the proposed development
- Diesel generator yards to provide emergency power to the proposed development
- Roof top condensers
- Air Handling units

The main concern from Environmental Health relates to the potential impact with regards to operational noise. Should the background noise level in this area increase substantially this could lead to long term negative impacts for the surrounding residential receivers, the nearest of which is located closeby, approximately 60 – 70 meters from the proposed development.

Environmental Health previously made the observations noted below with reference to issue 1 of the acoustic report, dated 29th of July 2021.

Table 14 of the acoustic report predicts the cumulative noise level at “NSR 1” will be 43dB. Whilst the report references this change as a 3dB increase in noise, this is not a true representation of the increase to the existing environment, as highlighted below:

*Existing background noise level (LA90) at NSR1 = 34dB Night time (Table 9)
Predicted cumulative noise level at NSR 1 = 43dB Night time (Table 14)*

An increase of 9dB for the night time period equates to a doubling of noise and therefore is likely to impact on the residential receiver. This impact would be particularly noticeable during the night time period when people are sleeping.

It is noted within table 16 and 17 of the revised acoustic report by Arup dated 28th of January 2022 the night-time levels of noise have been reduced by 6dB.

The acoustic consultant has used a cumulative background baseline level of 39dB in line with other background levels in the area and in line with SDCC Noise Action Plan. It is noted that the background level for the nearest receiver is 34dB however it is understood the dwelling in question consists of a vacant and uninhabitable farmhouse, as specified within the report.

It is noted that the predicted change in level resulting from the proposed development is now 3dB which is more reasonable than the initial 9dB increase predicted. It is also noted the background noise level for this farmhouse location is particularly low.

The Environmental Health Department have taken the above points into consideration when undertaking this review.

Table 16: Scenario 1a Noise Modelling Results at Residential Receptors excluding power plant to the north

Sensitive Receptor	Model Output L _{Aeq} [dB]	Noise Limit [dB]	Compliance with limits?	Baseline noise level (night) [dB L _{A90,15min}]	Cumulative Noise Level [dB] ¹	Change in noise level [dB]	Significance criteria
NSR 1	34	34	Yes	34	37	+3	Imperceptible
NSR 2	31	39	Yes	39	40	+1	Imperceptible

¹ Where cumulative noise level = Model Output L_{Aeq} dB + Baseline noise level (night)

Table 17: Scenario 1b Noise Modelling Results at Residential Receptors including power plant to the north

Sensitive Receptor	Model Output L _{Aeq} [dB]	Noise Limit [dB]	Compliance with limits?	Baseline noise level (night) [dB L _{A90,15min}]	Cumulative Noise Level [dB] ¹	Change in noise level [dB]	Significance criteria
NSR 1	34	38	Yes	34	39	+1	Imperceptible
NSR 2	31	39	Yes	39	40	+1	Imperceptible

¹ Where cumulative noise level = Model Output L_{Aeq} dB + Baseline noise level (night) including power plant

The proposal is **acceptable** to Environmental Health subject to the following conditions set out below. The Environmental Health Department have included the attenuation measures in the conditions below as detailed under section 7.2 of the reviewed acoustic report by Arup dated 28th of January 2022. These measures must be adhered to in order for the development to operate within the noise limits specified.

1. Noise due to the normal operation of the proposed development, expressed as Laeq over 15 minutes at the façade of a noise sensitive location, shall not exceed the daytime background level by more than 10 dB(A) and shall not exceed the background level for evening and night time. Clearly audible and impulsive tones at noise sensitive locations during evening and night shall be avoided irrespective of the noise level.
2. During the construction / demolition phase of the development, Best Practicable Means shall be employed to minimise air blown dust being emitted from the site. This shall include covering skips and slack-heaps, netting of scaffolding, daily washing down of pavements or other public areas, and any other precautions necessary to prevent dust nuisances.
3. No heavy construction equipment/machinery (to include pneumatic drills, construction vehicles, generators, etc) shall be operated on or adjacent to the construction site before 07:00 hours on weekdays and 09:00 on Saturdays nor after 19:00 hours on weekdays and 1300 hours on Saturdays, nor at any time on Sundays, Bank Holidays or Public Holidays.

Any work outside of these hours shall only be permitted following a written request to the Planning Authority and subsequent receipt of the written consent of the Planning Authority, having regard to the reasonable justification and circumstances and a commitment to minimise as far as practicable any unwanted noise outside the hours stated above.

4. Diesel generators must be attenuated to achieve a maximum sound pressure level at 1m from any point of the generator of 75dBA
5. Dry air chillers must be attenuated to achieve a maximum sound pressure level at 1m from any point of the chiller of 55dBA.
6. Condensers and AHUs must be attenuated to achieve a maximum sound pressure level at 1m from any point of 70dBA.
7. A minimum 9m high noise wall must be constructed around all diesel generator yards, with louvres as detailed in appendix A of acoustic report by Arup, dated 28th of January 2022.
8. A minimum 4m high solid noise parapet must be constructed on the main data centre buildings to shield receptors from chiller noise.

9. The development shall be so operated that there will be no emissions of malodours, gas, dust, fumes or other deleterious materials, no noise vibration on site so as would give reasonable cause for annoyance to any person in any adjoining unit or public place in the vicinity.



Kieran Groarke
Environmental Health Officer
22nd of July 2022



Fiona Byrne
Senior Environmental Health Officer