

ENVIRONMENTAL HEALTH - PLANNING MEMO

Date: 17th of August 2021

Register Reference: SD21A/0186

Development: Construction of a 3 storey (part 4 storey) data centre known as 'DB8' to include data halls, electrical/plant rooms including internal generators, offices, lobbies, ancillary staff areas including break rooms and toilets, stores, stair/lift cores throughout and photovoltaic panels at roof level; the total gross floor area excluding hot air plenums and external staircase is c.9,601sq.m and the overall height of the data centre ranges from c.16m to c.20m to roof parapet level and up to c.24.48m including roof top plant, flues and lift overrun; provision of 5 external generators, 8 fuel tanks and ancillary plant contained within a plant yard to the north of DB8; provision of a water tank plant room, air cooled chillers and ancillary plant contained within a chiller plant yard to the south of DB8; provision of a water sprinkler pump room (c.23sqm), 2 sprinkler tanks (c.12m high each), heat recovery plant room (c.17sqm), ESB substation (c.44sqm), waste/bin stores (c.52sqm); total floor area of ancillary structures and plant (c.303sqm); provision of a delivery yard and loading bays, 64 car parking spaces, 5 motorcycle spaces, bicycle shelter serving 14 spaces, smoke shelter, internal access roads and footpaths, vehicular and pedestrian access to the west from Falcon Avenue and closure of an existing vehicular entrance from Falcon Avenue; all associated site development works, services provision, drainage works including attenuation, landscape and boundary treatment works including berming, hedgerow protection areas and security fencing; no buildings are proposed above the existing ESB wayleave and SDCC watermain wayleave to the west and north of the site; the area to the southwest of the site (temporary meadow) is reserved for a future data centre, subject of a separate application to South Dublin County Council on a site bounded to the east and south by Grange Castle Golf Club, to the north by Nangor Road (R134) and to the west by an estate road known as Falcon Avenue. This application is accompanied by a Natura Impact Statement.

Location: Plot 100, Profile Park, Nangor Road, Clondalkin, Dublin 22

Applicant: Equinix (Ireland) Ltd.

App. Type: Permission

Planning Officer: Sarah Watson

EHO: Kieran Groarke

Comments

The subject proposal is for the Construction of a 4 storey data centre with total gross floor area of 9,601sq.m. As part of this assessment the Environmental Health Department have focused mainly on the potential impacts to the nearby residents in respect of noise and also with regard to air quality.

The subject site is located just off the nangor road and whilst it is mainly surrounded by commercial developments the closest residential receivers are closely located approximately 50 metres to the north of the site where there are dormer bungalows. Whilst there is potential for construction noise to generate complaints, the main concern would be in relation to long-term noise impact from the sites operation.

The key components of the site with respect to noise impact include:

- Internal generators
- 5 external generators
- 8 fuel tanks and ancillary plant
- Air cooled chillers within a chiller plant yard

It is noted that an acoustic assessment has been undertaken by Damian Kelly of AWN Consulting, dated the 14th of June 2021 reference “DK/20/11952NR02”

Background noise monitoring was undertaken at appropriate locations which included the closest residential receiver. It is noted that Laf90 background readings have been calculated using 15 minute measurements for day and night. An average background noise measurement has then been calculated from the two 15 minute measurements.

This approach is not the most accurate method for determining a representative background noise reading. Background noise readings (La90) should be taken for longer periods and ideally include unattended monitoring where possible.

On review of the background noise readings for “Location A” – Nearest residential receiver, it is noted that two separate readings have been taken, one at 11pm – 41dB and one at 12am – 37dB. There is a notable difference of 4dB which is likely due to the drop in traffic within this hour. The acoustic consultant has taken an average of these two readings which is not truly representative of the core night hours. The early hours of the morning are likely to be much lower than the 41dB recorded at 11pm. The lowest of these readings was recorded around midnight with a reading of 37dB is likely to be the most representative background noise measurement for the night time period and not the 39dB “average” which has been noted in the report.

Therefore the potential impact of this development has been assessed against this parameter. In addition any recommended noise conditions which refer to the background noise exceedance will infer a background noise level of 37dB for the night time period at the closest residential receiver.

Under table 6 of the report the predicted noise impact on noise sensitive receiver number 7 is 37dB. As this is the nearest residential receiver to the development this is the receiver of main concern. It can therefore be assumed that the development will not increase the background noise taking the background noise level to be 37dB.

NOTE: It is important that the development does not give rise to an exceedance of the background noise level. Environmental Health Have included a condition requiring an acoustic verification report to be submitted following commencement of the development. This is to ensure compliance with South Dublin County Council's noise conditions as set out below.

Mitigation of noise impact

The acoustic consultant has set out specific performance parameters for a solid acoustic screen around the chiller yard and louvered screen for around the containerized generator units. Illustrations of the appropriate screens have also been included.

It is important that these specific design parameters are incorporated into a final development consent if granted by the Planning Department

Construction Noise

On review of the construction noise impact, based on the predictions set out under table 6 of the acoustic report it is anticipated that noise levels will fall well within the adopted criteria.

Air Quality and Climate

The air quality and climate assessment was conducted by Dr Edward Porter and is dated the 15th of June. The report focuses mainly on the potential impact of the 8 diesel generators which are included in the development for situations where power from the grid is not available or there is a requirement to reduce the load on the grid.

The modelling study concludes that providing the stacks are built to a height of 20m and the predicted emissions are complied with then the diesel generators will be in compliance with the ambient air quality standards.

The above proposal is **acceptable** to Environmental Health subject to the following conditions:

1. No equipment or 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 hours on Saturdays nor after 19:00 hours on weekdays and 13:00 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.
2. Noise levels arising from construction activities shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give rise to a noise nuisance affecting a person in any premises in the neighbourhood.
3. Noisy plant and intrusive construction machinery shall be situated as far away from sensitive properties as possible during the construction stage.
4. Noise due to the normal operation of the proposed development, expressed as *L_{aeq}* 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.
5. Following commencement of the development the applicant is required to submit an Acoustic Verification report to South Dublin County Council. The report must confirm whether the development complies with Council's standard noise criteria: *Noise due to the normal operation of the proposed development, expressed as L_{aeq} 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.*
 - (a) This Acoustic Verification report should comprise of noise monitoring data at any noise sensitive locations. It should also include the cumulative noise level whereby the existing noise levels are included in the assessment of the developments overall impact.
 - (b) Acoustic design criteria or performance specifications acoustic report as prepared by Damian Kelly of Awn Consulting, dated the 14th of June 2021 reference "DK/20/11952NR02" or any subsequent acoustic assessment into the proposed use shall be finalised and verified by a suitably qualified acoustic consultant.

- (c) Following completion of all verification testing, measurement and reporting, a final acoustic compliance report referencing all testing, verification, noise measurement results and reports undertaken is to be submitted to the Environmental Health Department of South Dublin County Council.

The report is to include a clear statement certifying that the development or proposed use is fully capable of complying with all the design criteria and operating within the requirements of the noise control conditions and criteria as set out within the planning consent.

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

Drainage

7. Any connections to the main sewer must be connected so as not to give rise to a public health nuisance



Kieran Groarke
Environmental Health Officer
17th of August 2021

Tom Prendergast
Principal Environmental Health Officer