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227501.0262/NL01
10 May 2023

EdgeConneX Ireland Ltd
c/o Henry J Lyons Architects
51-54, Pearse Street
Dublin 2

To whom it may concern,

RE: SD22A/0333 – ADDITIONAL INFORMATION – ENVIRONMENTAL NOISE

This technical letter has been prepared in order to respond to a Request from South Dublin County Council for Additional Information in respect of environmental noise in relation to the planning application by EdgeConneX Ireland Ltd for a data centre development on lands at Site within the townland of Ballymakailly, West of Newcastle Road (R120), Lucan, Co. Dublin.

AWN are the noise consultants for this project and prepared the Noise & Vibration Section of the submitted Environmental Impact Assessment Report (EIAR). The noise and vibration assessment carried out as part of the submitted EIAR is considered robust; however, appropriate clarifications and further comment are presented in the following sections of this technical letter to clarify, expand and reiterate previous statements within the submitted EIAR.

AWN accessed the EIAR on file on the SDCC planning website; it appears that the EIAR is in two separate PDF documents, and that the first document runs from the start of the EIAR to Chapter 9 Noise and Vibration and stops part-way through Chapter 9. The second PDF of the EIAR starts part-way through the following chapter. It appears that many of the requests for further information relate to the sections of the noise chapter which were missing from the on-line documents. The online document does not reflect the extent of the noise and vibration assessment that was submitted to the local authority as part of this planning application.

The following sections of this letter respond to each point by highlighting in the EIAR where the issues are already addressed, adding detail where considered appropriate.

SDCC Request:

6. EHO

1. *An acoustic assessment must be undertaken by a suitably qualified acoustic consultant describing and assessing the impact of noise emissions from the proposed development to include accumulative noise impacts. The investigation must include, but not be necessarily limited to, the following:*
 - (a) *The identification of any neighbouring noise sensitive receivers who may be potentially impacted by the proposal*

Response:

Figure 9.4 in the EIAR identifies fifteen noise-sensitive locations (NSLs) in the environs of the proposed development.

SDCC Request:

- (b) *The identification of all operations conducted onsite as part of the development proposal that are likely to give rise to a public nuisance for the neighbouring noise sensitive receivers.*

Response:

Sections 9.57 and the following sections describe the various operating scenarios that have been assessed. Table 9.12 presents the sound power levels for the condenser units on the proposed development. Table 9.13 presents the sound power levels for the Gas Plant.

Appendix B presents full details of the noise modelling parameters and assumptions. Table B in Appendix 9.4 presents the sound power levels for the permitted developments on the same site.

SDCC Request:

- (c) *An assessment of the existing background (LA90,15 min) and ambient (LAeq,15 Min) acoustic environment at each receiver locations representative of the time periods that any noise impacts may occur. NOTE: For the purposes of the assessment background noise includes; noise of the surrounding environment excluding all noise sources currently located on-site.*

Response:

Sections 9.9 and the following sections present the full details and results of the baseline noise survey. Please note the following text in relation to the background noise survey:

- 9.10 *It should be noted that the noise criteria applied for the current phase of the campus development are based on noise data and assessment obtained before the Phase 1 site was operational and/or considered planning conditions issued for previous phases by the local authority and/or An Bord Pleanála (ABP) and therefore addresses any concern of 'background creep' and is considered a suitably conservative approach.*

SDCC Request:

- (d) Distances between the development and the nearest noise sensitive receiver and the predicted level of noise ($L_{Aeq, 15min}$) at each receiver for each development activity. These noise predictions must be conducted for all operational noise and the construction noise activities. The predicted level of noise should be assessed at the boundary of each receiver.

Response:

In the assessment of environmental noise, it is normal practice to assess environmental noise impact at the NSL façades, as the existing noise level at an NSL boundary is often higher due to the proximity to surrounding roads. As the development will, if permitted, run on a 24/7 basis, as such the protection of the indoor acoustic environment during night-time periods is key to avoiding sleep disturbance. Therefore, once the night-time noise criteria are met then noise effect during daytime periods is less and that for the night-time period.

Distances to the NSLs are presented in Table 1 below (and incorporated into the updated EIAR as Table 9.3); distances from the NSL façade to the site boundary and to the proposed development building are shown, which will be used for the assessment of construction noise.

Location	Distance from Site Boundary	Distance from Proposed Building
NP01	10	228
NP02	31	256
NP03	340	545
NP04	354	555
NP05	310	490
NP17	51	100
NP18	51	95
NP19	50	92
NP20	54	101
NP21	56	122
NP22	40	234
NP23	180	480
NP24	49	99
NP25	45	106
NP26	51	121

Table 1 Distances from application boundary and proposed development building to NSLs

Table 9.9 in the EIAR presents noise levels 10m distance from typical items of construction plant for various phases of the construction programme: foundations, steel erection, general construction and landscaping, based on data in BS 5228: 2009+A1:2014: *Code of practice for noise control on construction and open sites - Noise*.

Table 2, (which is incorporated into the updated EIAR as Table 9.11) presents construction noise levels for all fifteen NSLs for the different construction phases. As in the EIAR construction noise sources are assumed to be running 66% of the time. A site hoarding offering an acoustic screening of 5dB is included in the calculated values.

Location	Noise Level $L_{Aeq,1hr}$ for construction phase			
	Foundations ^A	Steel Erection ^A	General Construction ^A	Landscaping ^B
NP01	49	46	48	68
NP02	48	45	47	64
NP03	41	38	40	43
NP04	41	38	40	43
NP05	42	39	41	44
NP17	56	53	55	60
NP18	56	53	55	60
NP19	57	54	56	60
NP20	56	53	55	59
NP21	54	51	53	59
NP22	49	46	48	62
NP23	42	39	41	49
NP24	56	53	55	60
NP25	55	52	54	61
NP26	54	51	53	60

Table 2 Review of potential daytime construction noise impact

Note A Based on distances to proposed building

Note B Based on distances to application boundary

Note C Based on distance of 20m in the case of NP01, being considered more representative of the average distance to landscaping works in the north-east area of the site..

In all cases, the noise levels are within the adopted criterion of 70 dB $L_{Aeq,1hr}$ for weekday construction noise.

SDCC Request:

- (e) *A statement outlining any recommended acoustic control measures that should be incorporated into the development to ensure the use will not create adverse noise impacts on the occupiers of any neighbouring noise sensitive properties*

Response:

Section 9.80 in the updated EIA states:

- 9.80 *Building services noise / emergency site operation – Noise from external plant will be kept within criteria by adherence to the sound power levels presented in Appendix 9.4 through selection of plant items, incorporating appropriately specified in line attenuators where necessary. With due consideration as part of the detailed design process, this approach will result in the site operating within the constraints of the best practice guidance noise limits that have been adopted as part of this detailed assessment. In addition, noise emissions will be broadband in nature and will not contain any tonal or impulsive elements.*

This effectively means that the noise mitigation measure is the adherence to the sound power levels (in tables as referred to above) as maximum criteria for the selection of each item of plant at detailed design or procurement stage. Once the sound power levels are not exceeded, the resulting noise levels due to site operations will be within the environmental criteria adopted.

The EIA also states in section 9.86: 'noise emissions should be broadband in nature and should not contain any tonal or impulsive elements'.

SDCC Request:

- (f) *The applicant is required to demonstrate whether the propose[d] development can meet the standards set out by South Dublin County Council as detailed in Councils Standard condition below:*

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.

Response:

The table below presents background noise levels for night-time periods, assigned to each NSL, along with the predicted noise level from the proposed development alone. All predicted noise levels due to the proposed development are below the measured night-time background noise levels in all cases.

Location	Background Noise Level dB LA90,15min	Predicted Noise Level from Proposed Development only dB LAeq,T	Exceeds?
NP01	42	29	No
NP02	42	28	No
NP03	48	18	No
NP04	48	23	No
NP05	48	23	No
NP17	38	34	No
NP18	38	36	No
NP19	38	36	No
NP20	38	34	No
NP21	38	33	No
NP22	42	28	No
NP23	32	24	No
NP24	38	32	No
NP25	38	33	No
NP26	38	34	No

Table 2 Proposed development noise levels compared to night-time background noise levels

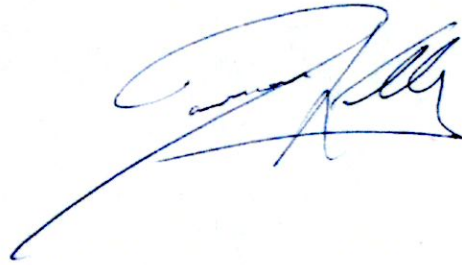
As the normal operation of the development will run on a 24/7 basis, the same development noise levels apply for daytime and evening periods and therefore the condition in paragraph (f) above is satisfied.

Furthermore, section 9.72 of the EIAR assesses the significance of the increases in noise levels due to the cumulative development, i.e. the permitted development on site along with the proposed development, at the closest NSLs. The effect range from 'not significant' to 'slight'. Also, section 9.91 of the EIAR assesses the combined noise levels of the Edgeconnex, Microsoft, and Interxion and demonstrates that the cumulative noise levels remain within the adopted criteria.

Yours sincerely,



MIKE SIMMS
Principal Acoustic Consultant



DAMIAN KELLY
Technical Director (Acoustics)