Table 17.2: Demolition and Construction Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
			No demolition of buildings within the swallow summer breeding season April – October. Pre-demolition check of building for nesting birds.						
		Habitat loss as a result of displacement by disturbance	None required						
Ground Conditions	Construction workers	Impact to human health from exposure to contaminated soils / dust / ground gases / water during enabling and construction works.	None required	Imperceptible	-	U	D	IR	T
	Adjacent site users	Impact to human health from exposure to contaminated dust during enabling and construction works.	None required	Imperceptible	-	U	I	IR	T
	Water environment (Baldonnel Stream)	Increased potential for leaching of contaminants from soils and mobilisation of contamination in surface water and groundwater during earthworks and foundation works. Also, contaminants introduced to surface water by construction activities through leakages/spillages.	None required	Imperceptible/not significant	-	U	D	IR	T
	Groundwater beneath the site (aquifers)		None required	Imperceptible/not significant	-	U	D	IR	T
	Agricultural Land	Loss of agricultural land	None required	Imperceptible	-	U	D	IR	P
Climate Change	**CCR**								
	Buildings and Infrastructure	Extreme rainfall events could result in the erosion of stockpiles and resultant silting of drainage assets.	None required	Imperceptible to Not significant	-	U	D	R	T
	Buildings and Infrastructure	Extreme rainfall events and their secondary impacts could affect the ability to undertake certain construction activities leading to programme delays (e.g. pouring of concrete and asphalt) increasing project costs.	None required	Imperceptible to Not significant	-	U	D	R	T
	Environment	Extreme rainfall events could result in increased runoff of concrete or cement products nearby watercourses.	None required	Imperceptible to Not significant	-	U	I	R	T
	Human Health	Heatwaves, higher temperatures and drought conditions could impact dust generated during construction activities.	None required	Imperceptible to Not Significant	-	U	D	R	T
	Human Health	Winds gusts could result in the damage of stockpiles. Secondary impacts could include site personnel welfare impacts.	None required	Imperceptible to Not Significant	-	U	D	R	T
	Human Health	Heatwaves, higher temperatures could impact on site construction personnel welfare, for example,	None required	Imperceptible to Not Significant	-	U	D	R	T

Table 17.2: Demolition and Construction Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
		causing heat stress and unsafe working conditions.							
	ICCI								
	Population and Human Health Sensitive Receptors	Potential interactions of climate change with the identified Population and Human Health effects	None required	Imperceptible to Not Significant	-	U	D	R	Mt
	Transport Sensitive Receptors	Potential interactions of climate change with the identified transport effects.	None required	Imperceptible to Not Significant	-	U	D	R	Mt
	Air Quality Sensitive Receptors	Exposure of sensitive receptors to dust from demolition and construction activities.	None required	Not Significant	-	U	D	R	Mt
	Air Quality Sensitive Receptors	Exposure of sensitive receptors to dust from demolition and construction activities.	None required	Not Significant	-	U	D	R	Mt
	Noise and Vibration Sensitive Receptors	Potential interactions of climate change with the identified Noise and Vibration effects.	None required	Imperceptible to Not Significant	-	U	D	R	Mt
	Water Resources and Flood Risk Sensitive Receptors	Exposure of sensitive receptors to water from demolition and construction activities.	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Ecology Sensitive Receptors	Exposure of sensitive receptors to demolition and construction activities.	None required	Imperceptible to Not Significant	-	U	I	IR	Mt
	Ground Conditions Sensitive Receptors	Exposure of sensitive receptors (water) to demolition and construction activities	None required	Imperceptible to Not Significant	-	U	D	R	Mt
	Waste Sensitive Receptors	Potential interactions of climate change with the identified Waste effects	None required	Imperceptible to Not Significant	-	U	D	R	Mt
	Material Assets Sensitive Receptors	Exposure of sensitive receptors (surface water) to demolition and construction activities	None required	Not Significant	-	U	D	R	Mt
	Material Assets Sensitive Receptors	Exposure of sensitive receptors (water supply) to demolition and construction activities	None required	Imperceptible to Not Significant	-	U	I	R	Lt
	GHG Emissions								
	Global Climate	GHG Emissions	None required	Slight to Not Significant (not significant)	-	IR	D	L	LT
Waste	Landfill Sites	Effect on void space	None required	Not Significant to Slight	-	L	D	IR	P
Material Assets	Power and Electrical Supply	Increased demand on the surrounding network	None required	Imperceptible	+/-	L	D	IR	T
	Gas Supply				+/-	L	D	IR	T
	Foul Water Infrastructure				+/-	L	D	IR	T
	Water Supply				+/-	L	D	IR	T

Table 17.2: Demolition and Construction Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
	Telecommunications				+/-	L	D	IR	T
	Surface Water Infrastructure	Risks of contamination from increased run-off, machinery on site, concrete activities, and/or accidental spillages.			+/-	L	D	IR	T
Landscape and Visual	**Landscape**								
	Site	Removal of vegetation and dwelling with stripping of soil and change of topography to accommodate proposed development and landscaping	None required	Not significant / Slight	-	L	D	IR	T
	Baldonnel Stream	Disturbance impacts on function and character value.	None required	Not significant / Slight	-	L	D	IR	T
	Newcastle Lowlands LCA	Construction activity within urban fringe area of LCA that has been allocated for development	None required	Not significant / Slight	-	L	I	R	T
	The Grand Canal	Disturbance of linked green infrastructure affecting landscape context and setting	None required	Not significant / Slight	-	L	I	R	T
	NIAH Listed features	Disturbance and impacts on character amenity and tranquillity	None required	Not significant / Slight	-	L	I	R	T
	Road Corridors	Change to the townscape associated with the road corridors	None required	Imperceptible	-	L	D	R	T
	Visual								
	VP1-11	Disturbance and construction impacts affect the visual amenity for receptors (Low – Medium)	None required	Imperceptible	-	L	I	R	T
Cultural Heritage	On site archaeology	Knowledge gained by preservation by record	Programme of archaeological monitoring of topsoil stripping in the area immediately surrounding the possible prehistoric or early historic ditch and by preservation by record (excavation) of any features exposed prior to construction.	Imperceptible/Not Significant	+	L	D	IR	P
	Built heritage	None identified	None required	Imperceptible	+/-	U	D	R	T

Notes:

* - = Negative/ + = Positive / +/- = Neutral; R = Reversible, IR = Irreversible; D = Direct, ID = Indirect; L= Likely, U = Unlikely; M = Momentary, B = Brief, T= Temporary, St = Short-term, Mt = Medium-term, Lt = Long-term, P = Permanent.

** Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant, Profound.

Operation Residual Effects

17.11 Table 17.3 summarises the residual effects which have been identified by the individual technical assessments as likely to arise upon completion and operation of the proposed development. Where **significant positive** effects are likely these are highlighted in bold green and where **significant negative** effects are predicted these are highlighted in bold red.

17.12 The following significant positive environmental effects for the operation stage have been identified and are highlighted in green text in Table 17.3.

Landscape and Visual:

- Enhancement of the landscape of the Baldonnel Stream with new riverine planting and features including a wetland meadow and pond

17.13 No significant negative environmental effects have been identified.

Table 17.3: Operation Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
Population and Human Health	Local Residents and Economy	Creation of Employment (Small area scale)	None required	Not-significant - Slight	+	L	D	IR	Lt - P
	Local Residents and Economy	Creation of Employment (Electoral division and South Dublin County scale)	None required	Imperceptible	+	L	D	IR	Lt - P
	Local residents	Air quality effects	None required	Not significant – Slight	-	L	D/I	IR	Lt - P
	Local residents	Noise effects	None required	Not Significant – Slight	-	L	D	IR	Lt - P
	Local residents	Transport effects	None required	Not Significant – Slight	-	L	D	IR	Lt - P
	Local residents	Amenity	None required	Imperceptible	-	L	D	IR	Lt - P
Transport and Accessibility	Pedestrians	Change in Pedestrian Severance, Delay, Amenity, Fear and Intimidation	None required	Slight	-	L	R	D	Lt to P
	Road users	Change in Driver Delay	None required	Slight	-	L	R	D	Lt to P
	Road users, pedestrians and cyclists	Change in Accidents and Safety	None required	Slight	-	L	R	D	Lt to P
Air Quality	Existing Off-site Human Health	Change in NO_2, PM_{10} and $PM_{2.5}$ levels due to vehicle emissions	None required	Not significant	-	L	D	IR	Lt to P
	Existing Off-site Human Health	Change in NO_2 levels due to Phase 1 and Phase 2 emergency generators	None required	Imperceptible	-	L	D	IR	Lt to P
	Existing Off-site Human Health	Change in NO_2 levels due to Phase 1 and Phase 2 emergency generators	None required	Imperceptible	-	L	D	IR	Lt to P
Noise and Vibration	Local Residents (All NSRs)	Plant noise under worst case operation conditions (Scenario 1)	None required	Slight	-	L	D	IR	Lt to P
	Local Residents (All NSRs)	Plant noise under vest-case operation conditions (Scenario 2)	None required	Slight	-	L	D	IR	Lt to P
	Local Residents (All NSRs)	Plant noise under emergency operation conditions (Scenario 3)	None required	Slight	-	L	D	IR	Lt to P
Water Resource and Flood Risk	Fluvial Flood Risk	Flood risk from the Baldonnel Stream	Site-Specific Flood Risk Mitigation Plan and associated maintenance regime	Slight to Moderate	+	L	D	IR	LT

Table 17.3: Operation Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
	Surface Water Flood Risk	Changes to flood risk as a result of changes to the surface water runoff regime of the site	None Required	Slight to Moderate	+	L	D	IR	LT
	Groundwater	Potential to alter local groundwater flow paths and levels	None Required	Imperceptible/Not Significant	-	L	D	IR	LT
	Water Supply and Foul Drainage Network	Water Supply and Foul Drainage Capacity During Operation	None Required	Imperceptible	+/-	L	D	IR	LT
Ecology	South Dublin Bay and River Tolka SPA	Pollution Ecological enhancement	None required	Imperceptible	+/-	L	I	IR	P
	Grand Canal pNHA and Liffey Valley pNHA	Pollution Ecological enhancement	None required	Imperceptible to Not-Significant	+/-	L	I	IR	P
	Baldonnel stream	Ecological enhancement	None required	Slight	+	L	D	R	P
	Terrestrial habitats	Ecological enhancement	None required	Imperceptible	+	L	D	R	P
	Bats	Disturbance through lighting	None required	Imperceptible	+	L	D	R	P
	Badger	Foraging habitat enhancement	None required	Imperceptible	+	L	D	R	P
	Birds	Foraging habitat enhancement	None required	Imperceptible	+	L	D	R	P
Ground Conditions	Adjacent site users	Impact to human health from exposure to residual contaminated soils / dust / ground gases / water.	None required	Imperceptible	-	U	I	IR	Lt to P
	Future site users		None required	Imperceptible	-	U	D	IR	Lt to P
	Water environment (Baldonnel Stream)	Contaminants released by operation activities through leakages/spillages.	None required	Imperceptible/Not significant	-	U	D	IR	Lt to P
	Groundwater beneath the site (aquifers)		None required	Imperceptible/Not significant	-	U	D	IR	Lt to P
Climate Change	**CCR**								
	Buildings and Infrastructure	Extreme rainfall events and increased frequency of intense rainfall events could result in the overwhelming of drainage assets.	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Buildings and Infrastructure	Extreme rainfall events could lead to flooding of the underground foundations or services (electrical cables)	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Buildings and Infrastructure	Extreme rainfall events could lead to fluvial flooding, including of the Baldonnel stream high-lighted within the FRA; culvert has potential blockages	None required	Imperceptible to Not Significant	-	U	D	R	Lt

Table 17.3: Operation Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
	Buildings and Infrastructure	Extreme rainfall events could lead to flooding of the drainage assets	None required	Imperceptible to Not Significant	-	U	I	R	Lt
	Human Health	Increased frequency of intense rainfall events could result in wet pavement surfaces leading to reduced skid resistance and unsafe conditions for site personnel.	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Environment	Increased frequency and severity of extreme heat events (i.e., heat waves) could result in the landscape design being compromised (e.g., tree and shrubs die).	None required	Imperceptible to Not Significant	-	U	I	R	Lt
	Buildings and Infrastructure	Increased frequency and severity of extreme heat events could result in overheating of the electrical equipment (e.g. data servers).	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Buildings and Infrastructure	Transformers affected by urban heat islands and coincident air conditioning demand leading to overloading in summer months.	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Buildings and Infrastructure	High temperatures and heatwaves could result in overheating and unsuitable conditions e.g., discomfort for occupants in ancillary buildings and office spaces	None required	Imperceptible to Not Significant	-	U	D	IR	Lt
	Buildings and Infrastructure	Heatwaves, higher temperatures could damage the building structure	None required	Imperceptible to Not Significant	-	U	D	IR	Lt
	Buildings and Infrastructure	Heatwaves, high temperatures and increased humidity could lead to lightning striking the data centre resulting in damage to infrastructure or loss of power.	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Infrastructure and Human Health	Prolonged periods of drought could lead to vegetation drying, increasing risk of grassland fires near the Data centre. Secondary impacts include infrastructure damage and vegetation	None required	Imperceptible to Not Significant	-	U	I	IR	Lt
	Human Health	Prolonged periods of drought could affect water and potable water availability.	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Buildings and Infrastructure and human health	Freeze-thaw could damage the proposed development, e.g. cracking, deformation, that reduces the proposed development's service life.	None required	Imperceptible to Not Significant	-	U	D	IR	Lt
	ICCI								
	Population and Human Health Sensitive Receptors	Potential interactions of climate change with the identified Population and Human Health effects	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Transport Sensitive Receptors	Potential interactions of climate change with the identified transport effects.	None required	Imperceptible to Not Significant	-	U	D	R	Lt

Table 17.3: Operation Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
	Noise and Vibration Sensitive Receptors	Potential interactions of climate change with the identified Noise and Vibration effects	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Water Resources and Flood Risk Sensitive Receptors	Exposure of sensitive receptors to water from operational stage	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Ecology Sensitive Receptors	Potential interactions of climate change with the identified Ecological effects	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Ground Conditions Sensitive Receptors	Potential interactions of climate change with the identified Ground Conditions effects	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Waste Sensitive Receptors	Potential interactions of climate change with the identified Waste effects	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	Material Assets Sensitive Receptors	Potential interactions of climate change with the identified Material effects	None required	Imperceptible to Not Significant	-	U	D	R	Lt
	GHG Emissions								
	Global Climate	GHG Emissions	None required	Slight to Not Significant	-	IR	D	L	LT
Waste	Landfill Sites	Effect on void space	None required	Not significant to slight	-	L	D	IR	P
Material Assets	Power and Electrical Supply	Increased demand on the surrounding network	None required	Imperceptible	+/-	L	D	IR	P
	Gas Supply				+/-	L	D	IR	P
	Foul Water Infrastructure				+/-	L	D	IR	P
	Water Supply				+/-	L	D	IR	P
	Telecommunications				+/-	L	D	IR	P
	Surface Water Infrastructure	Risk of contamination to surrounding water environment.			+/-	L	D	IR	P
Landscape and Visual	**Landscape – Operation Year 5**								
	Site	Creation of new topography and habitat types with increased tree planting and connection with the Baldonnel stream landscape feature	None required	Imperceptible	+	L	D	IR	Lt to P
	Baldonnel Steam	Enhancement with new riverine planting and features including wetland meadow and pond	None required	**Moderate**	+	L	D	R	Lt to P
	Newcastle Lowlands LCA	Additional data centre development within a business park on the urban fringe with extensive boundary treatments that soften and assimilate the building into the landscape	None required	Imperceptible	-	L	ID	IR	Lt to P

Table 17.3: Operation Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	L U	D I	R IR	M B T St Mt Lt P**
	The Grand Canal	Enhancement of linked green infrastructure features and increased commercial development within setting.	None required	Not Significant / Slight	-	L	ID	IR	Lt to P
	NIAH Listed features	Increased commercial development within setting.	None required	Not Significant / Slight	-	L	ID	IR	Lt to P
	Road Corridors	New commercial element within the transition from townscape to land-scape.	None required	Imperceptible	+	L	ID	IR	Lt to P
	Visual – Operation Year 5								
	VP: 03, 05, 10	Not visible	None required	Imperceptible	-	L	ID	IR	Lt to P
	VP04	A small addition to the view, in context with surrounding character	None required	Not Significant / Slight	-	L	ID	IR	Lt to P
	VP: 01; 02; 06; 08; 09, 11	A small addition to the view, in context with surrounding character	None required	Imperceptible	-	L	ID	IR	Lt to P
	VP: 07	A notable change within the view in keeping with the character of the area.	None required	Not Significant / Slight	-	L	ID	IR	Lt to P
Cultural Heritage	On site archaeology	None identified	None required	Imperceptible	+/-	U	D	IR	P
	Built heritage (TOR2-4)	Change to visual qualities of setting	None required	Imperceptible/ not significant	-	L	D	IR	P
	Built heritage (TOR8, 16, 17, 18-22)	None identified	None required	Imperceptible	+/-	U	D	IR	P

Notes:

* - = Negative/ + = Positive / +/- = Neutral; R = Reversible, IR = Irreversible; D = Direct, ID = Indirect; L= Likely, U = Unlikely; M = Momentary, B = Brief, T= Temporary, St = Short-term, Mt = Medium-term, Lt = Long-term, P = Permanent.

** Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant, Profound.

GLOSSARY OF TERMS

Accurate Visual Representations	A static or moving image which shows the location of a proposed development as accurately as possible; it may also illustrate the degree to which the development will be visible, its detailed form or the proposed use of materials. AVRs are produced by accurately combining images of the proposed building with a representation of its context.
Ambient Noise Level	The totally encompassing sound in a given situation at a given time, usually composed of a sound from many sources both distant and near (LAFeq,T).
Amenity	A pleasant or advantageous aspect of the environment.
An Bord Pleanála	Ireland's national independent planning body.
Annual Probable Sunlight Hours	The Annual Probable Sunlight Hours (APSH) is a measure of sunlight that a given window may expect over the period of a year, and where there is no obstruction, equates to a maximum of 1,486 hours. Sunlight is measured using a sun indicator which contains 100 spots, each representing 1 % of APSH (i.e. 14.86 hours of the total APSH).
Applicant	Vantage Data Centers DUB11 Limited
Application	Means the full planning application, for the proposed development on the site.
A-weighting Sound Pressure Level	The sound pressure level with the A-weighting applied. The A-weighting is used for most environmental noise measurements and is used to weight a spectrum of sound to match the sensitivity of the human ear.
Background Sound/Noise Level	These are amongst the lowest noise levels measured over a given period of time and exclude short term, intermittent noise sources. The background noise level is quantified by the LA90 descriptor and is therefore the level which is exceeded for 90% of a given period of time.
Baseline Studies	Studies of existing environmental conditions which are designed to establish the baseline conditions against which any future changes can be measured or predicted.
Biodiversity	The diversity, or variety of plants and animals and other living things in a particular area of region. It encompasses landscape diversity, ecosystem diversity, species diversity and genetic diversity.
Brief Effects	Effects lasting less than a day
Climate Change Resilience	An assessment of the vulnerability of the proposed development to extreme weather and projected climate change.
Completed Development	A development scheme which has been build out and is operational.
Construction Environmental Management Plan	A documented management system with environmental procedures to monitor residual effects of the demolition and construction stage of a development.
Construction Logistics Plan	A documented travel plan specific for a construction site.
Construction Method Statement	A document which addresses the health and safety risks to workers and other personnel on-site during the demolition and construction stage of the development.
Cumulative Effects	Effects that result from incremental changes caused by other past, present or reasonably foreseeable actions.
Cumulative Developments	Developments that have received a resolution to grant planning permission or have a signed legal agreement in place. They are likely to be delivered concurrently with the Proposed Development assessed in the EIA.
Decibel	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1 / s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
Desk Study	A non-intrusive study and review of all available information pertaining to a site, including historical records, collated and monitored data, and consultation with relevant stakeholders.
Diffusion Tube	A passive sampler used for collecting NO_2 in the air.
Directive	European Union (EU) Directives impose legal obligations on European Member States. They are binding as to the results to be achieved but allow individual states the right to decide the form and methods used to achieve the results.
EIA Scoping	An initial stage in determining the nature and potential scale of the environmental impacts arising from a proposed development and assessing what further studies are required to establish their significance.
EIA Scoping Opinion	A written statement of the opinion of the relevant planning authority as to the information to be provided in the Environmental Statement.
EIA Screening	An initial stage in which the need for EIA is considered in respect of a development. Some developments are automatically subject to EIA by means of their inevitable size, nature and effects (Annex I developments). Other projects are made subject to EIA because it is anticipated that they are likely to have significant environmental effects (Annex II Developments).
Emission	A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.
Environmental Impact Assessment	A process by which information about the environmental effects of a development is collected and taken into account by the relevant decision-making body before a decision is given on whether the development should go ahead.
Environmental Impact Assessment Report	A statement that includes such information that is reasonably required to assess the environmental effects of a development.
Environmental Protection Agency	An independent public body established under the Environmental Protection Agency Act , 1992, responsible for protecting and improving the environment.
Equivalent Continuous A-Weighted Sound Pressure Level	The L_{Aeq} is an energy average and defined as the level of sound which, over a given period of time, would equate to the same A-weighted sound energy as the actual fluctuating sound.

Façade	The front or face of a building.
Fit-out	Installation of all non-substructure and non-superstructure items such as electrical water services, as well as final internal finishings.
Frequency	In sound, the number of cycles per second of a pressure fluctuation and frequency in sound is proportional to its pitch. Different frequencies are divided into octave and one third octave bands.
Frequency of Effects	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
Frequency Weightings	Weightings can be applied to a spectrum of sound and act as a filter to account for different sensitivities and conditions.
Gross External Area	A measure of area of a building measured externally at each floor level.
Heavy Goods Vehicle	A vehicle with a gross vehicle weight greater than 3.5 tonnes.
Hydrotreated Vegetable Oil	A paraffinic bio-based liquid fuel originating from many kinds of vegetable oils.
Imperceptible Effect	An effect capable of measurement but without significant consequences
In-Combination Climate Change Impacts	An assessment of the additive impact that climate and climate change may have on impacts identified by other environmental topics as a result of the proposed development, now and in future years.
Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Long-term Effects	Effects lasting fifteen to sixty years.
Maximum Noise Level	The maximum instantaneous noise level measured during a given period of time. The time weighting to which the meter is set for this measurement parameter is always indicated by either an F or S.
Medium-term Effects	Effects lasting seven to fifteen years.
Minimum Noise Level	The minimum instantaneous noise level measured during a given period of time. The time weighting to which the meter is set for this measurement parameter is always indicated by either an F or S.
Mitigation	Any process, activity of thing designed to avoid, reduce or remedy adverse environmental effects likely to be caused by a development project.
Mitigation Measure	Measure aiming at reducing an adverse environmental effect.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
Momentary Effects	Effects lasting from seconds to minutes
Multifuel Generation Plant	A power generation plant with the ability to operate on natural gas and HVO.
National Planning Framework (2018)	At the national level, planning policy is contained within the National Planning Framework (NPF) 2018. The Department of Housing Planning and Local Government, on behalf of the Government of Ireland, published the NPF in February 2018 and is the Government's high-level strategic plan for shaping the future growth and development of our country out to the year 2040.
National Development Plan 2021-2030	The National Development Plan 2021-2030 (NDP) sets out the investment priorities that will underpin the implementation of the NPF, through a total investment of approximately €165 billion. Finalisation of the NPF alongside the ten-year NDP will culminate one plan to guide strategic development and the infrastructure investment at the national level.
Negative/adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Nitrogen dioxide	Road transport and the burning of fossil fuels for power are the main sources of Nitrogen dioxide. In addition to being a greenhouse gas it also contributes to photochemical smog formation. It is an irritant to the respiratory system.
Noise Rating Level	This is a single figure value derived by plotting a noise spectrum against a set of curves. The curve under which the spectrum fits is the resulting Noise Rating Level.
Non-Technical Summary	A summary of the Environmental Statement in 'non-technical language'.
Normalised Element Level Difference	The normalised difference in sound level between a pair of rooms via a small element such as a trickle ventilator. The level difference in octave bands is normalised to a reference amount of absorption.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
Objective EE	A classification under the South Dublin County Development Plan 2022-2028: to provide for enterprise and employment uses.
Ordnance Datum	Land levels are measured relative to the average sea level at Newlyn, Cornwall. This average level is referred to as 'Ordnance Datum'.
Particulate Matter	Discrete particles in ambient air, sizes ranging between nanometres (nm, billionths of a metre) to tens of micrometres (µm, millionths of a metre).
Pathways	The routes by which impacts are transmitted through air, water, soils or plants and organisms to their receptors.
Percentile Level	A-weighted sound pressure level obtained using time-weighting F, which is exceeded for N% of a specified time interval. An example of this is background noise which is quantified with the LA90 descriptor, which is the A-weighted level which is exceeded for 90% of the measurement period.
Permeant Effects	Effects lasting over sixty years.
Plant	A building's generator, heating, ventilation, and/or electricity-production system.
Positive Effects	A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Profound Effects	An effect which obliterates sensitive characteristics.
Quality of Effects	An effect that is positive, neutral, or negative.
Receptor (Sensitive)	A component of the natural, created, or built environment such as human being, water, air, a building, or a plant that is affected by an impact.

Residual Effects	Those effects of a development that cannot be mitigated following implementation of mitigation proposals.
Reverberation Time	The time that would be required for the sound pressure level to de-crease by 60 dB after the sound source has stopped. The descriptor T, often includes other nomenclature to describe the type of reverberation time measurement or if the reverberation time is an average taken for specific frequencies.
Reversible Effects	Effects that can be undone, for example through remediation or restoration.
Regional Spatial and Economic Strategy (2019)	The Draft Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly includes Regional Policy Objectives.
Regional Policy Objective 8.25	A policy objective under the RSES which outline the responsibility of local authorities to support the implementation of ICT infrastructures such as data storage facilities at appropriate locations.
Risk Assessment	An assessment of the likelihood and severity of an occurrence.
Short-term Effects	Effects lasting one to seven years.
Significance of Effect	The impact of an effect on a receptor defined at one of the following significance levels: imperceptible, not-significant, slight, moderate, significant, very significant and profound.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Site	Located at Irish grid reference O 03687 30780, within Profile Park, Dublin.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Sound Exposure Level	A level of a sound, of 1 s duration, that has the same sound energy as the actual noise event considered.
Sound Power Level	This is the total sound energy radiated from a given source. The sound power Level is 10 times the logarithm to base 10 of the ratio of the reference sound power level (1x10-12) and the measured power.
Sound Pressure Level	This is the unweighted or linear level which is measured prior to any weightings being applied. The sound pressure level is 20 times the logarithm to base 10 of the ratio of the reference sound pressure (2x10-5) and the measured sound pressure.
Sound Reduction Index	The laboratory measured sound insulation properties of a material or building element in octave or third octave bands.
South Dublin County Council	The South Dublin County Council (SDCC) which is the local planning authority for South Dublin County.
South Dublin County Council Corporate Plan	Identifies South Dublin County Council's objectives and strategies for each of the councils' principal activities.
South Dublin County Council Development Plan 20222028	The relevant statutory development plan for the Site, adopted in August 2022.
Specific Noise Level	The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source (the noise source under investigation) over a given time interval (LAeq,T).
Standardised Weighted Level Difference	The standardised, weighted difference in sound level between a pair of rooms, stated as a single figure. The level difference in octave bands is first normalised to a reference reverberation time and then plotted against a set of reference curves to establish a single figure value.
Statutory Consultees	Groups or bodies that, by law, must be consulted as part of the planning application process for EIA development.
Structure Borne Noise	Audible noise caused by the vibration of elements of a structure, the source of which is within a building or structure with common elements.
Study Area	Defined impact assessment area surrounding the site relative to the technical topic in question and determined based professional judgement.
Substructure	Elements of a development below ground level, typically basements and foundations.
Superstructure	Elements of a development above ground principally the mega frame, supporting core and outer shell cladding.
Sustainable Development	Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
Temporary Effects	Effects lasting less than a year.
Time Weightings	A time weighting to denote the response of the sound level meter. For most measurements the Fast time weighting is selected (F) how-ever, a slow time weighting (S) is often used to for the measurement train noise and vibration.
Topography	The natural and man-made features of an area collectively.
Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Vibration	The periodic movements of structures transferred by ground and parts of the building, due to events such as train pass-by, piling, blasting or use of heavy machinery.
Vibration Dose Value	The Vibration Dose Value is the vibration dose a person is expected to be exposed to over the course of the day or night. It is given by the fourth root of the time integral of the fourth power of the acceleration after it has been frequency-weighted.
Weighted Sound Reduction Index	A single number which represents the sound reduction of a material. It is derived by plotting the sound reduction index against a set of reference curves. The curves are shifted until a best-fit is established and the curve which best fits the sound reduction spectrum is used to represent the single figure value.

ABBREVIATIONS

AA	Appropriate Assessment
AADT	Annual Average Daytime Traffic Flows
ABP	An Bord Pleanála
ADMS	Atmospheric Dispersion Modelling System
AEP	Annual Exceedance Probability
AOD	Above Ordnance Datum
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Standards
BAT	Best Available Technique
BH	Borehole
BMP	Biodiversity Management Plan
BT	British Telecommunications
CAFE	Directive 2008/50/EC on ambient air quality and cleaner air for Europe
CCR	Climate Change Resilience
CCTV	Closed Circuit Television
CDE	Construction, Demolition and Excavation
CDM	Construction Design and Management
CEMP	Construction Environmental Management Plan
CFA	Continuous Flight Auger
CFRAM	Catchment Flood Risk Assessment and Management
CGI	Computer Generated Image
CIEEM	Chartered Institute of Ecology and Environmental Management
CLEA	Contaminated Land Exposure Assessment
CLOCS	Construction Logistics and Community Safety
CLP	Construction Logistics Plan
CLR	Contaminated Land Report
CMP	Construction Management Plan
CO	Carbon Monoxide
COMAH	Control of Major Accident and Hazard
COSHH	Control of Substances Hazardous to Health
COVID 19	Coronavirus Disease
CSO	Central Statistics Office
CTMP	Construction Traffic Management Plan
DAS	Design and Access Statement
DC	Data Center
DCCOPP	Data Centre Connection Offer Process and Policy
DMP	Dust Management Plan
DOAS	Dedicated Outside Air-handling Units
DS	Data Center
DSMP	Delivery and Servicing Management Plan
EB	East Bound
EC	Environmental Commissions
ED	Electoral Division
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EIA	Environmental Impact Assessment
EMR	East Midlands Region
EMRA	Eastern and Midlands Regional Assembly
EPA	Environment Protection Agency
EPUK	Environmental Protection UK
EQS	Environmental Quality Standards
ERFB	Eastern Regional Fisheries Board
ESA	Ecological Survey Area
ESB	Electricity Switch Board
EU	European Union
EV	Electric Vehicle
EVCP	Electric Charging Point
FFL	Finished Floor Level
FM	Facilities Management
FRA	Flood Risk Assessment
FTE	Full Time Equivalent
GA	General Arrangement
GAC	Generic Assessment Criteria
GDA	Greater Dublin Area
GDSDS	Greater Dublin Strategic Drainage Strategy
GEA	Gross External Area
GFA	Gross Floor Area
GHG	Greenhouse Gases
GIA	Gross Internal Area
GIS	Geographical Information System
GLVIA	Guidance for Landscape and Visual Impact Assessment

GNI	Gas Networks Ireland
GSI	Geological Survey of Ireland
GTV	Groundwater Threshold Values
GWB	Groundwater Body
GWDTE	Groundwater Dependent Terrestrial Ecosystem
ha	Hectare
HDV	Heavy Duty Vehicles
HGV	Heavy Goods Vehicle
HRU	Heat Recovery Units
HSA	Health and Safety Authority
HV	High Voltage
HVO	Hydrotreated Vegetable Oil
IAQM	Institute of Air Quality Management
ICCI	In-Combination Climate Change Impacts
ICT	Information and Communications Technology
ID	Indirect
IDF	Intermediate Distribution Frame
IE	Industrial Emissions
IED	Industrial Emissions Directive
IEMA	Institute of Environmental Management and Assessment
IGI	Geologist of Ireland
IGR	Irish Grid Reference
IGV	Interim Guideline Values
IMS	Industrial Marine Silencers
IPPC	Integrated Pollution Prevention Control
IR	Irreversible
ISO	International Organisation of Standards
ITS	Irish Traffic Surveys
LCA	Landscape Character Area
LDV	Light Duty Vehicle
LED	Light-Emitting Diode
LGV	Light Goods Vehicles
LT	Long Term
LV	Low Voltage
LVHIA	Landscape, Visual and Heritage Impact Assessment
LVIA	Landscape and Visual Impact Assessment
m	Metre
m AOD	Metres Above Ordnance Datum
MCPD	Medium Combustion Plan Directive
MFGP	Multifuel Generation Plant
MMP	Materials Management Plan
MPOE	Main Point of Entry
Mt	Medium Term
MV	Medium Voltage
MW	Megawatts
N/A	Not applicable
NB	North Bound
NBDC	National Biodiversity Data Centre
NDP	National Development Plan
NHA	National Heritage Area
NIAH	National Inventory of Architectural Heritage
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxide
NPF	National Planning Framework
NPWS	National Parks and Wildlife Services
NRA	National Roads Authority
NSS	National Spatial Strategy
nZEB	Nearly Zero Energy Building
NRA	National Roads Authority
NSR	Noise Sensitive Receptor
NTS	Non-Technical Summary
NWCPO	National Waste Collection Permit Office
OCEMP	Operational CEMP
OPW	Office of Public Works
PAH	Polycyclic Aromatic Hydrocarbons
PC	Process Contribution
PCE	Pre-Connection Enquiry
PEC	Process Environmental Contribution
PEM	Project Environmental Manager
PI	Performance Indicator
PIA	Personal Injury Accident
$PM_{2.5}/PM_{10}$	Particulate Material of a particular size fraction
PPE	Personal Protective Equipment
PPG	Planning Practice Guidance
PPV	Peak Particle Velocity
PV	Photovoltaic

RFI	Request for Information
RPO	Regional Policy Objective
RSES	Regional Spatial and Economic Strategy
SA	Small Area
SAC	Special Area of Conservation
SB	South Bound
SCR	Special Catalytic Reduction
SDCC	South Dublin County Council
SFRA	Strategic Flood Risk Assessment
SID	Strategic Infrastructure Development
SRF	Soil Recovery Facility
SGV	Soil Guideline Values
SPA	Special Protection Area
SPOSH	Significant Potential of Significant Harm
ST	Short Term
SuDS	Sustainable Drainage Systems
SWMP	Site Waste Management Plan
TA	Transport Assessment
TRL	Transport Research Laboratory
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	U.S. Environmental Protection Agency
VP	View Point
WB	West Bound
WMP	Waste Management Plan
WMU	Water Management Unit
ZOI	Zone of Influence
ZTV	Zone of Theoretical Visibility