Inspector's Report
ABP-317802-23

Development	Construction of 2 adjoined single storey data centres with associated site works. An Environmental Impact Assessment Report (EIAR) has been submitted with this application.
Location	Site within the townland of Ballymakaily, West of Newcastle Road (R120), Lucan, Co. Dublin.
Planning Authority	South Dublin County Council
Planning Authority Reg. Ref.	SD22A/0333
Applicant(s)	EdgeConneX Ireland Limited.
Type of Application	Permission
Planning Authority Decision	Refusal of Permission
Type of Appeal	First Party v. Refusal
Appellant(s)	EdgeConneX Ireland Limited.
Observer(s)	John Callaghan Sustainability 2050
Date of Site Inspection	27th September 2024.
Inspector	Enda Duignan

Contents

1.0 Site Location and Description

1.1. The appeal site has a stated area of c. 5.14ha. and is located within the townland of Ballymakaily, Lucan, Co. Dublin. The site has an eastern boundary with the realigned R120 and is positioned to the south of the Grand Canal. The site forms part of a larger data centre campus which is currently under construction. Permission has been previously granted for various phases of the overall development which I will discuss in further detail below and in Section 4 of this report. Prior to the submission of the application, the site comprised open grassland which was bound and diagonally bisected by mature hedgerows. The majority of the site now comprises a construction compound and an extensive area of surface level car parking associated with the development of the wider permitted data centre campus (referred to herein as the Facility Campus). I note that the existing hedgerows within the site have been retained and secured by protective fencing. There was previously a vehicular entrance and connecting road in the site's north-eastern corner which provided access from the R120 to the former agricultural buildings to the north of the site (outside red line boundary). The vegetation and trees within this portion of the site have now been cleared and the access to the site has been blocked by construction hoarding along the R120. A large electricity pylon is located in the northern portion of the site and the power cables run across the site on a west-northwest to east-southeast axis. The site levels have been modified along the eastern boundary of the site through the provision of a landscaped earthen embankment as permitted under SD19A/0042 (ABP-305948-19).

1.2. There is an existing vehicular access to the Facility Campus to the immediate south of the site. To the south of the access road are the data centres and power plants permitted under Ref. SD19A/0042 (ABP-305948-19) (DUB 04). To the west and south-west of the site are the data centres and the gas-powered generation plant buildings permitted under Ref. SD21A/0042 (DUB 05). To the immediate west of the appeal site is the substation permitted under Ref. SD21A/0105. I note that all of which are at a relatively advanced stage of construction. Lands to the north of the site and to the south of the Grand Canal are within the control of the Applicant. This is a c. 80-90m corridor which was permitted (SD19A/0042 (ABP-305948-19)) to be developed as a public park and green infrastructure buffer between the Grand Canal Corridor and the

Facility Campus. I note that the works within this portion of the wider landholding are also relatively advanced

1.3. To the north-east of the site is a dormer style dwelling which is located on the corner of the R120 and the Grand Canal towpath. To the east of the site, on the opposite side of the R120 is a data centre development which is within the control of the Applicant. A row of residential properties lies further to the south. The data centre development to the site's east is located within Grange Castle Business Park which includes international companies such as Microsoft, Pfizer, Interxion etc. To the north-east of the site, on the northern side of the Grand Canal is the Clonburris Strategic Development Zone (SDZ).

2.0 Proposed Development

2.1. Planning permission is sought for development comprising the construction of 2 no. adjoined single storey data centres with associated office and service areas with an overall gross floor area (GFA) of 15,274sq.m. The proposed data centre halls are known as DUB 06 and will have a GFA of 12,859sq.m and a maximum height of c. 12.9m. I note that plant in form of mechanical cooling units is proposed on the roofs of the data halls.

2.2. The adjoining single storey goods receiving area / store and single storey office area is located to the east of the data halls. This portion of the development has a GFA of 2,415sq.m and a maximum height of c. 9m. I note that c. 230sq.m. of 50KWE solar PV panels are proposed at rooftop level above the office area. A water tower, sprinkler tank, pump house and other services are located to the south of the office area and is proposed to be enclosed on its eastern and southern sides by a high green wall. The Applicant notes that staff of the data centre facilities will largely be housed in this administration portion of the building which comprises:

- Reception Area,
- General Office Areas for staff and management,
- Offices space for clients and project teams,
- Canteen & Sanitary Facilities; and
- Conference Rooms/Meeting Rooms.

I note that the office area is set back c. 42m from the site's eastern boundary with the R120. The taller data halls provide a setback of c. 65m from the same boundary.

2.3. To the west of the data halls, it is proposed to provide 24 no. standby diesel generators with associated flues (each c. 25m high) that will be located within a generator yard (height of c. 9.15m). It is stated within the Applicant's EIAR that in the event of a loss of power supply i.e. temporary grid blackout, these diesel powered back-up generators will be provided to maintain power supply and the generators are designed to automatically activate and provide power to the data centres pending restoration of mains power. Each generator will also include a diesel belly tank (all tanks will be bunded) with a single refuelling area to serve the proposed emergency generators.

2.4. Access to the data centre development will be provided via the entrance permitted under SD19A/0042 (ABP-305948-19). A new internal access road and security gates are proposed and will provide access to sheltered bicycle parking and a total of 36 no. car parking spaces (including 4 no. electric and 2 no. disabled spaces). The proposed parking spaces are located to the east of the data centre and I note that the proposed access road and service lane will continue around the perimeter of the data centre.

2.5. The development will also include ancillary site works, connections to existing infrastructural services as well as fencing and signage and modifications to the permitted landscaping to the west of the site as granted under SD19A/0042 (ABP-305948-19) and SD21A/0042.

2.6. In terms of power supply, it is confirmed by the Applicant that the permanent power supply to the overall Facility Campus (which includes the proposed development) will be provided via the permitted two storey 110kV GIS Substation (Kishoge) with associated transformer compound which is located to the west of the proposed data centres. It is stated that this will be connected via an 110kV transmission line from the permitted 110kV transmission line at Aungierstown - Castlebaggot. I note that the SID application for the transmission line has been granted by the Board under ABP-314567-22. It is confirmed that the 3 no. power plants permitted under SD21A/0042 will be provided in a phased basis to provide power in the short to medium term to

each of the data centres already permitted and proposed under the current application. It is stated that there is a requirement for the Power Plants to provide both a short to medium term and back-up power solution to the proposed and permitted development due to the Flexible Demand conditional Eirgrid offer, which has been enacted by the applicant and that is in place for the site. To obtain a connection to the national grid, it is stated that the data centre must install on-site generation and Eirgrid have stipulated that this generation must be capable of running continuously for an extended period of time not limited by fuel reserves. This would be in multiple individual intervals during peak daily usage in winter that is estimated up to 500 hours per annum. To meet this requirement, gas engines have been chosen because no other renewable or storage technology can provide this at a commercial scale. As noted, diesel powered back-up generators are proposed to maintain power supply.

2.7. The development includes the provision of a 2 no. new attenuation ponds to the north of the proposed data centres. Stormwater from the roof areas of the proposed building will be directed via rainwater pipes into an on-site reticulation system. The outflow from this system will be connected into the surface water drainage network collecting run-off from the road areas and will be ultimately discharged into 2 stormwater storage ponds.

2.8. In terms of foul drainage, it is proposed to discharge foul water from the proposed development, via a 225mm gravity foul sewer outfall and discharge into the existing 450mm connection, as granted under SD19A/0042 (ABP-305948-19). It is proposed that all foul condensate effluent from the proposed new data halls, will be connected into head manholes adjacent to the data halls. The office building contains 6 no. WCs with a predicted maximum number of daily staff being in the region of circa 40 people, over a 24hr period.

2.9. In response to the matters raised by the Planning Authority, including the impact of the development on existing hedgerows, the Applicant as part of their response to the Planning Authority's Further Information (FI) request, sought to squeeze the external areas around the data centre to enable the planting of a new native hedgerow that would run parallel to the existing hedgerow, and which will also extend along the

southern side of the data centre to create stronger biodiversity links within the site. The Applicant confirmed that no other material elements were amended apart from the addition of an open bio-swale that will connect the two proposed attenuation ponds to the north of the site. The EIAR was also amended and updated where required.

3.0 Planning Authority Decision

3.1. Decision

The Planning Authority refused planning permission for the proposed development for the following 2 no. reasons.

1. Having regard to the existing insufficient capacity in the electricity network (grid), the lack of a fixed connection agreement to connect to the grid, the lack of significant on site renewable energy to power the proposed development, the lack of evidence provided in relation to the applicant's engagement with Power Purchase Agreements (PPAs) in Ireland, and the reliance on a gas powered plant to provide energy to the development, it is considered that the applicant has failed to demonstrate that the proposed use is acceptable on EE zoned lands, in accordance with EDE7 Objective 2 and Section 12.9.4 of the South Dublin County Development Plan 2022-2028. In this regard the proposed development, would, therefore, be contrary to the proper planning and sustainable development of the area.
2. The proposed development does not comply with GI1 Objective 4, GI2 Objective 2, GI2 Objective 4, NCBH11 Objective 3 and GI5 Objective 4 the South Dublin County Development Plan 2022-2028 in relation to the retention and protection of existing green infrastructure and provision of green infrastructure.

3.2. Planning Authority Reports

3.2.1. Planning Reports

3.2.1.1. The South Dublin County Council Planning Reports form the basis of the decision. The 1st Planner's Report dated 10th October 2022 recommended that FI be requested regarding 18 no. items. These items are summarised as follows:

1. Employment - The applicant was requested to demonstrate compliance with the following employment policies of the current Plan, namely:

- EDE1 Objective 6,
- EDE3 Objective 5,
- EDE4 Objective 4,
- EDE4 SLO1.

2. The applicant was requested to submit a plan indicating the delineation of the area of the site zoned RU and to detail what works would take place within 'RU' zoned lands.
3. Space Extensive - The applicant was requested to demonstrate compliance with each section of the following space extensive policies of the current Plan, namely:
   - EDE7 Objective 2
   - EDE7 Objective 3
4. Implementation - The applicant was requested to demonstrate compliance with the various implementation sections of the current Plan (Chapter 12).
5. Design - The applicant was requested to demonstrate compliance with the various design policies of the current Plan (a). Further to this, the applicant was requested to provide details / photomontages of the visual impact without screening, confirmation of the length of growing time required to achieve the desired landscape mitigation and photomontages of the development from closer angles (b). In addition, the applicant was requested to provide full details of fencing and signage (c).
6. The Applicant was requested to submit an acoustic assessment describing and assessing the impact of noise emissions from the proposed development to include cumulative noise impacts.
7. Arboricultural Impact – Noting the relevant Plan policy, the Applicant was requested to submit;
   - Revised proposals that include the western boundary hedgerow into the layout by moving the building proposals eastward.
   - Revised proposals to include an updated Arboricultural Impact Report and Plan, Tree Protection Plan and Arboricultural Method Statement.
8. Bats - The Environmental Impact Assessment Report (EIAR) identifies the hedgerow habitat proposed for removal as providing good commuting and foraging routes for bats, a protected species. The applicant was requested to

demonstrate what mitigation is proposed for bats foraging along these routes which are to be kept dark.

9. The EIAR identifies the 'hedgerows located along field boundaries' forming 'part of a wider ecological corridor network which connects the site to the surrounding area...and beyond'. The submitted plans propose removal of these hedgerows, in conflict with the County's Green Infrastructure Strategy. It was stated that the development has not considered the impacts on Green Infrastructure and is in direct conflict with the above objectives and the Applicant was requested to respond accordingly.
10. The applicant was requested to demonstrate how they contribute to the protection or enhancement of Green Infrastructure in the County through the provision of green infrastructure elements.
11. The applicant was requested to demonstrate how they can achieve a minimum Green Space Factor, noting the relevant objectives of the current Plan.
12. Resolution of the variations between landscape architect's pond edge detail and planting plan indicating shallow planting and varied slopes and those shown in the engineer's drawings (steep section which doesn't allow for a stepped profile with varied habitat is required).
13. It was stated that the development would have a significant detrimental impact on hedgerows and biodiversity and lacks a green infrastructure strategy. The Applicant was requested to alter the layout of the proposed development by providing;
    - Proposals that retain the western boundary hedgerow,
    - Proposals that mitigate the loss of commuting and foraging routes for bats,
    - A green infrastructure strategy,
    - Green space factor,
    - Landscape architect and engineer proposals for pond profile and habitat proposals to align, and,
    - Demonstrate all four pillars of SuDS can be achieved.
14. The applicant was requested to submit a drawing in plan and cross sectional views clearly showing additional SuDS features for the development (a) and a CFRAM Flood Risk Drawing showing the location of proposed site on flood map.

15. Submit a Pre connection enquiry with Irish Water for both water supply and wastewater for the proposed development (a) and a copy of the letter of confirmation from Irish Water as mentioned in the "Engineering Planning Report" which states the foul network on site is under the charge of SDCC (b).
16. The applicant was requested to submit:
    - A wildlife aviation impact assessment, and,
    - Aviation impact assessment on all potential emissions.
17. EIAR
    - Concerns raised regarding compliance with the Plan policy in relation to space extensive uses and Green Infrastructure. It was therefore considered that further assessment of alternatives is required, once overall policy considerations have been incorporated.
    - It was considered that the information contained within the EIAR requires amending following any changes in the scheme following additional information. In particular, amendments should include updates to the noise assessment, updates to GI plan and layout of the scheme / siting design, changes following assessment against spaces extensive policies and other policies that require further consideration and further assessment of cumulative impacts in terms of data centres permitted close to the site.
    - Additional data and more comprehensive analysis requested in the EIAR in relation to the impact of the development (i) by itself and (ii) in combination with other data centres - permitted and existing; locally and nationally - on the power generation and supply network (Material Assets) during the operational phase of the development. Justification for the absence of renewable energy generation on-site or other measures in operation elsewhere, such as the use of waste heat from data centres should be provided.
    - An assessment of the development in light of July 2022 Department of Enterprise, Trade and Employment 'Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy'.
18. The applicant was requested to provide justification for the proposed 10 year permission duration.

3.2.1.2. The 2nd Planner's Report dated 20th July 2023 concludes that the Applicant had failed to provide evidence of sufficient on-site renewable energy or evidence of PPAs in Ireland. In light of this, it was considered that the Applicant had failed to demonstrate full compliance with Policy EDE7, specifically Objective 2. In addition, it was considered that the proposed development would not comply with the green infrastructure policies and objectives of the current Plan in relation to retention and protection of existing green infrastructure, the provision of green infrastructure and the Green Space Factor. It was therefore recommended that permission be refused for 2 no. reasons

3.2.2. Other Technical Reports

Water Services: Initial report on file dated 21st September 2021 recommending a request for FI. FI requested with respect to the provision of additional SuDS features and a requirement for the Applicant to submit a CFRAM Flood Risk Drawing showing the location of proposed site on flood map. Second report stating no objection subject to compliance with conditions.

Parks and Public Realm: Initial report on file dated 4th October 2022 recommending a request for FI. The Applicant was requested to alter the layout of the proposed development as follows:

- Proposals that retain the western boundary hedgerow
- Proposals that mitigate the loss of commuting and foraging routes for bats
- A green infrastructure strategy,
- Green space factor,
- Landscape architect and engineer proposals for pond profile and habitat proposals to accord,
- Demonstrate that all four pillars of SuDS can be achieved

Second report on file dated 15th June 2023 recommending a refusal of permission. In the event that permission is granted, a condition is recommended that all buildings must be moved back a minimum of 10m from the base of any hedgerow and a much higher percentage of the existing hedgerows on site to be retained, protected and enhanced.

Roads: Report on file dated 7th July 2023 stating no objection subject to compliance with conditions with respect to the EV charging spaces, bicycle parking spaces the submission of a Construction Traffic Management Plan.

3.3. Prescribed Bodies

EHO: Initial report on file dated 7th October 2022 which requested the Applicant to submit an acoustic assessment, describing and assessing the impact of noise emissions from the proposed development to include accumulative noise impacts. The second report dated 20th July 2023 has recommended conditions to be attached to a grant of permission.

Irish Water: Initial report on file dated 28th September 2022 recommending a request for further information. Second report on file dated 16th June 2023 stating no objection.

TII: Report received recommending that the proposed development be undertaken strictly in accordance with the recommendations of the Transport (Traffic Impact) Assessment. Any recommendations arising should be incorporated as Conditions on the Permission, if granted and any additional works required as a result of the Assessment should be funded by the developer. Second report on file reiterating the initial commentary.

Inland Fisheries Ireland (IFI): Observation received which noted that proposed development has hydraulic connectivity to the Griffeen River, via the proposed surface water management system and this connectivity in the absence of appropriate mitigation measures during both the construction and operational phase of the development poses a risk to the receiving aquatic environment. Conditions have been recommended in the event of a grant of permission.

Irish Aviation Authority (IAA): It is the observation of the Safety Regulation Division, Aerodromes that in the event of planning consent being granted, the applicant should be required to engage with the Property Management Branch of the Department of Defence with regard to the management of construction activities on site to minimise

wildlife attractants and also in relation to any utilisation of cranes with a minimum of 30 days notification to be provided.

Department of Defence: Report on file dated 6th September 2022 recommending a request for FI with respect to the following:

- Recommendation that the operation of cranes should be coordinated with Air Corps Air Traffic Services.
- A wildlife aviation impact assessment, and,
- Aviation impact assessment on all potential emissions.

3.4. Third Party Observations

3.4.1. A total of two (2) no. observations were received in relation to the proposed development by the following parties.

- Proinsias Mac Fhiannchadh, and,
- John Callaghan for Sustainability 2050.

3.4.2. The issues raised in the observations can be summarised as follows:

- It is highlighted that the Planning Authority must assess the application in accordance with the Planning & Development Act and Regulations, the EIA Directive, the Habitats Directive and the Energy Efficiency Directive.
- Concerns raised that the Commission for Regulation of Utilities (CRU) has not been notified of the proposal given its potential impact on national energy infrastructure.
- The Applicant has failed to demonstrate compliance with the relevant policies of the current County Development Plan (2022-2028).
- Deficiencies in the EIAR Technical Summary as to how this development would address Sectoral emissions under the Climate Action and Low Carbon Development (Amendment) Act 2021 nor how the provision of 24 no. diesel generators would accord with national and local environmental policies.
- The observer notes that there is a disproportionate number of data centres in the surrounding area.
- Concerns that cumulative effects in combination with other data centres has

not been adequately addressed in the EIAR.

- It has not been demonstrated how the development will contribute to carbon budget.
- The applicant has underplayed the ecological importance of the site to migratory birds, native birds and bats in the area, particularly due to the destruction of hedgerows with insufficient mitigating factors.
- There is no reference to the July 2022 Department of Enterprise, Trade and Employment 'Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy.
- Concerns raised that there is no intention by the applicant to supplement the significant energy demands of the proposal with alternative energy supply, including renewables.
- It is considered that a 10 year permission is excessive.
- Concerns raised regarding prematurity and that the applicant had failed to provide any correspondence from the CRU/Eirgrid that a grid connection is feasible and the timeline for the connection, as well as details of any consultation undertaken with these bodies.

4.0 Relevant Planning History

4.1. Appeal Site

SD19A/0004: Planning permission granted by the Planning Authority for enabling works on the southern portion of the Facility Campus to facilitate the future development of the site and comprised topsoil strip and a cut and fill operation across the site. Permission included temporary construction access off the R120 to facilitate the proposed works.

SD19A/0042 (ABP-305948-19): Planning permission granted by the Planning Authority and the Board for a phased development for the construction of 4 no. single storey data halls which are located within the south-eastern corner of the Facility Campus (south of the proposed development) and all associated site works including a temporary gas powered generation plant within a walled yard, containing 19 generator units with associated flues (each 17m high).

Following a request for FI, the number of generators within the Temporary Power Plant was reduced to 8 (with 2 no. back up units) and limited to a lifespan of 2 no. years. An EIAR was submitted with the application.

SD21A/0042 (ABP-312749-22): Planning permission granted by the Planning Authority for the construction of 2 no. single storey data centres with associated office and service areas (west of the proposed development) and 3 no. gas powered generation plant buildings (south-west of the proposed development). The development also included 24 no. standby diesel generators with associated flues (each 25m high).

Gas plant 1 (20 generator units (18+2)) once operational will facilitate the decommissioning of the temporary Gas Powered Generation Plant within the Facility Campus granted under SD19A/0042 (ABP-305948-19). Gas plant 2 (20 generator units (18+2) with associated flues) and Gas plant 3 (21 generator units with associated flues) are proposed to provide power to each data centre (including the proposed data centre), if and when required, and are required as backup power generation once the permitted power connection via the permitted substation is achieved.

Condition No. 3 is of relevance and is detailed as follows:

'GAS Plants - Temporary

i. Prior to the commencement date of the first operation of the first gas plant, the Planning Authority shall be contacted in writing to confirm the date on which the first gas plant shall first commence operation.
ii. Five (5) years from the date the first gas plant first commences operation, the gas plants and all associated and related ancillary structures shall cease operation unless prior to the end of the five-year period, planning permission has been sought and granted for its continued use.
iii. All structures related/associated with the gas plants shall be removed from the entire site within a year of the ceasing of operation, unless prior to the end of the five-year period, planning permission has been sought and granted for its continued use.

Reason: To enable the impact of the development to be reassessed having regard to changes in technology, climate action and energy supply options.'

SD22A/0105: Planning permission granted by the Planning Authority for amendments to the electrical substation compound and structures permitted under SD19A/0042 (ABP-305948-19).

SD22A/0289: Planning permission Granted by the Planning Authority for development comprising the amendment of Condition no. 3 (ii) and 3 (iii) of the permission granted under SD21A/0042 that related to the Gas Plant of the overall permitted development only.

Condition no. 3 (ii) & (iii) was amended as follows:

i. Within four (4) years from the date the first Gas Plant commences operation, the applicant or operator shall undertake a review with Gas Network Ireland of the ability to serve the Gas Plant with green gas and / or hydrogen (or similar fuels) shall be Investigated and reported to the Planning Authority. Any ability for the Gas Plant to be operated with green gas and/ or hydrogen (or similar fuels) shall be implemented within an agreed timeline agreed with GNI.
ii. If the applicant receives a firm offer from Eirgrid under which the Gas Plant is not required, and the connection has been realized with capacity onsite from Eirgrid, then the Gas Plants shall be removed from the entire site within a year of the ceasing of operation.

ABP-314567-22: Strategic Infrastructure Application granted to the current Applicant by the Board in November 2023 for underground 110kV transmission line connections between the permitted Kishoge 110kV GIS substation and the permitted Aungierstown - Castlebaggot underground 110kV transmission line.

I note that the Kishoge substation is centrally located within the Facility Campus (west of proposed development) and was originally permitted under SD19A/0042 (ABP-305948-19) (amended under SD22A/0105)**.** The development will provide a loop in connection to serve the Kishoge substation via the creation of a new Aungierstown -

Kishoge 110kV circuit and a new Castlebaggot-Kishoge 110kV circuit. The Applicant notes that the SID project was designed to support the power demand of the Facility Campus, and the connections were agreed and designed in accordance with the specifications of, and following review by, EirGrid and ESB.

SD23A/0151: Planning permission Granted by the Planning Authority for development comprising amendments to the permitted development as granted under SD19A/0042 (ABP-305948-19) that will include:

- Reduction in the number of back-up generators, flues and other related plant from 32 to 24 within the permitted generator compound located to the west of the data centre granted under SD19A/0042; and,
- Repositioning of the 24 no. back-up generators, flues and other plant within the permitted generator compound.

4.2. Surrounding Area

4.2.1. *West*

SD23A/0301: Planning permission granted by the Planning Authority for the development of the lands to the west of the facility campus comprising the construction of five logistics / warehousing units (Units 1 - 5) with associated office accommodation, service yards, ancillary structures/areas, and substations; the provision of no. 419 car parking spaces and 172 bicycle spaces to serve the proposed development and all associated site works.

4.2.2. *East*

I note that there is a data centre development to the east of the appeal site on the opposite side of the R120 which is located on lands identified as being within the control of the Applicant. Permission was originally granted in September 2016 under SD16A/0214 for the construction of a single storey data centre (4,435sq.m) with plant at roof level, associated support services and 6 standby generators with associated flues (each 15m high). In the intervening years, there has been a number of permissions for new data halls, extensions and amendments of the original data centre development which include:

- SD16A/0345,

- SD17A/0027,
- SD17A/0141,
- SD17A/0392 (ABP-300752-18),
- SD18A/0298,
- SD21A/0127, and,
- SD22A/0009.

5.0 Policy Context

5.1. Local Policy

5.1.1. South Dublin County Development Plan, 2022 - 2028

5.1.1.1. Under the South Dublin County Development Plan (referred to herein as the current Plan), 2022-2028, the majority of the appeal site is located on lands zoned 'EE' (Enterprise and Employment), the objective of which seeks 'To provide for enterprise and employment related uses'. The northern portion of the site is located within lands zoned 'RU' (Rural and Agriculture), where it is an objective 'To protect and improve rural amenity and to provide for the development of agriculture'. Data Centre, offices 100sqm-1,000sqm and offices over 1,000sqm are 'Open for Consideration' within this zoning objective. Ministerial Direction issued on 18/11/2022 to amend the land use zoning objectives in Table 12.4, 12.8 and 12.10 to reinstate data centre use class as an 'open for consideration' use class in the REGEN, Enterprise and Employment (EE) and Major Retail Centre (MRC) zoning objectives.

5.1.1.2. I note that a Specific Local Objective applies to the lands to the north of the site which seek 'To investigate the full potential for the 12th Lock lands as centrally located within growing employment and residential areas, with tourism and active travel potential along the Grand Canal and have cognisance of the potential for the lands and associated heritage buildings to become a hub supporting the surrounding land uses while protecting the natural environment'.

5.1.1.3. There are also 4 no. designated Protected Structures located to the north of the appeal site which include:

- RPS Ref. No. 118,
- RPS Ref. No. 119,

- RPS Ref. No. 125, and,
- RPS Ref. No. 127.

5.1.1.4. Policies and Objectives of particular relevance to the subject appeal are listed as follows;

5.1.1.5. **Chapter 2 Core Strategy**

Policy CS1: Strategic Development Areas

- **CS1 Objective 1**: To ensure a sustainable and plan led allocation of housing and employment growth within the strategic development areas of South Dublin County in line with the provisions of the MASP.

5.1.1.6. **Chapter 3 Natural, Cultural and Built Heritage**

Policy NCBH11: Tree Preservation Orders and Other Tree / Hedgerow Protections Review Tree Preservation Orders (TPO) within the County and maintain the conservation value of trees and groups of trees that are the subject of a Tree Preservation Order while also recognising the value of and protecting trees and hedgerows which are not subject to a TPO.

- **NCBH11 Objective 3**: To protect and retain existing trees, hedgerows, and woodlands which are of amenity and / or biodiversity and / or carbon sequestration value and / or contribute to landscape character and ensure that proper provision is made for their protection and management taking into account Living with Trees: South Dublin County Council's Tree Management Policy (2015-2020) or any superseding document and to ensure that where retention is not possible that a high value biodiversity provision is secured as part of the phasing of any development to protect the amenity of the area.

5.1.1.7. **Chapter 4 Green Infrastructure**

- **GI1 Objective 4**: To require development to incorporate GI as an integral part of the design and layout concept for all development in the County including but not restricted to residential, commercial and mixed use through the explicit identification of GI as part of a landscape plan, identifying environmental assets and including proposals which protect, manage and enhance GI resources

providing links to local and countywide GI networks.

- **GI2 Objective 2**: To protect and enhance the biodiversity and ecological value of the existing GI network by protecting where feasible (and mitigating where removal is unavoidable) existing ecological features including tree stands, woodlands, hedgerows and watercourses in all new developments as an essential part of the design and construction process, such proactive approach to include provision to inspect development sites post construction to ensure hedgerow coverage has been protected as per the plan.
- **GI2 Objective 4:** To integrate GI, and include areas to be managed for biodiversity, as an essential component of all new developments in accordance with the requirements set out in Chapter 12: Implementation and Monitoring and the policies and objectives of this chapter.
- **GI5 Objective 4:** To implement the Green Space Factor (GSF) for all qualifying development comprising 2 or more residential units and any development with a floor area in excess of 500 sq m. Developers will be required to demonstrate how they can achieve a minimum Green Space Factor (GSF) scoring requirement based on best international standards and the unique features of the County's GI network. Compliance will be demonstrated through the submission of a Green Space Factor (GSF) Worksheet (see Chapter 12: Implementation and Monitoring, Section 12.4.2).

5.1.1.8. **Chapter 5 Quality Design and Healthy Placemaking**

Policy QDP2: Overarching - Successful and Sustainable Neighbourhoods

Policy QDP3: Neighbourhood Context

Policy QDP4: Healthy Placemaking

Policy QDP7: High Quality Design – Development General

Policy QDP8: High Quality Design – Building Height and Density Guide (BHDG)

Policy QDP11: Materials, Colours and Textures

5.1.1.9. **Chapter 9 Economic Development and Employment**

Policy EDE1: Overarching - 'Support sustainable enterprise and employment growth in South Dublin County recognising the County's role in the Dublin region as a driver of economic growth.'

- **EDE1 Objective 2**: 'To develop and support the Dublin Metropolitan Area Strategic Plan (MASP) through growth in the identified strategic development and employment areas of South Dublin County, as part of the growth of the Dublin Region to a sufficient scale and quality to compete internationally and to be drivers of national and regional growth, investment, and prosperity consistent with NSO 5 of the NPF'.
- **EDE1 Objective 6**: 'To ensure that economic and enterprise related development is provided in a manner which facilitates a reduction in greenhouse gas emissions by supporting and promoting the following measures:
    - An increase in employment densities within walkable distances of communities and on public transport routes;
    - Promotion of walking and cycling and use of public transport through increased permeability and mobility management measures within and outside employment areas;
    - The sourcing of power from district heating and renewables including wind, hydro and solar;
    - Additional native tree planting and landscaping on existing and proposed enterprise zones and development sites to aid with carbon sequestration, contribute to the green infrastructure network of the County and promote quality placemaking.'

Policy EDE3: Innovative Economy Promote an Innovative Economy, fostering an environment which supports creativity and new technologies in the places we live, work and invest in, supported through orderly growth at strategic population and employment locations.

- **EDE4 Objective 4** To direct people intensive enterprise and employment uses such as major office developments (>1,000 sq. m gross floor area) into appropriately zoned lands subject to their location within approximately 500 metres of a high frequency urban bus service and / or within 1000 metres walking distance of high capacity transport stops (Train / Luas), and to demonstrate the required walking distance or provision of a permeability project, in accordance with the Permeability Best Practice Guide (2015), to achieve same.

- **EDE4 Objective 8**: To support the provision of a broad diversity of employment opportunities in the County that can attract a wide range of skills, training, and educational qualifications for a resilient and inclusive economy.

Policy EDE5: Building on Clusters

Support clustering, by creating, maintaining, or upgrading economic strongholds in a favourable business ecosystem.

- **EDE5 Objective 4**: To encourage the development of initiatives to utilise sectoral clusters in the County to grow new enterprise ecosystems with layers of value, innovation and investment.

Section 9.3 Space Extensive Land Use

'Certain types of development are particularly land hungry. Typically, these land use types have lower employment opportunity although it is recognised that there may be potential to add value as promoted in objective EDE5 Objective 4 above. Space extensive enterprise should not compete for lands which are more suitable for labour intensive enterprise by reason of their location adjacent to public transport nodes or within existing built up, compact growth areas. Alongside warehousing, data centres are one of the most space extensive land use types in the County. Dublin is one of the fastest growing data centre markets in Europe with a significant element of this growth in South Dublin County. It is recognised that the requirement for data centres is increasing with social and technology needs such as 5G, smart cities and artificial intelligence. Technology is constantly evolving with Cloud computing now shifting to Edge computing and a need for smaller data centres closer to cities and end users.

Space extensive land uses generally have a higher carbon footprint, whether because of transport related uses or the large amounts of energy demanded by them. The Development Plan will encourage, through its policies, high energy users to demonstrate ways to reduce or negate reliance on fossil fuels and to redistribute energy for other end users where such potential exists.'

Policy EDE7: Space Extensive Land Use

Recognise the need for land extensive uses and ensure that they are located within

appropriate locations having regard to infrastructural, transport and environmental considerations and the need for orderly growth'.

- **EDE7 Objective 1:** To ensure that, insofar as possible, space extensive enterprise is located on lands which are outside the M50, and which do not compromise labour intensive opportunities on zoned lands adjacent to public transport.
- **EDE7 Objective 2:** To require that space extensive enterprise demonstrates the following:
    - The appropriateness of the site for the proposed use having regard to EDE7 Objective 1;
    - Strong energy efficiency measures to reduce their carbon footprint in support of national targets towards a net zero carbon economy, including renewable energy generation;
    - Maximise on site renewable energy generation to ensure as far as possible 100% powered by renewable energy, where on site demand cannot be met in this way, provide evidence of engagement with power purchase agreements in Ireland (PPA);
    - Sufficient capacity within the relevant water, wastewater and electricity network to accommodate the use proposed;
    - Measures to support the just transition to a circular economy;
    - Measures to facilitate district heating or heat networks where excess heat is produced;
    - A high-quality design approach to buildings which reduces the massing and visual impact;
    - A comprehensive understanding of employment once operational;
    - A comprehensive understanding of levels of traffic to and from the site at construction and operation stage;
    - Provide evidence of sign up to the Climate Neutral Data Centre Pact.
- **EDE7 Objective 3:** To ensure that landscaping and site layout in space extensive developments provides for demonstrated biodiversity measures and that landscape and biodiversity measures integrate into the green infrastructure network, in accordance with the Green Infrastructure Strategy set out in Chapter 4 of this Plan.

5.1.1.10. **Chapter 12 Implementation and Monitoring**

Section 12.3.1 Appropriate Assessment

Section 12.3.2 Ecological Protection

Section 12.3.3 Environmental Impact Assessment

Section 12.4.1 Green Infrastructure Definition and Spatial Framework

Section 12.4.2 Green Infrastructure and Development Management

Section 12.5.2 Design Considerations and Statements

Section 12.9.2 Enterprise and Employment Area

Section 12.9.4 Space Extensive Enterprises

Section 12.10.1 Energy Performance in New Buildings

Section 12.10.2 Low Carbon District Heating Networks

Section 12.10.3 Energy from Waste

Section 12.10.4 Solar Photovoltaic

Section 12.11.1 Water Management

5.1.2. **South Dublin Climate Change Action Plan 2019-2024**

5.1.2.1. The Climate Change Action Plan identifies the main climate risks facing South Dublin County and includes both the Councils' and the current levels of greenhouse gas emissions across the South Dublin County Council area. It includes four targets for the Council to reach in the coming years:

- A 33% improvement in the Council's energy efficiency by 2020,
- A 40% reduction in the Councils' greenhouse gas emissions by 2030,
- To make Dublin a climate-resilient region, by reducing the impacts of future climate change-related events,
- To actively engage and inform citizens on climate change.

5.2. National Policy and Guidance

5.2.1. **National Planning framework – Project Ireland 2040 (NPF)**

- **National Strategic Outcome 5** 'Digital and Data Innovation' states that 'Ireland is very attractive in terms of international digital connectivity, climatic factors and current and future renewable energy sources for the development of international digital connectivity such as data storage facilities.

- **National Strategic Outcome 6** seeks the 'promotion of Ireland as a sustainable designation for ICT infrastructure such as data centres and economic activities.
- **National Strategic Outcome 8** seeks to 'transition to a low carbon and climate resilient society'.

5.2.2. **Climate Action Plan 2024**

5.2.2.1. The Government of Ireland's Climate Action Pan was published in June 2019 by the Department of Communications, Climate Action and Environment. The Climate Action Plan 2024 (CAP24) is the third annual update to Ireland's Climate Action Plan 2019. This plan is prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021, and following the introduction, in 2022, of economy-wide carbon budgets and sectoral emissions ceilings.

5.2.2.2. A key policy of CAP 2024 is to "ensure that 15% of electricity demand is met by renewable sources contracted under Corporate Purchase Power Agreements (PPAs)" (DoECC, 2024). In addition, the Plan commits to achieving "up to 0.8 TWh of district heating installed capacity across both the residential and commercial building stock by 2025, and up to 2.7 TWh by 2030" (DoECC, 2024).

5.2.3. **Climate Action and Low Carbon Development (Amendment) Act 2021**

5.2.3.1. This Act amends the Climate Action and Low Carbon Development Act 2015. It sets out the national objective of transitioning to a low carbon, climate resilient and environmentally sustainable economy in the period up to 2050. The Act commits us, in law, to a move to a climate resilient and climate neutral economy by 2050.

5.2.4. **Regional Spatial & Economic Strategy for the Eastern & Midland Region, 2019-2031.**

5.2.4.1. Chapter 7 Section 7.9 refers to Climate Change and the need to support the transition to a low carbon, circular and climate resilient region, and decarbonising the energy sector.

5.2.4.2. Regional Policy Objective (RPO) 8.25: Local authorities shall:

- Support and facilitate delivery of the National Broadband Plan.
- Facilitate enhanced international fibre communications links, including full interconnection between the fibre networks in Northern Ireland and the Republic of Ireland.
- Promote and facilitate the sustainable development of a high-quality ICT network throughout the Region in order to achieve balanced social and economic development, whilst protecting the amenities of urban and rural areas.
- Support the national objective to promote Ireland as a sustainable international destination for ICT infrastructures such as data centres and associated economic activities at appropriate locations.
- Promote Dublin as a demonstrator of 5G information and communication technology.

5.2.5. **Statement on the Role of Data Centres in Ireland's Enterprise Strategy, July 2022 (referred to herein as the 'Government Statement on Data Centres).**

5.2.5.1. This Statement sets out how digital and climate change policies can be achieved in respect to data centres, recognising the capacity constraints within the electricity system and the significantly large loads required by data centres. Reference is made to the "CRU Direction to the System Operators related to Data Centre grid connection processing" (CRU/21/124), which allows the data centre industry to continue to connect to the electricity grid, subject to certain conditions. New data centre connections are required to have on-site generation (and/or battery storage) that is sufficient to meet their own demand. To assist in full decarbonisation of the power system, this generation should also be capable of running on renewably sourced fuels (such as renewable gas or hydrogen) when supplies become more readily available.

5.2.5.2. The Government has agreed the following set of principles to inform and guide decisions on future data centre development:

- **Economic Impact** – The Government has a preference for data centre developments associated with strong economic activity and employment.
- **Grid Capacity and Efficiency** - The Government has a preference for data centre developments that make efficient use of our electricity grid, using

available capacity and alleviating constraints.

- **Renewables and Additionality** - The Government has a preference for data centre developments that can demonstrate the additionality of their renewable energy use in Ireland.
- **Co-location or Proximity with Future-Proof Energy Supply** - The Government has a preference for data centre developments in locations where there is potential to co-locate a renewable generation facility or advanced storage with the data centre, supported by CPPA, private wire or other arrangement.
- **Decarbonised Data Centre by Design** - The Government has a preference for data centre developments that can demonstrate a clear pathway to decarbonise and ultimately provide net zero data services.
- **SME Access and Community Benefits** - The Government has a preference for data centre developments that provide opportunities for community engagement and assist SMEs, both at a construction phase and throughout the data centre life cycle.

5.2.6. **Other National Guidelines**

5.2.6.1. Regard is also given to:

- The Planning System and Flood Risk Management - Guidelines for Planning Authorities, Department of the Environment, Heritage and Local Government & OPW, (2009).
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, (Department of Housing, Local Government and Heritage) (August 2018).
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2009).

5.3. Natural Heritage Designations

5.3.1. There are no Natura Sites within the immediate vicinity of the appeal site. The nearest designated site (Rye Water Valley/Carton (Site Code 001398)) is located c. 4.1km to the north-west of the appeal site. The site is also located to the south of the Grand

Canal Proposed Natural Heritage Area

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. A First Party appeal has been prepared by Marston Planning Consultancy on behalf of the Applicant. The appellant's submission provides a description of the site and surrounding context, details of the site's planning history, a summary of the nature and extent of the proposed development and an assessment of the application, having regard to the relevant policies and objectives of the current Plan. A particular emphasis is given to Policy EDE7 Objective 2 and EDE7 Objective 3. A detailed assessment is also provided against National policy provisions, including the NPF, the 'Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy' (Referred to herein as the Government Statement) and the Climate Action Plan (2023).

6.1.2. Included as appendices to the First Party appeal are:

- Advisory Note as Part of Appeal Against Decision of South Dublin County Council in Relation to Planning Reference SD22A/0333 prepared by Mason Hayes & Curran - Appendix A
- EirGrid Connection Agreement Letter – Appendix B
- Gas Network Ireland's Connection Agreement Letter – Appendix C.
- Letter from KPMG confirming they are contracted to acquire Corporate PPAs on behalf of Edgeconnex in Ireland.

6.1.3. The appellant's grounds of appeal can be summarised as follows:

Refusal Reason No. 1.

6.1.4. It is noted by the appellant that the first reason for refusal stems from Policy EDE7, Objective 2 and section 12.9.4 of the current Plan which requires compliance with 10 no. objectives. It is stated that the application was refused based on matters that related to:

- The existing insufficient capacity in the electricity network (grid);
- The lack of a fixed connection agreement to connect to the grid;
- The lack of significant on-site renewable energy to power the proposed

development;

- Lack of evidence provided in relation to Power Purchase Agreements (PPAs) in Ireland; and
- The reliance on a predominately gas-powered plant to provide energy to the development.

Having regard to the existing insufficient capacity in the electricity network (grid);

6.1.5. It is submitted that it is not within the Planning Authority's remit to determine whether there is sufficient capacity on the national grid. Nevertheless, it is confirmed that the First Party has obtained a connection agreement from EirGrid in respect of the Facility Campus (which includes the Permitted Development and Proposed Development) - i.e. the Edgeconnex Grid Connection Agreement. The appellant highlights that EirGrid, in accordance with policy directions from the Commission for Regulation of Utilities (CRU), develop policy criteria regarding grid connection that applicants are required to satisfy in order to obtain a grid connection agreement and are largely designed to take into account capacity constraints on the National electricity grid.

6.1.6. The appellant notes that the First Party has satisfied these policy criteria, which is evidenced by the Grid Connection offer and subsequent Edgeconnex Grid Connection Agreement. Therefore, the Planning Authority should be satisfied that EirGrid (as TSO for the Irish transmission system electricity grid and therefore, the appropriate authority on this matter) has determined that the Facility Campus can connect to the grid. It is confirmed that the Edgeconnex Grid Connection Agreement has been signed, the Bond paid, and all connection charges are fully paid.

6.1.7. It is highlighted that the various policies of EirGrid (as outlined in the Data Centre Connection Offer Process and Policy, July 2020 (DCCOPP)) are driving the need for on-site dispatchable generation on all data centre sites to ensure security of supply for the grid as a whole, until such time as transmission and generation capacity short-falls are addressed. The appellant notes that on-site dispatchable energy generation capacity is already provided to the proposed development by the permitted Power Plant granted under the permitted development (i.e. SD21A/0042 (ABP-312749-22), which is unaffected by the current proposals. Therefore, it is contended that the overall

dispatchable generation element of the overall Facility Campus is established under the extant permission and does not fall to be reconsidered as part of this application or appeal process. In addition, it is stated that the Applicant has sought to maximise use of renewables through the design and future proofing of the Power Plant so that it has capacity to accept biogas and hydrogen when it becomes available.

6.1.8. The appellant highlights that Flexible Demand Offers are the only offers being provided to data centre operators in constrained network areas such as the subject site under current EirGrid policy. In addition, the importance of the flexibility in demand forms a corner stone of government policy but also facilitates the transition to decarbonisation which is recognised in the recent Government Statement on Data Centres.

6.1.9. As the primary fuel of the Power Plant is gas, this plays a part in decarbonising the grid - as acknowledged in the Climate Action Plan adopted by government. It is contended that the Power Plant will provide stable power to the grid in order to facilitate the greater resilience of the grid and to enable the penetration of additional intermittent renewables in the short term. The appellant notes that current national policy is to facilitate new data centre development by ensuring that on-site dispatchable energy of the same or equivalent is available on the same site, as well as other considerations as set out within the appeal that the Applicant meets in full.

Lack of significant on-site renewable energy to power the proposed development.

6.1.10. A sub-point under Policy EDE7 Objective 2 is to:

- Maximise onsite renewable energy generation to ensure as far as possible 100% powered by renewable energy, where on site demand cannot be met in this way provide evidence of engagement with power purchase agreements (PPA) in Ireland;

6.1.11. The appellant acknowledges that there are two elements to the above requirement, first the applicant must maximise onsite renewable energy generation to ensure as far as possible it is 100% powered by renewable energy. Secondly, where an applicant cannot do this, it can satisfy the requirement by providing evidence of engagement with PPAs in Ireland. The appellant contends that it satisfies the second element of

this requirement (i.e. in relation to providing evidence of engagement with PPAs in Ireland) and refers to the KPMG letter (Appendix D).

6.1.12. In the context of the Government Statement on Data Centres, while the subject site does not provide for an opportunity to power the proposed development via on-site solar or wind generation, the appellant notes that the Facility Campus (which the current development will form part, and the third and final phase of) includes the permitted Power Plant which is designed to accommodate operation on renewable fuel sources. In addition, it is asserted that robust evidence of engagement with renewable PPAs in Ireland in respect of the proposed development has been demonstrated (see further commentary below).

Lack of evidence provided in relation to the applicant's engagement with Power Purchase Agreements (PPAs) in Ireland.

6.1.13. The appellant refers to the Planning Authority's commentary where they stated that the use of natural gas to power the already permitted Power Plant is not renewable and therefore that the applicant should provide evidence of engagement with PPA providers. The appellant highlights that a PPA is an agreement between two parties, typically a power producer and a buyer, regarding the purchase and sale of electricity. The power producer, often a renewable energy company or a generator, agrees to produce a certain amount of electricity over a specified period. The buyer, who could be a corporation, a government entity, or even an individual, agrees to purchase that electricity at a predetermined price. The appellant again refers to the correspondence from KPMG (a broker for PPAs and the First Party's main partner in the sourcing of PPAs) which confirms that the First Party has been engaging actively in the pursuit of a PPA in respect of the proposed development. It is also confirmed that they are actively pursuing a PPA for the Power Plant. It is stated that this represents clear and unequivocal evidence of the First Party's engagement with Power Purchase Agreements in Ireland.

6.1.14. The appellant notes that the design of the permitted Power Plant allows for the use of biogas and hydrogen in the future and the overall Facility Campus will provide a direct opportunity for additional renewable energy generation on site. It is highlighted by the

appellant that the wording of EDE7, objective 2 can only reasonably be interpreted as requiring a confirmation that discussions have taken place between a First Party and PPA and there is no requirement under this objective beyond this. However, it is confirmed that the Applicant would welcome a condition that would ensure both compliance with this objective, and a greater certainty of the proposed development entering into PPA's with renewable energy providers.

6.1.15. The appellant notes that the Government Statement on Data Centres has identified the preference for data centre developments to be supported by a renewable generation facility to be supported by PPAs, private wire or other arrangements. It is again highlighted that the permitted Power Plant has been designed to accommodate power generation via renewable fuel sources, allowing for transition towards carbon neutrality. In addition, the Applicant is actively pursuing and committed to sourcing PPAs and to powering the development using renewable energy.

The reliance of on a predominately gas-powered plant to provide energy to the development.

6.1.16. It is the appellant's contention that having an on-site generation plant that is predominately powered by natural gas is not, of itself, a ground for refusal and would be contrary to the requirement relating to on-site energy generation under Policy EDE7 Objective 2. The appellant submits that it has satisfied the requirement relating to on-site generation under this policy objective as they have provided evidence that it has been engaging with renewable PPAs in Ireland. It is again highlighted that Policy Objective EDE7 Objective 2 does not restrict the use of onsite gas as an energy source where 100% onsite renewable energy is not viable.

6.1.17. It is again highlighted that the proposed development is covered by the existing Connection Agreement, and it is the Applicant's intention to procure renewable energy under the Edgeconnex Grid Connection Agreement and will not solely rely on the on-site generation plant (i.e. the Power Plant) to provide energy to the proposed development. The appellant notes that the Power Plant has been scaled to accommodate the proposed development and its principle, use, scale, and capacity of the Power Plant is established in planning terms.

6.1.18. It is reiterated that the Power Plant will reinforce the national grid, once the EirGrid connection is realised. In that scenario, the plant is only envisaged to run at the request of EirGrid in response to a grid event as per their flexible demand policy. This directly aligns with the CRU Direction to system operators and can support the increased penetration of intermittent renewable energy on the grid. In addition, the Power Plant is designed to allow for the use of renewable biogas and hydrogen to provide electricity and the Applicant is committed to increasing its use of these renewable energy resources when they become more available at scale in the Irish market.

Refusal Reason No. 2.

6.1.19. It is noted by the appellant that Policies GI1 Objective 4; GI2 Objective 2; GI2 Objective 4, NCBH11 Objective 3; and GI5 Objective 4 all informed the overall approach to the proposed development, and as amended as part of the FI response. The appellant highlights that the overall Facility Campus site was enclosed by a strong and mature hedgerow to the west and south, and part of the south-east of the site (c. 900m in length) which is to be retained and enhanced as a result of the permitted development (c. 30-50m in width around the perimeter of the site).The eastern hedgerow bounding the site was removed by the Local Authority to facilitate the widening of the R120 which left c. 2,122m of hedgerow prior to the first application on this overall site (i.e. inclusive of boundary and internal hedgerows). It is the Applicant's understanding that the refusal of permission appears to be based on the 230m length of hedgerow which the Planning Authority sought to retain at FI stage. The following is noted by the Applicant;

- 1,362m of hedgerow (c. 66% of the total hedgerow within the original site) that will be retained is notable and would be in accordance with the principles of aforementioned GI policies and objectives.
- 1,052m of new hedgerows are either permitted or proposed around the site.
- The transformation of the site into a heavily landscaped site formed the starting point for the master planning of the site.
- The proposed development will enable the planting of 484 new semi-mature trees (c. 5m in height).
- The already permitted development provides 1,854 new semi-mature trees.
- It is permitted to plant 3,843 standard trees (c. 2m in height) under the two main

permitted developments (Planning Ref. SD19A/0042 & SD21A/0420) within 912 of these trees proposed to be planted within the application boundary.

- It is permitted to plant 18,458 saplings (c. 0.5m in height) across the Facility Campus and with a further 3,586 proposed under current application.

The Applicant notes that it was only the western hedgerow that was of concern to the Planning Authority under Item No. 7 of the further information request, and it is against this background that the Board is requested to consider this issue.

Has the development incorporated GI as an integral part of the design and layout, and incorporated proposals that protect, manage and enhance GI resources providing links to local and county wide GI networks?

6.1.20. In response to GI1 Objective 4, it is submitted that the overall site development has incorporated green infrastructure into its design and layout and has been enhanced at every phase. A comprehensive landscape plan was proposed and accepted under the 2019 application (SD19A/0042) which improved links to the Grand Canal, as well as replacing GI removed by the County Council (eastern hedgerow) and widening and improving biodiversity corridors within an 80-100m strip adjacent to the canal and a 30-50 strip around the site.

Has the development protected and enhanced the biodiversity and ecological value of the existing GI network by protecting where feasible, and mitigating where removable in unavoidable?

6.1.21. It is highlighted that the retention of the western hedgerow was unavoidable. It is stated that the proposed development forms the third phase of an already committed and commenced Facility Campus and there is no potential for it to be developed for any other purpose. At further information stage, the Applicant considered relocating the data centre eastward. However, this generated a clear conflict with the permitted green infrastructure on the eastern side of the site. To respond to the Planning Authority's concerns, the Applicant reduced the external areas around the data centre to provide a new native hedgerow that would run parallel to the existing hedgerow, and which would also extend along the southern side of the data centre creating stronger biodiversity links within the site.

6.1.22. The appellant refers to the technical note (Scott Cawley) that accompanied the FI response in relation to the ecological value of this western hedgerow which concluded that the effects of hedgerow loss on commuting and foraging bats had been determined not to be significant at any geographic scale, and there was not a requirement to provide mitigation. However, additional mitigation in the form of the new western hedgerow was proposed. The permitted development and proposed development has proposed 1,052m of new hedgerow (1,362m to be retained) and the northern portion of the Facility Campus will be transformed from agricultural lands with a few hedgerows to a wildlife area, with ponds and a significant increase in planting with a public park. It is stated that the provision of new hedgerows, tree shelter belts, ponds and wet meadows will enhance the suitability of these parts of the site for foraging bats.

6.1.23. It is the appellant's view that there is no basis for the Planning Authority taking a view that the proposed development would be contrary to the County Development Plan Policy GI1 Objective 4, GI2, Objective 2 and 4 as well as Policy NCBH 11, Objective 3 as the proposed development is fully in accordance with same.

Judge Humphreys judgement cited by Public Realm and Parks.

6.1.24. It is submitted that consideration of the Judge Humphreys judgment [2023] IEHC 335 21 June 2023 cited by the Public Realm and Parks Section is notable, as it would seem on an initial review to be in conflict with Policy GI2, Objective 2 of the Plan, that allows mitigation where removal of hedgerow is unavoidable, as is the case in this instance. Its use in this instance includes no consideration of the overall master planning of the site from a landscape and green infrastructure perspective, and it is stated that the Public Realm and Parks Section make no attempt to consider this judgment in its true context and apply it to the permitted development and proposed development.

6.1.25. The Applicant acknowledges that new hedgerows do not have the same ecological value as existing mature hedgerows. It was therefore decided that the majority of the green infrastructure being proposed would be implemented as early as possible and will be maturing well before the development comes into operation. The rigid

interpretation of Policy GI2, Objective 2 put forward by the Planning Authority would in essence remove the ability to develop large swathes of zoned lands within the County which was clearly not the aim or objective of these Green infrastructure policies.

6.1.26. The permitted development includes some removal of existing hedgerows but also the provision of significant shelter belts of trees and new hedgerows that will provide enhanced connectivity between the development site and the surrounding landscape. In addition, the eastern boundary will now form a 30-40m wide biodiversity corridor that is currently bounded primarily an agricultural fence, prior to work commencing recently. The external (eastern side) of this eastern corridor was to be bounded and is already permitted to be bound by a formal hedge of 590m along the R120 and the Applicant would welcome a condition that required this to be replaced by a native planted hedgerow, if the Board were to overturn the decision of the Planning Authority.

Has the Proposed Development adequately met the Green Space Factor under Policy GI 5, Objective 4.

6.1.27. The Applicant's consultants have calculated that the Green Space Factor for the site would be c. 0.4. It is stated that the method of calculation for the overall Facility Campus site was undertaken on the basis of a large 22.1ha. site. It is the appellant's view that the method of calculation set out under the current Plan is both unclear and leaves no allowance for whether a development is a commercial entity on an EE zoned site; or a development such as the currently proposed, that has by its very nature a large footprint. It is submitted that it is both unreasonable and is not in accordance with the proper planning and sustainable development of the area for the proposed development to narrowly fall below the 0.5 suggested, when such little guidance is provided on so many factors in calculating Green Space Factors. It is noted that a range of additional mitigation measures can be provided in lieu of failing to reach the 0.5 which are suggested, and the Applicant would be willing to be conditioned to amend the formal hedgerow to a native hedgerow bounding the east of the site.

6.1.28. In order to maximise the level of connectivity of GI and biodiversity corridors, all planting is proposed outside of the security fencing and with only a post and rail fence proposed at the boundary of the site. It is stated that the proposal has also utilised

bioswales and tree pits throughout the application site; and there is clearly a significant tree and hedgerow gain (albeit some hedgerow is new, 66% of hedgerow is to be retained) within the overall site. In addition, it is confirmed that the applicant would be willing to accept a condition that requires bird and bat boxes to be provided within the site. In summary, these measures will ensure that the proposed development is in accordance with the section 12.4.2 and Policy GI5 Objective 4 of the current Plan.

6.2. Planning Authority Response

6.2.1. In response to the First Party appeal, the Planning Authority confirms its decision and indicates that the issues raised in the appeal have been covered in the Planner's report.

6.3. Observations

6.3.1. One (1) no. observation to the appeal was received by the Board from John Callaghan for Sustainability 2050. The various issues raised in the submissions can be summarised as follows;

- The Applicant has not clearly set out the primary energy demand of the proposed facility for the various fuels proposed nor the efficiency of conversion to electricity. Coal and Gas are still major inputs into the electricity system.
- Condition No 3 of SD21A/0042 limited the duration of any planning permission to generate power on site to 5 years. The application before the Board seeks to construct and operate a Data Centre indefinitely and there is little information in the application documents as to the thermal energy input in MWh using natural gas as a fuel or indeed the type of plant to be used, its efficiency of conversion to electricity, and the amounts of waste heat to be produced from the electricity generation process. Therefore, there is insufficient information provided to enable assessment under the EIA Directive 2014/52/EU, and the Recast Energy Efficiency Directive 202316
- The Applicant argues at Section 1 of the appeal document that they have a connection agreement. It is stated that third party observers should be permitted to know the details, regarding MIC (Maximum Import Capacity).
    - A question arises as to whether Eirgrid has lawful capacity to offer a connection before planning permission is granted and before EIA

Assessment and Appropriate Assessment is carried out.

  - Eirgrid is not the Competent Authority under the EIA and Natura Related Directive's. A Planning Authority must make their decision in accordance with both National and EU Law and by necessity assessment related to EU Energy and Climate law must be carried out and a reasoned decision provided.
  - To what extent is the offer subject to flexible demand and review?
  - Data centres provide very low levels of employment relative to their energy consumption. Data centres constitute a large proportion of the new connection demand to the Grid in the Dublin Region such that there is an economic interest in prioritising grid capacity for uses that avail the employment needs of large proportions of the population.
  - Data Centres with flexible demand connection agreements are still tied to on site power generation which does not avail consumption of renewable power.
  - The interested public is not given any information on the frequency or duration of application of flexible demand and consequent on site gas based generation at low efficiency.

- The applicants claim that the entire facility is already permitted is clearly not the case, having regard to the Site Layout Map of the SD19A/0042 application and the 5 year limit imposed by condition 3 of the subsequent application for the Gas plant.
- The applicant refers to a legal opinion from Mason Hayes & Curran in relation to the refusal of permission on basis of a Grid Connection Point.
  - Reference is made to Applicant’s variations of a grid connection agreement and members of the public should be able to see these documents.
  - As the development is reliant on onsite gas powered generation, which is actually being scaled up, it is reasonable for the Planning Authority to conclude that grid connection capacity is too constrained to connect the development.
- Lack of sufficient on site renewable energy to power the proposed development.

- Lack of evidence in relation to PPAs. The Applicant refers to negotiating PPAs and it is the observer's view that it is reasonable for members of the public to be informed and consulted in this regard.
- The application lacks detail on the type of power generation technology to be deployed.
- The application must be sufficiently detailed to satisfy the requirements of:
    - The Planning and Development Act,
    - The Planning and Development Regulations,
    - The EIA Directive,
    - The Habitats Directive,
    - The EU Energy and Climate Related Directives, such as the iterations of the Renewable Energy Directive, The Recast Energy Efficiency Directive.
    - The EU Solar Energy Strategy
    - Irish Climate Related Legislation.
- The Applicant's commitment to use Green GAS or hydrogen 'if it becomes available'. The question of whether "Green Gas" or hydrogen becomes available is a subjective one and is very much dependent on price. Even if 100% renewable fuel was procured and used the proposal is still flawed as the electricity is to be converted from gas at a location that cannot usefully use the waste heat.

6.4. First Party Response

None

6.5. Further Responses

None.

7.0 Planning Assessment

Having examined the application details and all other documentation on file, including the reports of the Local Authority, the submissions on file and having inspected the site, and having regard to the relevant local/regional/national policies and guidance, I consider that the substantive issues in this appeal to be considered are as follows:

- Principle of Development

- Space Extensive Uses & Power Supply
- Green Infrastructure
- Appropriate Assessment – Screening Determination

7.1. Principle of Development.

7.1.1. Under the current proposal, the Applicant is seeking planning consent for the construction of a data centre and associated office development on the subject site. The Applicant confirms that the subject proposal represents the third and final phase of development on an overall landholding which is known collectively as the Facility Campus. Under the South Dublin County Development Plan, 2022-2028 (Plan), the majority of the appeal site is located on lands zoned 'EE' (Enterprise and Employment), the objective of which seeks 'To provide for enterprise and employment related uses'. I note that the northern corner of the site is also located within lands zoned 'RU' (Rural and Agriculture), where it is an objective 'To protect and improve rural amenity and to provide for the development of agriculture'. In response to the Planning Authority's FI request, it was confirmed by the Applicant that the only new elements of the current development within this portion of the site was part of a new attenuation pond. I note that a drawing was enclosed with the response that overlayed the 'RU' zoning relative to the proposed site layout plan. I am satisfied that the provision of landscaping and attenuation at this location is accordance with the relevant zoning provision that pertains to this area of a site, a point which was also accepted by the Planning Authority.

7.1.2. Under the 'EE' zoning, a data centre is identified as being an 'open for consideration' use (Table 12.10), that being a use that may be acceptable to the Planning Authority subject to detailed assessment against the principles of proper planning and sustainable development, and the relevant policies, objectives and standards set out in the current Plan. It is highlighted by the observer to the appeal that data centres provide very low levels of employment relative to their energy consumption. Section 9.3 (Space Extensive Land Use) of the current Plan acknowledges that data centres are one of the most space extensive land use types in the County. The policy is clear insofar as space extensive enterprise should not compete for lands which are more suitable for labour intensive enterprise by reason of their location adjacent to public

transport nodes or within existing built up, compact growth areas. Therefore, due regard must be given to EDE7 Objective 1 of the current Plan which seeks 'To ensure that, insofar as possible, space extensive enterprise is located on lands which are outside the M50, and which do not compromise labour intensive opportunities on zoned lands adjacent to public transport'. I note that the Planning Authority was satisfied that the principle of development was acceptable at this location given its location outside the M50. I would agree with the Planning Authority in this regard, noting its general location, the availability of public transport, the pattern of development in the surrounding area and the established use on the wider Facility Campus. However, the application was ultimately refused by the Planning Authority and the following sections of this report will address in detail the Applicant's grounds of appeal and their response to the Planning Authority's reasons for refusal.

7.1.3. The proposed development includes an ancillary office area which is located on the eastern side of the proposed data halls. The office space has a floor area measuring c. 1,700sq.m. It is confirmed by the Applicant that the staff of the data centre facilities will largely be housed in this administration portion of the building which comprises a reception area, general office areas, office space for clients and project teams, canteen & sanitary facilities and conference rooms/meeting rooms. Under the relevant zoning objective, offices over 1,000sqm are identified as being open for consideration. It is an objective of the current Plan (EDE4 Objective 4) 'To direct people intensive enterprise and employment uses such as major office developments (>1,000 sq. m gross floor area) into appropriately zoned lands subject to their location within approximately 500 metres of a high frequency urban bus service and / or within 1000 metres walking distance of high capacity transport stops (Train / Luas), and to demonstrate the required walking distance or provision of a permeability project, in accordance with the Permeability Best Practice Guide (2015), to achieve same'. As part of the Planning Authority's assessment, the Applicant was requested to demonstrate the appropriateness of the development in the context of this objective. The Applicant's response refers to the location of the site relative to the existing bus stops (i.e. Bus Stop Nos. 3143 & 7229) which are located within c. 500m and 800m of the entrance to the Facility Campus respectively. Notwithstanding this, I am cognisant of the ancillary nature of the office accommodation to the primary use proposed (i.e. a

space extensive land use). I am therefore satisfied that the general principle of the ancillary office floor space is acceptable at this location. However, I acknowledge that the Planning Authority have recommended revisions to the pedestrian and cyclist routes within the site to improve accessibility to the footpath and cycle infrastructure along the R120. I am satisfied that this matter could reasonably be addressed by way of condition.

7.2. Space Extensive Uses & Power Supply

7.2.1. As indicated in the foregoing, the Planning Authority was satisfied that the principle of the development was acceptable at this location and was generally in accordance with EDE7 Objective 1 of the current Plan. The current Plan policy acknowledges that Dublin is one of the fastest growing data centre markets in Europe with a significant element of this growth in South Dublin County. The current Plan recognises that space extensive land uses generally have a higher carbon footprint, whether because of transport related uses or the large amounts of energy demanded by them. The current Plan policy seeks to encourage high energy users to demonstrate ways to reduce or negate reliance on fossil fuels and to redistribute energy for other end users where such potential exists. The application was ultimately refused by the Planning Authority as it was their view that the development had failed to accord with EDE7 Objective 2 of the current Plan. The policy objective requires space extensive enterprise to demonstrate compliance with various criteria which are also included within Section 12.9.4 of the Plan. When examining the Planning Authority's reason for refusal (Refusal Reason No. 1), the scheme's shortcomings can be distilled down to the following;

- Existing insufficient capacity in the electricity network (grid),
- The lack of a fixed connection agreement to connect to the grid,
- The lack of significant on-site renewable energy to power the proposed development,
- The lack of evidence provided in relation to the applicant's engagement with Power Purchase Agreements (PPAs) in Ireland, and,
- The reliance on a gas-powered plant to provide energy to the development.

The following sections of this report will evaluate the development in the context of various criteria included within EDE7 Objective 2 and Section 12.9.4 of the current

Plan.

The appropriateness of the site for the proposed use having regard to EDE7 Objective 1.

7.2.2. As noted in Section 7.1 above, I am satisfied that the proposed development is generally in accordance with EDE7 Objective 1 of the current Plan and the principle of a space extensive land use is acceptable having regard to the site's location on 'EE' zoned land outside the M50, the pattern of development in the area and the established data centre use on the wider Facility Campus. In my view, the development accords with this requirement.

Strong energy efficiency measures to reduce their carbon footprint in support of national targets towards a net zero carbon economy, including renewable energy generation.

7.2.3. As part of the Applicant's response to the FI request, the Applicant confirmed that they are committed to achieving net zero carbon emissions by 2030 and are creating interim reduction targets that are in alignment with the Science Based Target Initiative ("SBTi") methodology. It is stated that the overall design has introduced energy efficiency measures that are detailed within the Energy Statement (Ethos Engineering) and the Applicant is committed to driving emission reductions across all of its activities through investment in technology; sourcing renewable energy, wherever possible; and in funding carbon removal projects. Sustainable design features of the project include;

- Enhanced building fabric performance,
- High efficiency HVAC systems,
- High efficacy lighting with occupancy and daylight control where applicable.
- 230sq.m. of solar PV panels (50KW) on the roof of the office component;
- Heat pumps, and,
- BER rating of "A3" which demonstrates Part L compliance in accordance with NEAP.

7.2.4. The Applicant's appeal submission also notes that the Facility Campus has been future proofed to take advantage of cleaner fuels as they become available. It is stated that the amended Condition No.3 of the gas powered plant permission (SD22A/0289)

will enable, if it becomes available, a transition to it using green gas and / or hydrogen (or similar fuels) within an agreed timeline with Gas Networks Ireland (GNI). Within their assessment of the Applicant's response, the Planning Authority indicated that they had concerns in relation to the proposed measures to reduce the carbon footprint of the proposed development. I note that no further analysis was provided regarding this specific point.

7.2.5. Whilst the sustainable design features discussed above would be expected for a modern development of this nature, it would appear that a fundamental concern of the Planning Authority is the proposal's reliance on a gas-powered plant to provide energy to the development, which has been identified in the reason for refusal. This issue has also been raised by the observer to the appeal. As discussed in Section 4 of this Report, the gas-powered plant was originally permitted under SD21A/0042. This development permitted 2 no. data centres and 3 no. gas powered generation plant buildings. Condition No. 3(ii) of this permission stipulated that the gas plants and all associated and related ancillary structures shall cease operation within five (5) years from the date the first gas plant first commences operation. Condition No. 3(iii) required the gas plants to be then removed within 1 no. year of the ceasing of operations. However, Condition Nos. 3(ii) & (iii) were amended under SD22A/0289, as follows.

ii. 'Within four (4) years from the date the first Gas Plant commences operation, the applicant or operator shall undertake a review with Gas Network Ireland of the ability to serve the Gas Plant with green gas and / or hydrogen (or similar fuels) shall be Investigated and reported to the Planning Authority. Any ability for the Gas Plant to be operated with green gas and/ or hydrogen (or similar fuels) shall be implemented within an agreed timeline agreed with GNI.

iii. If the applicant receives a firm offer from Eirgrid under which the Gas Plant is not required, and the connection has been realized with capacity onsite from Eirgrid, then the Gas Plants shall be removed from the entire site within a year of the ceasing of operation'.

7.2.6. The Applicant has confirmed that the Power Plant has been designed to serve the both the permitted and proposed development, known collectively as the Facility

Campus. I would accept that Applicant's contention that the principle, use, scale, and capacity of the Power Plant is established in planning terms and the conditions discussed above have been included to restrict/control their use and are directly applicable to the subject proposal given its reliance on same. It is noted within the appeal submission that the Power Plant will reinforce the national grid, once the EirGrid connection is realised and the Power Plant is only envisaged to run at the request of EirGrid in response to a grid event as per their flexible demand policy. In addition, the Power Plant has been designed to allow for the use of renewable biogas, and hydrogen to provide electricity and the Applicant has committed to engagement with renewable PPAs in Ireland and the securing of renewable energy to power the proposed development.

7.2.7. In terms of decarbonisation, the Government Statement on Data Centres notes that 'Islanded' data centre developments, that are not connected to the electricity grid and are powered mainly by on-site fossil fuel generation, would not be in line with national policy. These would run counter to emissions reduction objectives and would not serve the wider efficiency and decarbonisation of our energy system. The policy notes that growth in 'Islanded' data centres could result in security of supply risk being transferred from electricity to gas supply, which would be a significant challenge given Ireland's reliance on gas importation. Since the decision of the Planning Authority, the Applicant has obtained a grant of permission (ABP-314567-22) by the Board for the development of underground 110kV transmission line connections between the permitted Kishoge 110kV GIS substation (i.e. to serve the proposed development) and the permitted Aungierstown - Castlebaggot underground 110kV transmission line. This development will facilitate the connection to the national grid and the Applicant notes that the SID project was designed to support the power demand of the Facility Campus, and the connections were agreed and designed in accordance with the specifications of, and following review by EirGrid and ESB. As detailed in the Government Statement on Data Centres, the CRU has advised that the power system is facing potential capacity margin shortfalls over the next few years – effectively meaning there is a likelihood that projected generation supply may not be enough to meet forecast demand at peak demand periods. To address these risks, the CRU published in November 2021 the "CRU Direction to the System Operators related to

Data Centre grid connection processing" (CRU/21/124). The Government Statement on Data Centres notes that this allows the data centre industry to continue to connect to the electricity grid, subject to certain conditions and it is highlighted that new data centre connections are required to have on-site generation (and/or battery storage) that is sufficient to meet their own demand and, to assist in full decarbonisation of the power system. It is also stated that this generation should be capable of running on renewably sourced fuels (such as renewable gas or hydrogen) when supplies become more readily available.

7.2.8. The Applicant has confirmed that they currently benefit from a flexible connection to the gird and evidence of same has been enclosed with the appeal (Appendix B). Further discussion regarding a fixed and flexible connection is provided below as this point has been raised as an issue by the Planning Authority. In my view, it is evident that there is currently a clear obligation for the Applicant to provide on-site generation at this constrained location, and the provision of same would accord with the national policy guidance for data centres (i.e. Government Statement on Data Centres). The Power Plant has been designed to run on renewably sourced fuels and Condition Nos. 3(ii) & (iii) of SD22A/0289 will ensure that if there is any ability for the Power Plant to be operated with green gas and/ or hydrogen (or similar fuels), it shall be implemented within an agreed timeline with GNI and ultimately the Planning Authority. In addition, if circumstances change, and there is greater security of supply in the national grid, whereby a fixed connection can be secured at this location, this condition (3(iii)) will require the Power Plant to be removed from the entire site within a year of the ceasing of operations. Therefore, I am satisfied that appropriate planning conditions are in place and the development has been designed so that the development's carbon footprint has been reduced in support of national targets towards a net zero carbon economy. Therefore, it is my view that the proposal is in accordance with this policy objective.

7.2.9. I note that the proposed development includes the provision of 24 no. standby diesel generators with associated flues (each 25m high) that will be located within a generator yard to the west of the data centres. The Applicant notes that in the event of a loss of power supply i.e. temporary grid blackout, the diesel powered back-up

generators will be provided to maintain power supply. These generators are designed to automatically activate and provide power to the data centres pending restoration of mains power (An uninterruptible power source is also provided for the short-term transition from mains power to diesel generators). Each generator will also include a diesel belly tank (all tanks will be bunded) with a single refuelling area to serve the proposed emergency generators. Chapter 10 of the EIAR notes that the modelled maintenance plan for the proposed development comprises the following:

- Testing once per week of all 24 no. standby generators on site at 80% load for a maximum of 1 hour each, 1 generator at a time, sequentially.
- All testing is assumed to occur between 8am and 5pm, Monday to Friday only.

7.2.10. I note that a transition has begun within the industry, whereby hydrotreated vegetable oil (HVO) is being utilised as a fuel to power backup generators at data centre sites. HVO is a renewable fuel that can be made from waste cooking oil, or vegetable, plant, and residue oils and are proven to be more compatible with industrial machinery than biodiesel as they don't require any modification to the fuel systems and can remain stable even in colder temperatures. Therefore, it is my recommendation that a condition be included which restricts the use of fossil diesel within the proposed 24 no. standby generators. Confirmation of what renewable fuel will be utilised (i.e. HVO or other renewable diesels) by the standby generators shall be submitted to the Planning Authority prior to the operation of the proposed development. Compliance with this condition would assist in reducing the development's carbon footprint in support of national targets towards a net zero carbon economy.

Maximise on site renewable energy generation to ensure as far as possible 100% powered by renewable energy, where on site demand cannot be met in this way, provide evidence of engagement with power purchase agreements in Ireland (PPA).

7.2.11. The criterion contains two parts, with the first being a requirement for a development to maximise on site renewable energy generation to ensure as far as possible 100% powered by renewable energy. Where on site demand cannot be met in this way, the criterion can be satisfied, where evidence is provided of engagement with power purchase agreements in Ireland (PPA). In their FI response, the Applicant noted that

there is insufficient land on the site to accommodate adequate onsite renewable energy generation. An example is provided by the Applicant where a 1MW solar farm would require 1.2ha. of land and would provide less than 2% of the energy consumption of the facility. In addition, it is stated that the data centre cannot be permanently powered by renewable energy generation due to the unreliability and intermittency of renewables as a permanent source of power. The Applicant's response relating to renewables was noted by the Planning Authority and a refusal of permission was recommended as the Applicant had not provided sufficient evidence of engagement with PPAs (i.e. required to satisfy the second part of the criterion).

7.2.12. The Applicant's appeal submission notes that the already permitted Power Plant has capacity to be fuelled by green gas and / or hydrogen (or similar fuels) as the plant has been scaled to serve the proposed development and does not result in any change to the already permitted infrastructure. The Applicant states that under SD21A/0042, the Power Plant was permitted:

- to provide continuous power to the permitted and proposed data centres should the EirGrid connection not be realised at the time of commissioning of the Facility Campus.
- once the EirGrid connection is realised, the gas plant will only ever be utilised to reinforce the national grid. In that scenario the plant is only envisaged to run at the request of EirGrid in response to a grid event as per their flexible demand policy.

It is stated that the permitted Power Plant will provide security of supply to the national grid, where currently renewables cannot, by providing additional capacity under the terms of the flexible connection arrangements under the Edgeconnex Grid Connection Agreement.

7.2.13. Whilst the permitted power plant has capacity to be fuelled by green gas and / or hydrogen, it is clear that the proposed development cannot be powered by on site renewable energy generation as encouraged by the current Plan policy. However, I am satisfied that this criterion can still be satisfied where evidence of engagement with PPAs in Ireland is provided. Having reviewed the Applicant's FI response, I would agree with the Planning Authority that the Applicant had failed to provide adequate

evidence of engagement with PPAs. However, in support of this appeal, correspondence from KPMG (a broker for PPAs) (Appendix D) has been enclosed which confirms that they have been engaging actively in the pursuit of a PPA in respect of the proposed development. In addition, it is stated that a PPA is being actively pursued for the Power Plant. As the design of the permitted Power Plant allows for the use of biogas and hydrogen in the future, the overall campus being progressed by the First Party will also provide a direct opportunity for additional renewable energy generation on site. It is the Applicant's contention that this this represents clear and unequivocal evidence of the First Party's engagement with PPAs in Ireland.

7.2.14. Whilst the wording of this policy only requires evidence of engagement with PPAs, it is a logical assumption that the Planning Authority would include an appropriate condition to ensure that certainty is provided that a development would enter into PPAs with a renewable energy provider. In my view, this would be necessary to ensure compliance with the overarching policy and I note that the Applicant has confirmed that they would welcome a condition of this nature. Overall, I am satisfied that the Applicant has demonstrated compliance with this criterion, and it is evident that there is a commitment to enter into PPAs for both the proposed development and the permitted Power Plant. Should the Board be minded to grant permission for the proposed development, it is my recommendation that a condition be included which requires details of a Corporate PPA with a renewable energy be provided prior to the operation of the development.

Sufficient capacity within the relevant water, wastewater and electricity network to accommodate the use proposed.

7.2.15. In terms of water and wastewater demands generated by the proposed development, I note that Irish Water have raised no objection to the proposed development subject to compliance with standard conditions. These matters are addressed in further detail in Section Nos. 8.11 of the EIA and in my view, it has been adequately demonstrated that there is sufficient capacity to accommodate the proposed use. However, the application has been refused by the Planning Authority in part, due to the existing insufficient capacity in the electricity network (grid) and also the lack of a fixed connection agreement to connect to the grid. Whilst the Planning Authority accepted

that proposed development was generally taken into account when designing and assessing the Power Plant (short-medium term power supply) and the GIS Substation (permanent power supply), it was their view that a fixed EirGrid connection should be demonstrated. As the applicant had failed to do so, it was considered that planning permission should be refused.

7.2.16. The Government Statement on Data Centres is the latest policy in place with respect to the assessment of planning applications for data centres and acknowledges that 'the capacity constraints experienced by our electricity system, and the binding carbon budgets that require rapid decarbonisation of energy use across all sectors, necessary mean that not all existing demand for data centre development can be accommodated'. Within their assessment, the Planning Authority refer specifically to the commentary within the Government Statement on Data Centres which notes that in the short term, there is only limited capacity for further data centre development, as the key state bodies, regulators and the electricity sector work to upgrade our infrastructure, connect more renewable energy and ensure security of supply. It is noteworthy to refer to Section 4.3 (Planning Permission) of the EirGrid DCCOPP, which highlights that the CRU introduced planning permission as a key part of the eligibility criteria for generation projects to be able to apply for connection to the transmission system. This decision was designed to ensure that more advanced or "shovel ready" projects receive priority over less advanced projects and that transmission capacity is allocated to projects most likely to utilise the valuable transmission capacity in the shortest period of time. The DCCOPP confirms that EirGrid requires that planning permission is provided prior to a customer progressing to Stage 2 of the connection offer process.

7.2.17. Under the heading of 'Electricity Grid Capacity and Energy System Capacity' (Government Statement on Data Centres), it is highlighted that new data centre projects, not yet contracted to the electricity system, would only further increase electricity demand and would present additional challenges for grid capacity and the emissions targets set for the electricity sector in the Climate Action Plan. Nevertheless, it is confirmed by the Applicant that they have already obtained a connection agreement from EirGrid in respect of the overall Facility Campus (i.e. the Edgeconnex

Grid Connection Agreement (Appendix B). It is stated that that was obtained following planning permission being granted under SD21A/0042 and includes both the permitted and proposed development. In addition, the legal advice note prepared by Mason Hayes & Curran (Appendix A) which accompanies this appeal confirms that the Applicant is contracted to connect to and use the electricity system and does not fall to be considered as a 'prospective data centre project' in this respect. It is stated that the Connection Offer was received, and the Connection Agreement entered into following the EirGrid introduction of DCCOPP and the identification of the greater Dublin area as a constrained area.

7.2.18. Further to the above, it has been submitted by the Applicant that it is not within the Planning Authority's remit to determine whether there is sufficient capacity on the national grid. This is reiterated in the Applicant's legal advice note, where they state that it is not within the Planning Authority's remit to determine capacity allocation or connection to the electricity grid, or indeed the operation and management of contracted grid capacity. It is stated that this falls squarely within the remit of the two state licensed entities which determine applications to connect to the grid and maintain and operate the grid, namely ESB Networks Limited at distribution level as the licensed Distribution System Operator (DSO) and EirGrid plc at transmission level as the Transmission System Operator (TSO). As discussed in the preceding sections, the CRU Direction (CRU/21/124) allows the data centre industry to continue to connect to the electricity grid, subject to certain conditions. Within this direction, the TSO and DSO have been directed to assess applications for the connection of data centres by reference to the following assessment criteria to determine whether a connection offer can be made within the system stability and reliability needs of the electricity network:

- The location of the data centre applicant with respect to whether they are within a constrained or unconstrained region of the electricity system.
- The ability of the data centre applicant to bring onsite dispatchable generation (and/or storage) equivalent to or greater than their demand, which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.
- The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO in times of

system constraint through the use of dispatchable on-site generation (and/or storage) which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.

- The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO, in times of system constraint, in order to support security of supply.

As these assessment criteria have been acknowledged in the Government Statement on Data Centres, it is reasonable to conclude that the issue of grid capacity and security of electricity supply falls within the remit of the TSO (i.e. EirGrid) rather than the Planning Authority. Whilst issues of capacity are acknowledged in national policy, there are clear criteria that prospective Applicant's must satisfy to obtain a grid connection, and I again note that the Applicant has outlined that they currently benefit from an existing connection. It is therefore my view that the Planning Authority's claim that there is insufficient capacity in the national grid to cater to the proposed development is unfounded.

7.2.19. In terms of the Government Statement on Data Centres, a set of national principles have been agreed that should inform and guide decisions on future data centre development. Within the constraints of sectoral emissions obligations, these principles set out the positive role that data centres can play, subject to meeting the requirements set out under the applicable planning and grid connection processes. The policy notes that data centre development that is not consistent with these principles would not be in line with national policy. As detailed in the summary below, I am satisfied that the proposed development is broadly in compliance with the various national principles.

Table 7.1: National Principles as set out in the 'Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy (July 2022)'

Principle	Criteria	Level of compliance
Economic Impact	Preference for DC developments associated with strong economic activity & employment.	It is expected that the maximum employment will be 250 with the average people employed during the construction stage being 150. Construction jobs often have a related multiplier effect, creating additional indirect employment in business, which in turn benefit from increased spending by local construction workers. Increased employment

		opportunities as the Proposed Development (post-construction) will help to sustain c. 100 jobs. The appeal site is located land zoned for enterprise and employment use (EE) under the current Plan, where the proposal is identified as an 'open for consideration use'. The development represents the final phase of a data centre development (Facility Campus) where the use is established and the proposal is consistent with the pattern of development within the surrounding area, where there is concentration of data centre developments.
Grid Capacity & Efficiency	Preference for DC developments that make efficient use of our electricity grid, using available capacity & alleviating constraints.	Located beside permitted Kishoge 110kV GIS substation and the 110kV transmission lines permitted under ABP-314567-22. On-site power plant with potential to supply energy to the grid. This power plant has been future proofed to run on hydrogen and other renewable fuel sources. Provision of solar panels on buildings. Provision of backup (stand-by) diesel generators in the case of emergencies. The Applicant has demonstrated that they benefit from an existing flexible demand grid connection.
Renewables Additionality	Preference for DC developments that can demonstrate the additionality of their renewable energy use in Ireland.	Evidence provided of engagement with PPAs. On-site power plant with potential to supply energy to the grid. This power plant has been future proofed to run on hydrogen and other renewable fuel sources.
Co-location or Proximity with Future-proof energy supply	Preference for DC developments in locations where there is the potential to co-locate a renewable generation facility or advanced storage with the data centre, supported by a CPPA, private wire or other	Provision of solar panels on buildings. Provision of on-site gas generator, with potential to supply energy to the grid. Evidence provided of negotiations by a broker for PPA's and the First Party's

	arrangements.	main partner in the sourcing of PPA's and willing to accept a planning condition in this regard.
Decarbonised Data Centres by Design	Preference for DC developments that can demonstrate a clear pathway to decarbonise and ultimately provide net zero data services.	Construction will be in line with the current best practice in relation to energy efficiency, decarbonisation and sustainability. Solar panels on buildings. Future potential for the on-site energy centre to run on HVO, biogas and hydrogen.
SME Access & Community Benefits	Preference for DC developments that provide opportunities for community engagement & assist s*mall and medium-sized enterprises* (SMEs), both at the construction phase & throughout the data centre lifecycle.	Local construction phase opportunities. Provision for over 100 jobs during operational phase.

7.2.20. As noted in foregoing, the Planning Authority recommended a refusal of permission due to the lack of a fixed connection agreement to connect to the grid. It is submitted by the Applicant that EDE7 Objective 2 does not require a fixed connection agreement to be in place. Rather, an Applicant must demonstrate sufficient capacity in the electricity network. As per the DCCOPP, EirGrid has identified the greater Dublin region as constrained. This was due to the disproportionate interest among data centre developers that were applying for a connection to this region. As per Section 4.1 (Data Centre Flexible Demand) of the DCCOPP, EirGrid introduced a 'flexible demand' offering in 2018 which provided the option for new capacity for data centres in constrained regions to contract on a 'flexible' basis in advance of the necessary generation and/or transmission infrastructure being in place and have served to moderate the level of new capacity being sought by data centres.

7.2.21. As per the Government Statement on Data Centres, a more flexible pattern of data centre demand can reduce the need for fossil-fuel generated electricity and help with decarbonisation as renewables grow in importance. The policy notes that new data centre connections are required to have on-site generation (and/or battery storage) that is sufficient to meet their own demand. In addition, this generation should also be capable of running on renewably sourced fuels (such as renewable gas or hydrogen)

when supplies become more readily available to assist in full decarbonisation of the power system. As noted earlier in this report, the Applicant has sought to maximise the use of renewables through the design and future proofing of the Power Plant so that it has capacity to accept biogas and hydrogen when it becomes available. Further to this, I note that Condition Nos. 3(ii) & (iii) of SD22A/0289 are directly relevant to the subject appeal and will facilitate the Power Plant's transition to be fuelled by renewables in the short-medium term. In addition, it is my recommendation that a condition be included which requires details of a Corporate PPA with a renewable energy be provided prior to the operation of the development. In my view, this would support the measures and actions required to increase the deployment of renewable energy generation and to meet the demand and flexibility needs required for delivering at least 2 GWs of new flexible gas-fired generation as required within the Climate Action Plan 2024. Therefore, having regard to the location of the subject site in a constrained area which is subject to a 'flexible demand' offering, it is my view that the Applicant has demonstrated that there is sufficient capacity in the national grid to accommodate the proposed development and I would agree with the Applicant that there is no specific requirement for a fixed connection agreement under EDE7 Objective 2 of the current Plan.

Measures to support the just transition to a circular economy.

7.2.22. In their response to the FI request, the Applicant noted that an outline Construction and Demolition Waste Management Plan (CDWMP) (Chapter 15 of the EIAR) had been submitted that addressed construction waste and a number of the factors required under the transition to a circular economy. It was stated that this Draft Plan seeks to lower embodied carbon; conserving resources; sustainable material sourcing; designing to eliminate waste; longevity of design, flexibility and adaptability in design; and indicates design for disassembly. I note that the Planning Authority was satisfied that this addressed the above criterion, and I would recommend that a finalised CDWMP be conditioned should the Board be minded to grant permission for the proposed development.

Measures to facilitate district heating or heat networks where excess heat is produced.

7.2.23. In their application documents, the Applicant noted that there is currently no availability

for connection to a district heating system. However, it was stated in their FI response that a district heating system may be available in the region in the future, and it is confirmed that there is sufficient space on site to connect to a waste heat recovery building in such a scenario. They go on to state that the Clonburris SDZ Planning Scheme is recognised in the SDCC Climate Change Action Plan as having been developed in conjunction with the Clonburris Energy Master Plan. This Master Plan identifies a range of delivery mechanisms that include the creation of local heat networks. It is the Applicant's view that the implementation of such a scheme within Clonburris, or elsewhere, would enable heat rejected by the processes on the application site, to be provided to the surrounding area should sufficient demand exist for this.

7.2.24. Having examined the Clonburris Energy Master Plan, I note that the potential to supply a heat network at one or both of the two Urban Centres within the Planning Scheme using waste heat from existing commercial and industrial sources in the vicinity of the SDZ has been examined. It is stated that the commercial users at Grange Castle Business Park (east of the application site) offer the most likely source of the required amount of heat, as they are understood to have an energy demand many times that expected at the Kishoge Urban Centre. The Master Plan notes that much of this energy could be recoverable, particularly in the form of cooling water from the data centres, building cooling systems or primary processes on site, and could be used as the heat source for a water source heat pump (WSHP). The advantage of having access to waste heat would be to achieve greater heating efficiency and reduced fuel costs. In summary, the Master Plan notes that the potential to supply a heat network at Kishoge Centre with waste heat from Grange Castle industrial estate could allow a more extensive heat network scheme to be viable and a more detailed feasibility study on this is recommended. Within their assessment, the Planning Authority noted that a condition should be attached in the event of a grant of permission which requires the Applicant to demonstrate how a connection to a future district heating network can be facilitated on site. This would entail allowing internal space and alignment for the laying of pipework to facilitate a connection and would need to be agreed prior to the commencement of development on site. Overall, I am satisfied that the proposal is acceptable subject to compliance with this condition. I also note that this would comply

with Section 12.10.2 (Low Carbon District Heating Networks) of the current Plan. I note that the condition would need to obligate the Applicant to connect to the future district heating network should it become available.

A high-quality design approach to buildings which reduces the massing and visual impact.

7.2.25. The Applicant notes the highest element of the proposed development are the flues associated with the back-up generators which are located to the west of the data centre and will only be visible from distant views. A parapet is proposed above the data halls which will obscure views of the plant at roof level. It is contended that the setbacks of the building help to reduce the visual scale and massing of the building, which is further aided by the permitted planting that includes low tree and other planting either side of a row of triple staggered semi-mature trees planted along the top of the 4-5m berms (i.e. along the eastern boundary). I would agree with the Applicant that this will provide a high degree of visual screening when viewed from local and medium distance views. In addition, the Applicant has proposed vertical shaded cladding elements on the north, south and east elevations (that face the internal road, canal and the R120) of data halls. A similar façade treatment has been provided on the constructed data centres to the east of the site within the Grange Castle Business Park (within the control of the Applicant) and I am generally satisfied that this reduces the overall bulk of the structures and provides some articulation and visual interest to the elevations. The Planning Authority has raised some concerns with respect to the design of the development and modifications to its design were suggested within their second report on file. Further detailed analysis regarding the quality of design and visual impact is provided within my assessment of Chapter 12 (Landscape & Visual Impact) of the amended EIAR. Overall, I am satisfied that the proposed development is generally in accordance with this criterion subject to compliance with appropriate conditions.

A comprehensive understanding of employment once operational.

7.2.26. It is confirmed by the Applicant that once operational, c. 30 full time employees will be present on site daily in the data centre facilities. It is stated that security staff (6 no. total) will be required at all times as well as service staff from outside the data centre

facility in relation to the Power Plant creating employment of up to 40 employees. During the night shift a reduced number of staff will be required with 10 staff required in the data centre facilities. The facility will operate on 3 no. 8 hour shift basis (8am to 4pm; 4pm-12am and 12am-8am) and working hours are expected to be 24 hours a day, 7 days a week. The total persons employed directly on the site is c. 100 and this figure does not include additional service staff and other deliveries etc. that would be associated within the operation of the development. In my view, this level of direct employment is reasonable for a space extensive land use of this nature which is considered to be appropriate due to the site's location. I am therefore satisfied that the development is in compliance with this criterion.

A comprehensive understanding of levels of traffic to and from the site at construction and operation stage.

7.2.27. It is confirmed by the Applicant that the peak demolition and construction period would be in 2024 with a maximum of 20 no. demolition and construction vehicle movements per day 10 no. arrivals and 10 no. departures each day. It is stated that the effects of the demolition and construction traffic would be temporary, medium, negative and not significant. The Applicant goes on to note that proposed development would be fully operational in late 2024 and is anticipated to generate a maximum of 60 no. vehicle trips (arrivals and departures) during the am peak and none during the pm peak each day, and its impact was not considered to be significant on the surrounding road network. I am cognisant that the referenced timelines for the construction phase cannot be achieved given the application was subject to a First Party appeal. Further detailed analysis regarding the level of traffic during the construction and operational phase of the proposed development is provided within my assessment of Chapter 13 (Traffic & Transportation) of the revised EIAR. Overall, I am satisfied that the surrounding road network can accommodate a development of this nature and scale and the proposal is therefore in accordance with this criterion.

Provide evidence of sign up to the Climate Neutral Data Centre Pact.

7.2.28. It is confirmed that the Applicant (Edgeconnex) are signatories of the Climate Neutral Data Centre Pact (https://www.climateneutraldatacentre.net/signatories/). The proposal would therefore satisfy this requirement.

Summary & Conclusion

7.2.29. Having considered the provisions of the current Plan, the various policies at national level, the Applicant's appeal and the totality of the documentation on file, I am satisfied that the proposed development is an acceptable form of development on these 'EE' zoned lands and is in accordance with EDE7 Objective 2 and Section 12.9.4 of the current Plan (2022-2028). In my view, the Applicant has demonstrated that there is sufficient capacity in the national grid to accommodate the proposed development as it currently benefits from a 'flexible demand' connection within what is a constrained area. In addition, the potential to utilise significant renewable energy generation on site would accord within local through to national policy provisions. The proposed development aligns with the Agreed Principles contained in Government Statement on Data Centres and it is therefore my recommendation that permission be granted for the proposed development, subject to compliance with appropriate conditions.

7.3. Green Infrastructure

7.3.1. The Planning Authority's second reason for refusal centres on the development's failure to comply with GI1 Objective 4, GI2 Objective 2, GI2 Objective 4, NCBH11 Objective 3 and GI5 Objective 4 of the current Plan. Broadly speaking, these Plan objectives relate to both the retention and protection of existing green infrastructure and provision of green infrastructure. It is evident from reviewing the second Planner's Report on file, that the reason for refusal is based on the recommendations of the Planning Authority's Parks and Public Realm Section and the Applicant's failure, in their view, to adequately respond to the FI request.

7.3.2. At the time the application was submitted, the appeal site comprised open grassland that was bound and bisected by existing hedgerows which were interspersed by trees of varying maturities. The site has now been substantially cleared and comprises open surface car parking and the construction compound associated with the development of the wider permitted Facility Campus. The hedgerows that bound the site's western boundary and which diagonally bisect the site have largely been retained and protective fencing has been installed. The footprint of the proposed data centre development is extensive and covers the majority of the subject site. The proposal

requires amendments to the permitted public park to the north of the site and an area that was previously permitted as park land will form an attenuation basin that is required to serve the proposed development. This is located within the site's north-eastern corner and there are further revisions to the landscaping scheme at this location.

7.3.3. Within their initial assessment of the application, the Parks and Public Realm Section noted that the Applicant's proposals involve the removal of all hedgerows on site which they considered to be contrary to the relevant policies and objectives of the current Plan. The Planning Authority then requested the Applicant to submit by way of FI:

- Proposals that retain the western boundary hedgerow.
- Proposals that mitigate the loss of commuting and foraging routes for bats.
- A green infrastructure strategy.
- A green space factor; and,
- Landscape architect and engineer proposals for pond profile and habitat proposals to be in accord - demonstrate all four pillars of SuDS can be achieved.

The Applicant was also requested by the Planning Authority to provide a response to the relevant policy objectives of the current Plan that relate to green infrastructure and a demonstration of how the proposal was compliant with same. Having examined the Planner's Reports on file and their assessment of the Applicant's FI response, it is evident that there is a reliance on the recommendations of the Parks and Public Realm Section, upon which the second reason for refusal is based. It is therefore necessary to examine the report of the Parks and Public Realm Section in further detail.

7.3.4. It is evident that the principal concern of the Parks and Public Realm Section related to the loss of the existing hedgerow that bounds the site's western boundary. This hedgerow (Hedge 8) is described in the Applicant's Arboricultural Report as:

- A broadly mature hedge alignment of reasonable continuity associated with the eastern ascending embankment from a ditch feature. General continuity amongst the thorns tends to be broadly good though suppression is developing as result of more invasive plants such as Elder and ash. The hedge alignment is affected by only a small number of gaps where continuity is provided for only

by lower level Privet and Bramble Scrub.

Whilst the other hedgerows (Hedge 1 & 5) through the site are proposed to be removed, the Planning Authority have not raised a concern regarding their loss. As detailed earlier in this report, the site is subject to a detailed planning history and there has been a number of iterations of the Landscape Masterplan for the entire Facility Campus. This initial Landscape Masterplan was permitted under SD19A/0042 and was updated and amended with each subsequent application. Under SD19A/0042, planning permission was originally permitted for the data centre development within the south-eastern corner of the site (DUB04), with the balance of the site comprising native wildflower meadows which were bisected by the original field boundary hedgerows. The exception to this was the northern portion of the site which was permitted to be developed into publicly accessible parkland which had the aim of providing a buffer zone between the Facility Campus and the Grand Canal corridor. An amended Landscape Masterplan was provided for each additional phase of the Facility Campus's development and the wildflower meadows in the south-western and western portion of the site were replaced by data centres and their associated infrastructure (DUB05) (i.e. SD21A/0042 & SD22A0105). Having reviewed the application documents associated with SD19A/0042, it was made clear by the Applicant that the initial development represented the first phase of works and there was an intention to develop the entirety of the site, with each phase being subject to a separate planning application.

7.3.5. As part of the Applicant's response to the FI request, it was outlined that it was not feasible to relocate the data centre to the east as this would require the removal of the berming and extensive planting permitted along the eastern site boundary. In addition, the Applicant noted that data centre has been designed to maximise the efficiency of the end user requirements, and they conclude that it would not be possible to reduce the footprint of the proposed development in order to retain the hedgerow along the western site boundary. However, the Applicant has now proposed to plant a new native hedgerow that would run parallel to the existing hedgerow as a measure to mitigate its loss. It is stated that the hedgerow will also extend along the southern side of the data centre to create strong biodiversity links within and around the periphery of the site. Within the Parks and Public Realm Section's assessment of the Applicant's

response, it is contended that the removal of hedgerows, particularly along a primary Green/Blue corridor is in conflict with the Green Infrastructure Policies of the current Plan. They also had regard to the Judgement by Justice Humphreys (IEHC 335 21 June 2023), where they note that hedgerow removal and subsequent mitigation planting does not have the same value, and that mature hedgerows and their associated ecological benefits cannot simply be replaced by the planting of new ones. They go on to note that in an area of such high importance, Green Infrastructure within the site is going to be significantly impacted and compromised by the proposed development. For this reason, it was recommended that permission should be refused.

7.3.6. Whilst I note that the proposal necessitates the removal of the existing hedgerows on the appeal site, I would agree with the Applicant that this loss cannot be considered in isolation, and one must consider the landscape masterplan for the entire Facility Campus. I note that planning permission was previously permitted for the removal of the existing internal field boundary hedgerows within the northern portion of the Facility Campus lands (i.e. to the north of the appeal site). The hedgerows within this portion of the site provided an ecological corridor through the appeal site to the boundary with the Grand Canal further to the north. However, I note that the existing hedgerows within the northern portion of the site have now been largely removed, and the permitted publicly accessible parkland is currently under construction. This had the aim of creating an 80-100m buffer between the Facility Campus and the Grand Canal. I note that the northern portion of the overall Facility Campus site lies within the Grand Canal Corridor (Strategic Corridor 3) which is a key national Green Infrastructure feature, acting as a major ecological and recreational link between the River Shannon in the midlands and Dublin City where the canal enters the sea. From my observations on site, it was evident that this ecological link has essentially been extinguished, given the works that have already been carried out on site and Hedge 8 now sits in isolation. Whilst the loss of ‘Hedge 8’ is regrettable, the Applicant’s proposals to provide new native hedging along the southern and western side of the data centre will in the medium term create a new ecological link which will tie in with permitted and proposed tree belt screening and attenuation basins provided within the northern portion of the Facility Campus. This is illustrated in the Green Infrastructure Strategy Diagram prepared by the Applicant’s Landscape Architect (i.e. Drawing No. 203). I have also

had regard to the commentary provided within the appeal submission regarding the overall Green Infrastructure proposals for the wider Facility Campus which can be summarised as follows:

- Retention of 1,362m of hedgerow (c. 66% of the total hedgerow within the original site).
- 1,052m of new hedgerows are either permitted or proposed around the site.
- The planting of 484 new semi-mature trees (c. 5m in height).
- The already permitted development provides 1,854 new semi-mature trees.
- It is permitted to plant 3,843 standard trees (c. 2m in height) under the two main permitted developments (Planning Ref. SD19A/0042 & SD21A/0420) with 912 of these trees proposed to be planted within the application boundary.
- It is permitted to plant 18,458 saplings (c. 0.5m in height) across the Facility Campus and with a further 3,586 proposed under current application.
- The provision of shelter belts of trees and new hedgerows including a new 30-40m wide biodiversity corridor along the eastern boundary of the Facility Campus.
- The creation of wetland habitats through the provision of attenuation basins and bio swales within the appeal site and parkland area to the north.

Having regard to the foregoing, I am satisfied that the overall development of the Facility Campus, within which the proposed development is located, has sought to protect and enhance the biodiversity and ecological value of the existing GI network where possible. Where this hasn't been achievable, the Applicant has sought to mitigate the loss of existing hedgerow removal through the creation of new Green Infrastructure links throughout the site. For this reason, I am satisfied that the proposed development is in accordance with NCBH11 Objective 3, GI1 Objective 4, GI2 Objective 2 and GI2 Objective 4 of the current Plan and it is my view that permission can be granted for the proposed development. In terms of the potential impact of the development on commuting and foraging routes for bats, I refer to the detailed analysis provided within my assessment of Chapter 8 (Biodiversity) of the revised EIAR.

7.3.7. As per GI5 Objective 4 of the current Plan, there is a requirement in this instance to implement the Green Space Factor (GSF) for the proposed development. As part of the Planning Authority's FI request, the Applicant was required to demonstrate how

they can achieve a minimum Green Space Factor (GSF) scoring requirement based on best international standards and the unique features of the County's GI network. It is contended by the Applicant that the proposed development will result in a net biodiversity gain for both the existing application site and overall site. Using the Council's Green Space Factor Tool, the Applicant's consultants calculated that the Green Space Factor for the site would be 0.4 which is based on the entire Facility Campus. It is argued that the proposed development will contribute positively to the urban greening of the area and has utilised green roofs, green walls, significant tree planting, permeable paving etc. They go on to note that the green space factor calculation tool is not a perfect mechanism, but they reiterate that within the overall site, they have provided in accordance with best practice, a public park, and a level of unprecedented tree planting both mature and young, and new hedgerows that will materially improve the biodiversity of the site, and its linkages to surrounding GI network. In order to maximise the level of connectivity of GI infrastructure and biodiversity corridors, all planting is proposed outside of the security fencing and with only a post and rail fence proposed at the boundary of the site.

7.3.8. Within their assessment of the Applicant's response, the Parks and Public Realm Section noted that the Applicant had failed to reach the minimum Green Space Factor Score for the relevant land use zoning objective as only a score of 0.40 had been achieved when a score 0.50 is required. For this reason, the proposal was not in compliance with GI5 Objective 4. However, it was suggested within their report the Applicant should liaise with the Parks and Public Realm Section to determine what additional measures could be incorporated into the landscape design proposals in order to enhance GI, biodiversity and ecology values of the site. Suggested additional measures included:

- Additional Open Space and Street Trees Planting,
- Street trees proposed should include SUDS features and provide bioretention and bio attenuation.
- Miyawaki/Mini woodland Style Planting: Consideration could be given to the inclusion of Mini-woodland Style Plating within the main open space areas – inclusion of mini woodland style planting contributes to GSF (SDCC CDP 2022-28 Policy GI5 Objective 4) and Climate Action / Tree management Strategy

(SDCC CDP 2022-28 Policy GI5 Objective 3),

- Use of native and pollinator friendly planting – perennial planting and pollinator friendly bulb planting,
- Tree & Plant Quantities: Increases in tree numbers and planted areas wherever possible through increases in planting density,
- Specification enhancements with regard to biodiversity and native plants should be included in the detailed design for the site,
- Inclusion of Bird & Bat Boxes,
- Use of Wildflower Seed Mixes that are of native provenance.
- Improvements in the SuDS Design - applicant should seek to implement additional opportunities for bioretention and bio-attenuation, inclusion of green roofs, swales, suds trees pits etc. Any proposed swales should include check dams to improve bio-retention and should be detailed to maximise rooting space for planting. Applicant should refer to SDCC's SuDS Explanatory, Design & Evaluation Guide.

I note that within the appeal submission, the Applicant has indicated that they would be willing to provide bird and bat boxes throughout the site. In addition, it was suggested that the permitted formal hedge along the eastern boundary of the permitted Facility Campus could be replaced by a native hedgerow.

7.3.9. Section 12.4.2 (Green Infrastructure and Development Management) of the current Plan notes that in cases where a development does not meet the minimum required score and the Council agree that the minimum score is not achievable on the site, the Council will engage with the applicant to help determine an alternative GI solution, to ensure that the proposed development does not detract from the local environment and make a positive contribution to local GI provision. I am conscious of the site's sensitivity given its location relative to a primary GI corridor and the need to preserve/enhance connectivity and to ensure that the existing GI network is not fractured. The policy notes that sites at these locations may require the implementation of additional site-specific interventions to reflect their value. Whilst the proposal necessitates the removal of the existing internal hedgerows within the site, I am satisfied that the mitigatory planting will ensure that ecological corridors are provided throughout the site and the overall development of the Facility Campus will result in

an enhancement of the GI on site as I have outlined earlier in my assessment. Given the recommendations of the Parks and Public Realm Section, it is my recommendation that a condition should be attached which requires the Applicant to submit revised landscaping proposals which incorporate additional measures to enhance GI, biodiversity and the ecology values of the site. In tandem, the Applicant shall be required to submit an updated Green Space Factor (GSF) Worksheet for the proposed development, detailing how they have achieved the appropriate minimum Green Space Factor (GSF) scoring established by the land use zoning. Subject to compliance with this condition, I am satisfied that the proposed development is in compliance with GI5 Objective 4 of the current Plan, and it is my recommendation that planning permission be granted for the proposed development.

7.4. Appropriate Assessment - Screening Determination

7.4.1. In accordance with Section 177U(4) of the Planning and Development Act 2000 (as amended) and on the basis of objective information I conclude that the proposed development would not have a likely significant effect on any European Site either alone or in combination with other plans or projects. It is therefore determined that Appropriate Assessment (stage 2) (under Section 177V of the Planning and Development Act 2000, as amended) is not required. Further detail is included within Appendix 2 of this report.

7.4.2. This conclusion is based on:

- Objective information presented in the AA Screening Report, Addendum No. 1 (AA Screening Report submitted by way of FI), Environmental Impact Assessment Report (EIAR) (including revised EIAR at FI stage) and its associated appendices, Construction and Environmental Plan and the Flood Risk Assessment.
- The limited zone of influence of potential impacts, restricted to the immediate vicinity of the proposed development.
- Standard pollution controls that would be employed regardless of proximity to a European site and effectiveness of same.
- Distance from European Sites.
- Impacts predicted would not affect the conservation objectives.

7.4.3. I note that no measures intended to avoid or reduce harmful effects on European sites were taken into account in reaching this conclusion.

8.0 Environmental Impact Assessment

8.1. Introduction & Statutory Provisions

8.1.1. The proposed data centre development is located on a site measuring c. 5.14ha. This represents the third and final phase of a wider data centre development on the Applicant's landholding, known collectively as the Facility Campus (total site area of c. 22.1ha).

8.1.2. Part 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended) sets out development for the purposes of Part 10 and includes 'industrial estate development projects, where the area would exceed 15 hectares'. Although the proposed development is below the relevant threshold given its area, the Applicant notes that due to the cumulative nature of the proposed development with the already permitted developments on the wider 22.1ha. site, including its link to the permitted power plants, that the proposed development in combination of the wider site exceeds this threshold and an EIA Report is therefore required. I have had regard to the EIAR submitted with the application on 16th August 2022, the revised EIAR received on 26th May 2023 and all the supporting documentation.

8.1.3. This section of the report comprises the environmental impact assessment (EIA) of the proposed development in accordance with Planning and Development Act 2000 (as amended) and the associated Regulations, which incorporate the European directives on environmental impact assessment (Directive 2011/92/EU as amended by 2014/52/EU). Section 171A of the Planning and Development Act, 2000 (as amended) defines EIA as:

a. consisting of the preparation of an Environmental Impact Assessment Report (EIAR) by the applicant, the carrying out of consultations, the examination of the EIAR and relevant supplementary information by the Board, the reasoned conclusions of the Board and the integration of the reasoned conclusion into the decision of the Board, and

b. including an examination, analysis, and evaluation, by the Board, that identifies, describes and assesses the likely direct and indirect significant effects of the proposed development on defined environmental parameters and the interaction between these factors, and which includes significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters.

8.1.4. Article 94 of the Planning and Development Regulations, 2001 and associated Schedule 6 set out requirements on the contents of an EIAR.

8.1.5. This EIA section of the report is therefore divided into two sections. The first section assesses compliance with the requirements of Article 94 and Schedule 6 of the Regulations. The second section provides an examination, analysis and evaluation of the development and an assessment of the likely direct and indirect significant effects of it on the following defined environmental parameters, having regard to the EIAR and relevant supplementary information:

- population and human health,
- biodiversity,
- land, soil, water, air, and climate,
- material assets, cultural heritage, and the landscape,
- the interaction between the above factors, and
- the vulnerability of the proposed development to risks of major accidents and/or disasters.

8.1.6. It also provides a reasoned conclusion and allows for integration of the reasoned conclusions into the Boards decision, should they agree with the recommendation made.

8.2. Compliance with the Requirements of Article 94 and Schedule 6 of the Regulations, 2001

8.2.1. Compliance with the requirements of Article 94 and Schedule 6 of the Regulations is set out below.

Table 8.2.1

Section 94 (a) Information to be contained in an EIAR (Schedule 6, paragraph 1)	
A description of the proposed development comprising information on the site, design, size, and other relevant features of the proposed development (including the additional information referred to under section 94(b).	The proposed development is comprehensively described in Section 2 of the EIAR and depicted in the associated drawings. Information is included on the characteristics of the site, the planning history of the site and notably the Facility Campus within which it sits, the proposed data centre processes, the secondary process/activities, details of development's design, size and features of the development which include; - Power supply, - Telecommunications, - Generators and diesel storage, - Off-site traffic movements, - Security and lighting, and, - Waste management. Overall, I am satisfied that adequate detail has been provided to enable decision making.
A description of the likely significant effects on the environment of the proposed development (including the additional information referred to under section 94(b)).	An assessment of the likely significant direct, indirect, and cumulative effects of the development is carried out for each of the environmental parameters set out in the Regulations. I am satisfied that the assessment of significant effects is comprehensive and robust and enables decision making.
A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development (including the additional information referred to under section 94(b).	These are included in each of the technical chapters of the EIAR and the associated appendices. The schedule of mitigation measures is also included in Appendix 2.2.
A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment (including the additional information referred to under section 94(b)).	Chapter 4 of the EIAR considers alternatives in respect of do nothing alternative, alternative locations and uses and alternative design / layouts of the proposed development. The chapter explores the objectives of the proposed development, its design evolution and the reasonable alternatives considered. In doing so, the chapter considers the analysis of the site and existing environmental conditions which informed the design evolution of the proposed development. The following three alternatives were considered: - The do-nothing alternative - Alternative locations and uses; and - Alternative design / layouts of the proposed development. The chapter describes in detail how the proposed development design has responded to environmental constraints and the outcome of these design changes. I consider, therefore, that the description of alternatives is reasonable, in the context of the proposed development, and satisfactory.
Section 94(b) Additional information, relevant to the specific characteristics of the development and to the environmental features likely to be affected (Schedule 6, Paragraph 2).	
A description of the baseline environment and likely evolution in the absence of the development.	A detailed description of the baseline environment is included in each of the technical chapters of the EIAR and I am satisfied, is sufficient to enable the assessment of likely effects and to enable decision making.
A description of the forecasting	Forecasting methods and/or evidence to identify and assess

methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved	significant effects are included in the EIAR, as required for relevant environmental topics. Technical difficulties are identified where necessary, and I am satisfied that there are no significant deficiencies that prevent decision making.
A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it.	Likely significant effects of the development on the environment, arising from its vulnerability to risks of major accidents and/or disasters addressed, are described in Chapter 2 and Chapter 5 (Population and Human Health) of the EIAR and are adequate to support decision making.
A summary of the information in non-technical language.	A non-technical summary of the EIAR is provided by the applicant and satisfactorily describes the likely environmental effects of the development.
Sources used for the description and the assessments used in the report	Sources used for the description and assessment of environmental effects are included in each technical chapter of the EIAR.
A list of the experts who contributed to the preparation of the report	Table 1.2 (Contributors to the EIA Report) describes the expertise of those involved in the preparation of the EIAR. Having reviewed Table 1.2 of the EIAR, I am satisfied that it has been prepared by competent experts to ensure its completeness and quality
Consultations	Details of consultations have been set out in Chapter 1 of the EIAR. I am satisfied, that appropriate consultations have been carried out and that third parties have had the opportunity to comment on the proposed development and engage with the application process in advance of decision making.

8.3. Compliance

8.3.1. Having regard to the foregoing, I am satisfied that the information contained in the EIAR, and the supplementary information provided by the developer is sufficient to comply with article 94 of the Planning and Development Regulations, 2001.

8.4. Assessment of Likely Significant Effects

8.4.1. In accordance with section 171A of the Act, this assessment includes an examination, analysis and evaluation of the application documents, including the EIAR, the associated drawings, documents/appendices and the submissions received and identifies, describes and assesses the likely direct and indirect significant effects (including cumulative effects) of the development on the environmental parameters set out in the Regulations and the interaction of these. Each topic section is therefore structured under the following headings:

- Issues raised.
- Examination, analysis and evaluation.
- Assessment/Conclusion.

8.5. Population & Human Health

8.5.1. Issues Raised

8.5.1.1. No issues are raised by parties to the application in respect of population and human health.

8.5.2. Examination, analysis and evaluation

Context

8.5.2.1. Chapter 5 of the EIAR considers and assesses Population and Human Health having regard to employment, settlement patterns, land use patterns, baseline population, demographic trends, human health and amenity as set out under the EPA Guidelines 2022. The chapter notes that impacts on human beings are also considered in Chapter 9 – Noise and Vibration; Chapter 10 – Air Quality; Chapter 11 Climate; and Chapter 12 – Landscape and Visual Impact. The impacts on property are considered in Chapter 16 - Material Assets. The cumulative effect is addressed in the individual chapters of this EIAR. Interactions are addressed in Chapter 17.

Baseline

8.5.2.2. At time of EIAR was prepared, the application site was greenfield in nature, with the overall and wider site including further agricultural lands, field boundaries and included an abandoned agricultural property and associated buildings. Works associated with the permitted developments within the wider Facility Campus have since commenced and the subject site is currently used as a construction compound and surface level car park associated with the development of the wider Facility Campus.

8.5.2.3. In terms of the site surrounds, there is a single residential property that bounds and is outside the overall site to the north-east adjacent to the old canal bridge and lock. This house is located within the RU zoning and is served by a rear garden that backs onto the canal. The residential properties to the immediate east of the application site are primarily in a ribbon form of development and almost entirely located on the east side

of the Adamstown / Newcastle Road (R120).

8.5.2.4. To the east of the site is the Grange Castle Business Park and surrounding lands which are home to several industrial facilities and comprises a number of different land uses (identified in Figure 5.1 of the EIAR). The land uses in Figure 5.1 include the permitted development on the site; the permitted Edgeconnex data centre facility and associated offices on the lands to the east of the R120; two large biotechnology facility campuses – Pfizer Ireland and Takeda Pharma Ireland Ltd. Microsoft's data centres are also located within the business park to the immediate south-east, and in close proximity to the site of the Proposed Development. It is stated that Microsoft are currently constructing a much larger data centre campus to the immediate west of the Pfizer campus that will significantly extend the proposed use in this location. To the west of the site, the lands are also zoned 'EE' but are currently greenfield in nature.

8.5.2.5. In terms of 'population', a desktop study from the Census of Population for the South Dublin County Council area, the Newcastle Electoral Division and the Clondalkin-Dunawley Electoral Division was carried out. The populations of these three areas in the most recent census were 299,793, 11,285 and 5,566 respectively. The surrounding area of the subject site, however, is largely industrial and agricultural. There is very little population close to the subject site to provide any guide to trends in population. This is reflective of the fact that there is very little undeveloped residentially zoned land within the ED and that the western part of the ED that is covered by the Grange Castle Business Park and similarly zoned land for employment based development.

8.5.2.6. For employment, the CSO Newcastle ED figures for 2006, 2011 and 2016 indicate that employment, particularly in building and construction as well as agriculture, forestry and fishing have reduced during the Census periods 2006 to 2016. The report notes that itis expected that the figures for construction will have increased during the last six year inter-censal period. In terms of manufacturing, the figures showed an increase in numbers between 2006 and 2011 followed by a reduction in those employed in that particular sector. This trend is expected to have continued between 2016 and 2022.

8.5.2.7. With respect to community facilities and amenity, the following is noted:

- The wider area contains a small number of hotels and other tourist accommodation (B&B's etc.) which generally increases towards the east in the direction of Dublin city and its many tourist sites.
- The Lucan Sarsfield GAA pitches lie to the north of the canal off the newly realigned R120 within 100m of the northern Proposed Development boundary.
- The primary area of landscape amenity in the vicinity of the site is the Grand Canal that bounds the northern edge of the larger landholding.
- The nearest hospital to the facility is located at the Adelaide and Meath Hospital incorporating the National Children's Hospital, Tallaght, Dublin 24.
- There is a Garda station in Clondalkin and fire station at Belgard Road, Tallaght, Dublin 24.
- Grange Castle Business Park has 24 hour on site security to the immediate east.
- Local and regional bus services connect the local and wider area with Dublin city centre. The Dublin to Cork mainline railway passes to the north of the site. A new station at Adamstown and at Fonthill provide a new commuter service into the city centre.

Potential Effects

8.5.2.8. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 8.5.1 below.

Table 8.5.1: Summary of Potential Effects

Do Nothing	The site would have to be reinstated as a wildflower meadow which would site within a data centre campus. Loss of opportunity for further economic and employment growth, to maximise the productive use of the site, and further establish the site and the surrounding area as a data centre hub.
Construction Phase	The proposed data centres are proposed to be constructed over a 1.5 year period at the start of the overall construction period. Temporary local impacts during the construction phase may include increased vehicular traffic and increased noise, dirt and dust generation. Human health has the potential to be impacted by the construction process as a result of dust and other air pollutants even on a short-term perspective.

	This is outlined in more detail within Chapter: 10: Air Quality and Chapter 11: Climate. The noise and vibration impact of the construction phase of the Proposed Development is likely to be temporary to short-term and slightly negative with respect to human health because of the temporary short-term of such impacts during the construction phase. The proposal will result in increased employment opportunities, and it is expected that the maximum employment will be 250 with the average people employed during the construction stage being 150. Construction jobs often have a related multiplier effect, creating additional indirect employment in business, which in turn benefit from increased spending by local construction workers. The construction phase will have the potential to have a moderate short-term positive impact on the economy and employment of the local and wider area. There will also be an increase in the temporary population of the area as a result of the employment of workers from outside the wider Dublin area that may choose to reside in the immediate and wider local area during the construction period.
Operational Phase	Increased employment opportunities as the Proposed Development (post-construction) will help to sustain c. 100 jobs. The facility will also attract a significant level of additional support services and therefore employers and employees into the area. In this regard, the development has the potential to generate some local employment through support services. The Proposed Development has the potential to have a long-term and negative impact on the amenity of the residential dwellings adjoining the subject site as well as the amenity of the Grand Canal. The increased planting and the separation distances to existing adjoining residential dwellings and green infrastructure, particularly to the north of the site, as well as noise attenuation and overall master planning of the site, will ensure that the development will not be detrimental to human health. The Proposed Development will not generate any perceptible levels of noise or vibration during operation and therefore there will be no impact from vibrations on human health.
Cumulative Effect	Cumulative impacts have been considered with current and future developments in the vicinity of the subject site as outlined within Sections 5.78 – 5.84. As the permitted data centres and Power Plants have the potential to be built at the same time as the proposed data centres, the cumulative effect in terms of employment will be moderate, short-term but positive in nature. There is no significant cumulative effect associated with the Proposed Development, the permitted development and future cabling works, on human health. The cumulative effect of the Proposed Development; and the permitted development have been described in Chapter 10 - Air Quality and Chapter

	11 – Climate and the development will not result in a significant effect on human health. Once appropriate mitigation measures are put in place, any cumulative effects on population and human health will be positive and long-term and ranging from imperceptible to slight.

Mitigation

8.5.2.9. During the construction phase, any perceived negative impacts on the immediate local population will be short-term and temporary in nature due to the worst case 1.5 year construction process for the proposed development. No remedial or reductive measures are therefore required beyond normal landscaping, noise and construction mitigation that are outlined elsewhere within the EIA Report and should form a condition of permission.

8.5.2.10. In terms of the operational phase, no mitigation measures are considered necessary, beyond the landscaping proposed and detailed in Chapter 11 of the EIA Report; as well as Traffic, Air Quality and noise mitigation, as the proposed development will not give rise to any adverse impacts on population, and amenity or human health during the operational phase.

Residual Effects

8.5.2.11. The construction phase of the Proposed Development will result in the creation of a large construction site that will have a short-term and slight negative impact on the immediate local environment and the amenity of existing residents as a result of noise and disturbance during construction. The construction phase of the development therefore is considered likely to have a slight but short term negative impact on the local community, human health and population. It is also predicted to have a slight short-term positive impact on the economy and employment of the area.

8.5.2.12. The proposed development will upon completion sustain in the region of c. 100 workers. Based on the social class profile of the local community, a small number of the local population in the hinterland of the proposed development site are predicted to benefit from the new employment, which will be created. This is a slight and long-term positive impact. The impact on the amenity of the Grand Canal is viewed as being

neutral given the mitigation proposed.

Assessment / Conclusion

8.5.2.13. I have examined, analysed and evaluated Chapter 5 of the EIAR and all of the associated documentation and submissions on file in respect of population and human health. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028).

8.5.2.14. The information submitted indicates that the construction phase would take c. 18 months. The construction phase would also result in investment in the area with employment opportunities for construction workers and secondary benefits for local services and materials providers. Given the short-term nature of the construction phase, I am satisfied that there would not be any significant impact on the population or economy during the construction phase.

8.5.2.15. The construction phase poses potential risk to the health and safety of the public. A Construction Environmental Management Plan (CEMP) is provided with the application. In addition, it is recommended by the Planning Authority's Roads Department that a detailed Construction Traffic Plan should prepared prior to works commencing. Potential negative impacts to Human Health are outlined in relevant chapters of the EIAR. However, I am satisfied that the project would not have a significant effect on human health subject to appropriate controls and mitigation measures.

8.5.2.16. In terms of health and safety during the construction phase, there is potential for construction related hazards or injuries. Serious risks to human health and safety are not envisaged as the project would be managed in accordance with all applicable legislation and guidelines.

8.5.2.17. In terms of the operational phase, the development upon completion will sustain in the region of c. 100 workers and will result in a slight and long-term positive impact. The impact on the amenity of the Grand Canal is viewed as being neutral given the mitigation proposed. The proposed development will not generate any perceptible

levels of noise or vibration during its operation and therefore there will be no impact from noise or vibrations on human health.

8.5.2.18. Having regard to the examination of environmental information in respect of Population and Human Health, in particular the revised EIAR and supplementary information provided by the Applicant and the reports of the Planning Authority and prescribed bodies in the course of the application, I consider that the proposed development would have a neutral impact on the local socio-economic environment. I am also satisfied that the potential for significant adverse impacts on human health during the construction phase can be avoided, managed, and mitigated by measures that form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on population and human health.

8.6. Biodiversity

8.6.1. Issues Raised

8.6.1.1. Within their initial assessment of the application, the Planning Authority noted that the hedgerows within the site that are proposed to be removed have been identified as a habitat that provide good commuting and foraging routes for bats, a protected species. The Applicant was requested to demonstrate what mitigation is proposed for bats foraging along these routes which are to be kept dark.

8.6.1.2. Within an original observation by a Third Party to the application, it was noted the Applicant had underplayed the ecological importance of the site to migratory birds, native birds and bats in the area, particularly due to the destruction of hedgerows with insufficient mitigating factors.

8.6.2. Examination, analysis and evaluation

Context

8.6.2.1. This chapter of the EIA Report provides an assessment of the potential impacts of the proposed development on the local ecology of the site and surrounds and has the following aims:

- Establish and evaluate the baseline ecological environment, as relevant to the

proposed development,

- Identify, describe, and assess all potentially significant ecological impacts associated with the proposed development,
- Set out the mitigation measures required to address any potentially significant ecological impacts and ensure compliance with relevant nature conservation legislation, and,
- Provide an assessment of the significance of any residual ecological impacts.

8.6.2.2. Included as appendices to the Chapter are:

- Protected sites for Nature Conservation in the Vicinity of the Proposed Development,
- Desk study Flora and Fauna records,
- Examples of valuing important ecological features,
- Flora Species List by Habitat, and,
- Relevant Policies and objectives.

8.6.2.3. A separate standalone Appropriate Assessment (AA) screening (Scott Cawley Ltd., 2022) was submitted as part of the original planning application documentation and updated note accompanied the Applicant's FI response. To avoid any repetition, the potential impact on the designated sites has been addressed in Section 7.4 above and in Appendix 2 of this report.

8.6.2.4. There are six SACs and three SPAs within the vicinity of the proposed development and /or downstream in Dublin Bay and are outlined in Section 6.41 of the EIAR. There are 13 nationally designated sites located within c. 15km of the Proposed Development, of which all are pNHAs (see 6.4 of EIAR).

Baseline

8.6.2.5. Baseline data was collected through a desk study on 27th June 2022, to collate any available information on the local ecological environment and field surveys were conducted on 20th July 2022. Field surveys for habitats, protected, rare and invasive flora, terrestrial mammals (including bats) and amphibians and reptiles, as well as ground-level assessments of trees and structures with respect to their suitability for

roosting bats, as well as nesting birds, were undertaken on the 26th January 2021 and on the 10th June 2022. Breeding bird surveys were carried out during May and June 2022 and bat activity surveys during August and September 2019, and again during May and June 2022.

8.6.2.6. A summary of the habitats, flora and fauna recorded on site and within its surrounds can be summarised in Table 8.6.1 below:

Table 8.6.1: Habitats, Flora and Fauna Records

Habitats & Flora	No protected and/or rare flora were recorded within the site during the surveys. In terms of non-native invasive species within c. 2km of the site, the NBDC database search returned records for the following non-native invasive flora: *Elodea nuttallii* and *Ribes nigrum*. Dry meadow and grassy verges (GS2) habitat type is the most common habitat within the site totalling at c. 5ha. (local importance (lower value)) A small area (c. 0.12ha) of recolonising bare ground (ED3) can be found in the north-eastern corner of the site (local importance (lower value)) Hedgerows (WL1) comprise many of the field boundaries within or on the boundary the site and are c. 730m length in total. (local importance (higher value))
Fauna	*Badger* No badger setts or signs of badger activity were recorded within the site, however the habitats found within the site provide suitable foraging and commuting habitat for badgers. (local importance (higher value)) *Otter* There were no signs of otter present within the site. The NBDC database search returned one record for otter within c. 2km of the Proposed Development. This record is located c. 215m north-east along the Grand Canal and is from the 1980's. *Small Mammals* Small mammals, hedgehog *Erinaceus europaeus*, Irish hare *Lepus timidus hibernicus*, Irish stoat *Mustela erminea hibernica*, pine marten *Martes martes*, pygmy shrew *Sorex minutus* and red squirrel *Sciurus vulgaris* are protected under the Wildlife Acts. No signs of protected mammal fauna were noted within the site. The grasslands and hedgerows within the study area offer suitable foraging and breeding habitat for hedgehogs, Irish hare, Irish stoat and pygmy shrews. (local importance (higher value)). *Bats* Based on the survey and assessment of the site, there are no buildings or trees with suitability for roosting bats. The hedgerows located along field boundaries form part of a wider ecological corridor network which connects the site to the surrounding area within the masterplan area and beyond and provides good commuting and foraging routes for bats. Five bat species were recorded foraging and commuting within, or immediately adjacent to, the site:

	brown long-eared bat, common pipistrelle, Leisler's bat, Myotis species and soprano pipistrelle. (local importance (higher value)) *Breeding Birds* A range of common bird species were recorded on the site during the breeding bird surveys undertaken in May and June 2022 and are listed in Section 6.78 of the EIAR. Two of these species (kestrel and swift) are Red-listed and are considered to be of High Conservation Concern in Gilbert et al. (2021). (local importance (higher value)) *Wintering Birds* The desk study records from the NBDC included no records for wintering bird species within c. 2km of the site. However, Scott Cawley Ltd. ecologist recorded 11 wintering bird species within the Clonburris SDZ lands during winter 2020/21 (Scott Cawley Ltd., 2021). The Proposed Development is within the normal foraging range of c. 15-20km of SCI species of North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA, however, it comprises of no suitable foraging habitat due to grasslands being unmanaged or grazed, and enclosed by hedgerows. The wintering SCI bird populations are considered to be of local importance (higher value), however considering there is no suitable habitat for wintering SCI bird species, they are not considered to be a key ecological receptor. The habitats within the site offer suitable foraging habitat and shelter for smaller overwintering species such as passerines (e.g. redwing Turdus iliacus) and other wintering non-SCI bird species, and their wintering populations are assessed to be of local importance (higher value). *Amphibians and Reptiles* There are no areas of standing water suitable for breeding common frog within the site. However, their presence on site cannot be ruled out based on availability of suitable foraging and commuting habitat (grassland). (local importance (higher value)). There is no suitable habitat (e.g. ponds) for smooth newt within the site and no individuals were observed at the time of the survey. Unlikely that smooth newts are present within the site due to lack of suitable habitat. There are no records of common lizard located within c. 2km of the site. Considering the presence of suitable foraging and commuting habitat for common lizard in the site, the local common lizard populations are considered to be of local importance (higher value). *Fish* There are no records of fish species within c. 2km of the Proposed Development site on the NBDC database. *Ivertebrates* There are no records for freshwater white-clawed crayfish c. 2km of the site in the NBDC database. Although there is no suitable habitat for freshwater white-clawed crayfish within the site, suitable waterbodies which are connected to the site are found in the wider environs. Considering this, local freshwater white-clawed crayfish populations are considered to be of county importance. *Other Protected and/or Rare Invertebrates* The NBDC database did not return records for any other protected and/or rare terrestrial and/or aquatic invertebrates, such as bare-saddled *colletes bee Colletes similis*, marsh fritillary *Euphydryas aurinia*, moss beetle *Ochthebius bicolon* and moss chrysalis snail *Pupilla muscorum*, however invertebrates are a less frequently recorded group due to their small size and specialism

	required in their identification. There is suitable habitat for a variety of invertebrate species within the Proposed Development, as well as in the downstream habitats in the Griffeen River and beyond. Considering this, the local invertebrate populations are valued to be of local importance (higher value). *Non-Native Invasive Fauna* No Third Schedule non-native invasive fauna were recorded within the site during the surveys.

8.6.2.8. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.1 below.

Table 8.6.2: Summary of Potential Effects

Do Nothing	The EIAR notes that no impact is predicted from the Do-nothing scenario as it will remain in its natural condition. However, the site would have to be reinstated as a wildflower meadow which would sit within a data centre campus. This is necessary given the site clearance works undertaken to facilitate the construction compound and car parking as approved by the Planning Authority under SD21A/0042. Loss of opportunity to improve on-site biodiversity.
Construction Phase	*European Sites* The proposed development does not have the potential to affect the receiving environment and, consequently, do not have the potential to affect the conservation objectives supporting the qualifying interests or special conservation interests of any European sites; either alone or in combination with any other plans or projects *Habitat loss* Construction of the Proposed Development will result in the loss of habitat area; totalling c. 3.71ha in area – characterised by GS2 grassland sward and c. 730m in linear hedgerow habitats. *Vegetation Clearance and Habitat Loss* The construction of the proposed development will reduce the amount of semi-natural habitat available to local badger populations and potentially fragment habitat corridors used by badger. Given the absence of badgers on site, the development will not result in a significant impact on badgers at any geographical scale. Considering the absence of evidence of otter use of the site, the lack of waterbodies within the site, as well as the distance to the nearest suitable waterbody (c. 46m to the Grand Canal), the construction phase will not result in a significant impact on otters at any geographical scale. In terms of small mammals, the overall area of habitat loss is small and will not result in a significant impact on small mammals at any geographical scale.

	The clearance of vegetation will result in a loss of bat foraging habitat and breeding bird habitat, however considering that the extent of this loss is limited to c. 3.71ha in area and c. 730m in linear habitats and considering the amount of suitable foraging/commuting habitat located in the wider environs and particularly to the west of the site, the habitat loss will not result in a significant negative effect on the populations of bat species at any geographic scale. The clearance of vegetation will result in a permanent loss of foraging and/or roosting habitat for wintering birds. However, the habitat loss will not result in a significant negative effect on the populations of bird species at any geographic scale. The development will result in the permanent loss of suitable common frog habitat (e.g. grassland). However, there is suitable breeding and foraging habitat located in the wider environs and the potential loss of habitat will not result in a significant negative effect on common frog populations at any geographic scale. Mitigation measures have been provided to ensure adherence to the Wildlife Acts. There is potential for direct impacts on common lizards through habitat loss. However, due to common lizard being a mobile species, and the amount of suitable habitat in the wider environs, the risk of disturbance and mortality is not considered significant at any geographic level. Given the suitable breeding and foraging habitat located in the wider area, the potential loss of habitat will not result in a significant negative effect on terrestrial invertebrate populations at any geographic scale. *Disturbance or Displacement* Disturbance or displacement of badger during construction is unlikely to result in a significant negative effect, at any geographic scale. Mitigation measures have been provided to ensure adherence to the Wildlife Acts. The Griffeen River runs through some already built up environment, and it is anticipated that the local population of otters will be habituated to a certain level of human disturbance. Disturbance/displacement of otter during construction therefore is unlikely to result in a significant negative effect, at any geographic scale. Given the limited potential of the site to support any locally significant small mammal populations, and disturbance will be short-term, it is extremely unlikely to result in any long-term effects on the local small mammal populations or their conservation status. Temporary artificial lighting associated with the construction works will further illuminate the site and its immediate environs. In absence of mitigation, this could potentially displace bats foraging and/or commuting bats. Lighting mitigation has been provided to minimise any effect on individual bats during construction on a precautionary basis.

	The construction of the proposed development will result in a short-term increase in construction related noise and vibration and human disturbance over a construction period. Given the existing background noise in the surrounding urban environment and similar habitats found in the surroundings within the wider environs, it will not result in a significant negative effect on the local populations of breeding bird species at any geographic scale. Similar impacts arise for wintering birds. However, considering mostly small numbers of wintering birds may use the site due to its relatively small size and given the existing background noise in the surrounding semi-urban and agricultural environment, it will not result in a significant negative effect on the local populations of wintering non-SCI bird species at any geographic scale. Displacement effects associated with habitat loss, increased human presence and/or noise and vibration associated with construction works, has the potential to displace individual common frog and common lizards from the site. Disturbance or displacement during construction is unlikely to result in a significant negative effect, at any geographic scale. *Surface Water Pollutants on Prey Availability* In the absence of any mitigation, there is potential for a pollution event during the construction phase of the proposed development to result in a fish kill, and therefore affect prey availability. The effects on otter would be significant, likely at the local geographic level only. *Surface Water Pollutants* In the absence of any mitigation, there is potential for a pollutant event during the construction phase to result in mortality of fish, freshwater white-clawed crayfish and aquatic invertebrates in the waterbodies located in the immediate environs. The effects on aquatic invertebrates would be significant, likely at the local geographic level only.
Operational Phase	*European Sites* The possibility of any significant effects on any European sites, whether arising from the project alone or in combination with other plans and projects, can be excluded. With regards to potential impacts during Operational Phase on downstream sensitive habitats located within the boundaries of protected designated sites. In consideration of this, the proposed development will not result in a significant negative effect on habitats within the proposed development site at any geographical scale as a consequence of surface water degradation. *Increased Levels of Artificial Lighting* The potential displacement of bats from the site as a consequence of artificial lighting could potentially have a negative significant effect in the long-term on bat populations at a local geographic scale. *Disturbance or Displacement* Operational Phase will result in a significant increase in levels of noise and

	human disturbance. However, it is unlikely to affect the local breeding bird populations at any geographic scale. Considering the agricultural to semi-urban nature of the location, the wintering non-SCI birds using the site are habituated to anthropogenic disturbance to some degree. Considering this, increased disturbance within the proposed development site is unlikely to affect the local breeding bird populations at any geographic scale. *Collision Risk/Mortality Risk Associated with Buildings* The proposed development is considered to not have a significant negative effect on the bat populations at any geographic scale. In the absence of mitigation there could be a low level of mortality attributable to bird collision with windows of the proposed development, however this impact is unlikely to cause any significant impact above the local scale. *Surface Water Pollutants on Prey Availability* In the absence of any mitigation, there is potential for a pollution event during the Operational phase of the proposed development to result in a fish kill. The effects on otter would be significant, likely at the local geographic level only. *Surface Water Pollutants* In the absence of any mitigation, there is potential for a pollutant event during the Operational Phase of to result in mortality of fish, freshwater white-clawed crayfish and aquatic invertebrates in waterbodies located in the immediate environs (i.e. the Griffeen River). The effects would be significant, likely at the local geographic level only.
Cumulative Effect	Cumulative impacts have been considered with current and future developments in the vicinity of the subject site as outlined within Sections 6.235– 6.246. Considering the predicted impacts associated with the proposed development, the mitigation, compensation and enhancement measures proposed to protect and enhance the local biodiversity resource and the receiving environment, and the protective policies and objectives on the land-use plans that will direct future development locally, significant cumulative negative effects on biodiversity are not predicted. Positive effects are predicted at the local geographic scale for Daubenton's bat arising from the provision of 2 no. new ponds within the proposed development site which represents high-quality foraging habitat for this species.

Mitigation

8.6.2.9. Mitigation measures are summarised in Table 8.6.3 below.

Table 8.6.3: Summary of Mitigation

Construction Phase	
Habitats and Flora	*Water Quality* - Specific measures to prevent the release of sediment over baseline conditions to the existing surface water drainage network, during the construction work, which will be implemented as the need arises. - Provision of exclusion zones and barriers. - Provision of temporary construction surface drainage and sediment control measures. - Weather conditions to be taken into account when planning construction activities to minimise. risk of run-off from the site. - Prevailing weather and environmental conditions will be taken into account prior to the pouring of cementitious materials. - Any fuels of chemicals will be stored in secure bunded area(s). - All mobile fuel bowsers shall carry a spill kit and operatives must have spill response training. - A register of all hazardous substances, which will either be used on site or expected to be present (in the form of soil and/or groundwater contamination) will be established and maintained. - Preparation of a robust and appropriate Spill Response Plan and Environmental Emergency Plan. - All trucks will have a built-on tarpaulin. - Water supplies shall be recycled for use in the wheel wash. All waters shall be drained through appropriate filter material prior to discharge from the construction sites. - The removal of any contaminated material to an appropriate licenced facility shall be carried out in accordance with the Waste Management Act, best practice and guidelines for same. - A discovery procedure for contaminated material will be prepared and adopted by the appointed contractor prior to excavation works commencing on site. - Implementation of measures to minimise waste and ensure correct handling, storage and disposal of waste (most notably wet concrete, pile arisings and asphalt). *Vegetation Clearance* - A new native hedgerow along the western boundary of the proposed development site to offset the loss of an existing largely rank, hedgerow that must be removed to facilitate construction of the proposed development. - The provision of a visual screening belt (this item has been permitted and is a condition of SD19A/0042) on the eastern boundary of the site fronting the R120. - The provision of new pond and wetland habitats as part of the onsite attenuation process. The new wetlands include 2 no. ponds and 2 no. swales. - Areas of wetland wildflower meadow will be provided in the vicinity of ponds and swales
Fauna	*Badger* Although no badger setts or signs of badger activity were recorded on site, The presence of any new setts or significant badger activity will be treated

	and/or protected in accordance with the *Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes* (NRA, 2005). *Otter* Mitigation measures outlined above in "Mitigation Measures – Habitats and Flora" for the protection of water quality in the downstream receiving water courses, i.e. Griffeen River, and its immediate environs will mitigate against impacts of water pollution on the prey availability of otter during Construction Phase. *Bats* During construction, any external lighting to be installed, including facilitating night-time working or security lighting, on the site shall be sensitive to the presence of bats in the area, downlighting, and time limited where possible. Mitigation measures to reduce light spill during construction will include the following: - Areas of wetland wildflower meadow will be provided in the vicinity of ponds and swales the use of sensor/timer triggered lighting; - LED luminaires to be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability; - Column heights to be considered to minimise light spill; - Accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only where needed; and, - Where night-time works are required the suitably experienced and qualified ecologist will be liaised with to implement measures to mitigate the impact of such works. In terms of vegetation removal, the provision of new hedgerows, tree shelter belts, attenuation ponds and wet meadows will enhance the suitability of those parts of the proposed development site for foraging bats. The provision of 2 no. attenuation ponds within the site and associated riparian planting will enhance the site for bat species associated with waterways and open water, specifically Daubenton's bat Myotis daubentonii. *Birds (Breeding Birds and Wintering Birds (Non-SCI))* In order to avoid disturbance or harm to breeding birds, their nests, eggs and/or their unflown young, all works involving the removal of trees, hedgerows or grasslands will be undertaken outside of the nesting season (i.e. 1 March to 31 August inclusive). Where this seasonal restriction cannot be observed then a breeding bird survey will be undertaken by a suitably experienced ecologist in order to assess whether birds are nesting within suitable habitat affected by or immediately adjacent to the proposed works. No significant effects on common frog or the common Lizard are predicted during the construction stage. Mitigation measures outlined above in "Mitigation Measures – Habitats and Flora" for the protection of water quality in the downstream receiving water courses, i.e. Griffeen River, its immediate environs will mitigate against impacts of water pollution on fish, Freshwater White-clawed Crayfish and

	aquatic invertebrates during the construction phase.
Operational Phase	
Habitats and Flora	*Surface Water* - The proposed drainage system for the site has been designed in accordance with Greater Dublin Strategic Design System (GDSDS) specifications. - Pinnacle have identified that the above storm water drainage systems will accommodate a 1:2 year storm frequency. The attenuation system is also designed to accommodate a 1:100 year storm event accounting for a 20% increase with climate change. - Run-off from the car park areas and access roads/delivery areas will be drained either by a series of on-site gullies and channels draining into a separate system of below ground gravity storm water sewers and a Duraflow (or similar approved), porous asphalt product. - All oils, solvents, paints and fuels to be stored onsite will be stored within permanently bunded areas. *Foul Water* The increase in flow to the existing public foul sewer is not expected to have a negative effect on the foul drainage system in the area.
Fauna	No significant effects on badger, small mammals, Birds (Breeding Birds and Wintering Non-SCI Birds), Common Frog, Common Lizard and terrestrial invertebrates are predicted during the Operational Stage of the proposed development, therefore no mitigation is required. In terms of otters, fish, Freshwater White-clawed Crayfish and aquatic invertebrates, the EIAR refers to “Operational Phase – Potential Impacts on Designated Sites” and the “Operational Phase – Mitigation Measures for Habitats and Flora”. For bats, the Lighting design for the site during operation is designed in accordance with the best practice guidance. The following recommendations based on the above guidance have been considered in relation to the detailed construction and operational lighting design, and have been reviewed by a suitably qualified and experienced ecologist: - All pole mounted columns will be 5m high – located facing away from boundaries to minimise any light spill beyond the area to be illuminated; - The fittings have a sharp cut off with no upward light spill to minimise any resultant sky glow; and - All fittings selected will be LED selected with a lighting output spectrum which is appropriate for bat sensitive areas.

Residual Effects

8.6.2.10. Following the implementation of the mitigation measures outlined above, it is noted that the proposed development will not result in any significant residual effect on its own, or cumulatively with other plans or projects on any Key Ecological Receptors identified with the exception of bats. For bats, there will be a significant positive effect

at the local scale for Daubenton's bat arising from the provision of new attenuation pond habitats within the proposed development site, which will provide stepping stone sites from the adjacent Grand Canal ecological corridor. Table 6.7 of the EIAR provides a summary of the significant residual ecological effects of the proposed development during construction and operational phases.

Assessment / Conclusion

8.6.2.11. I have examined, analysed and evaluated Chapter 6 of the EIAR and all of the associated documentation and submissions on file in respect of biodiversity. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028).

8.6.2.12. I note that dry meadow and grassy verges (GS2) habitat type is the most common habitat within the site totalling at c. 5ha. (local importance (lower value)) and is proposed to be removed to facilitate the proposed development. However, I note that this habitat has now in fact been removed from site as approved by the Planning Authority under SD21A/0042. A key concern of the Planning Authority was the removal of the existing hedgerows within the site and in particular 'Hedge 08'. Hedgerows have been identified as a habitat that provide good commuting and foraging routes for bats, a protected species and the Applicant was requested during the application phase to outline appropriate mitigation.

8.6.2.13. A technical note prepared by Scott Cawley accompanied the Applicant's FI response. This noted that as the effects of hedgerow loss on commuting and foraging bats has been determined not to be significant at any geographic scale, there was not a requirement to provide mitigation. Nonetheless, it was considered that the provision of new hedgerows, tree shelter belts, ponds and wet meadows will enhance the suitability of those parts of the proposed development site for foraging bats. It is stated that the provision of 2 no. attenuation ponds within the site and associated riparian planting will enhance the site for bat species associated with waterways and open water, specifically Daubenton's bat *Myotis daubentonii* which are known to occur along the adjacent Canal. Upon their establishment, which is likely to take 2-3 years following construction, the ponds will provide stepping stone sites for this species, which use

the adjacent Grand Canal ecological corridor for foraging. The effects of enhancement of the proposed development site for this species is likely to be significant at the local scale, e.g. the proposed development site will contain high quality habitat for this species that was not present prior to its development.

8.6.2.14. I also note that an amended landscape plan was submitted at FI stage that has incorporated additional hedgerows to act as habitat corridors. In addition, the Applicant is willing to install a series of bird boxes and bat boxes and provide new native hedging along the eastern boundary of the Facility Campus in lieu of the permitted formal hedging. As indicated earlier in this report, I have recommended the inclusion of a condition which shall require the Applicant to submit revised landscaping proposals that incorporate additional measures to enhance GI, biodiversity and the ecology values of the site.

8.6.2.15. With regard to cumulative effects, I am satisfied that there will be no potential for significant cumulative effects on biodiversity, given the absence of significant effects likely to arise from the proposed development and the protective policies and objectives on the land-use plans that will direct future development locally.

8.6.2.16. Having regard to the examination of environmental information in respect of biodiveristy, in particular the EIAR and supplementary information provided by the applicant and the report of the Planning Authority and prescribed bodies in the course of the application, it is considered that the main significant direct and indirect effects of the development on biodiversity are the loss of the dry meadow and grassy verges (GS2) habitat type and hedgerows arising from the footprint of the development and the potential loss of commuting and foraging routes for bats (hedgerow removal). However, it is considered that these impacts will be mitigated by the application of best practice construction methodologies, as set out in the project documentation, the application of proposed site and species specific mitigation measures, such that no significant adverse effects arise.

8.7. Land, Soil, Water, Air & Climate

Land & Soil

8.7.1. **Issues Raised**

8.7.1.1. No issues are raised by parties to the application in respect of land and soil.

8.7.2. **Examination, analysis and evaluation**

Context

8.7.2.1. Chapter 7 of the EIAR assesses and evaluates the potential impacts of the development on the land, soil, geological and hydrogeological aspects of the site and surrounding area. The principal attributes (and effects) to be assessed include the following:

- Geological heritage sites in the vicinity of the perimeter of the subject site;
- Landfills, industrial sites in the vicinity of the site and the potential risk of encountering contaminated ground;
- The quality, drainage characteristics and range of agricultural uses of soil around the site.
- Quarries or mines in the vicinity, the potential implications (if any) for existing activities and extractable reserves;
- The extent of topsoil and subsoil cover and the potential use of this material on site as well or requirement to remove it off-site as waste for disposal or recovery;
- High-yielding water supply springs/wells in the vicinity of the site to within a 2km radius and the potential for increased risk presented by the proposed development;
- Classification (regionally important, locally important etc.) and extent of aquifers underlying the site perimeter area and increased risks presented to them by the proposed development.
- Natural hydrogeological/karst features in the area and potential for increased risk presented by the activities at the site; and
- Groundwater-fed ecosystems and the increased risk presented by operations both spatially and temporally.

8.7.2.2. Appendices to Chapter 7 include:

- Criteria for Rating Site Attributes – Estimation of Importance of Hydrogeological

Attributes (NRA, 2009),

- Lands at Ballymakaily – Ground Investigations, and,
- Soil chemical test analysis results.

Baseline

8.7.2.3. The site is relatively flat and there is a fall of approximately 1.5-2.0m from the south-western boundary of the site north-east towards the canal (from c. 66m AOD to c. 64m AOD). The site is in the catchment of the Griffeen River. There is no connectivity with the adjoining canal which is lined. The land surrounding the site is a mixture of agricultural (currently used as pasture land predominantly for livestock grazing to the west of the R120 and to the north of the canal), residential and industrial. According to the EPA website, there are a number of licensed IPPC facilities in the locality (Takeda Pharma Ltd, Grange Back Up Power Ltd. and Pfizer Biotech) and there are no licensed waste facilities in the vicinity of the subject site. Following consultation with South Dublin County Council, it was confirmed that there are no known illegal/historic landfills within 500m of the site.

8.7.2.4. In terms of soil and subsoil, the soil type beneath the eastern part of the site area predominantly comprises BminPD - Surface water Gleys / Ground water Gleys Basic. The western portion of the overall site area is composed predominantly of BMinDW soils-Grey Brown Podzolics/Brown earths basics. The site and overburden geology comprise Quaternary Glacial Till. During the investigation process, the following ground conditions were encountered by the consultant team;

- 0-0.3 metres below ground level (mbgl) of clayey topsoil is present. Cohesive deposits underlie this top soil until bedrock was encountered (i.e., from 0.3 to 1.1-3.2 mbgl). These deposits comprise a variation of firm to stiff sandy gravelly CLAY (glacial till) and overlie low permeability Calp limestone.

8.7.2.5. In terms of bedrock geology, rocks of Carboniferous Age underly the site and surrounding area. The site and local area is underlain by Dinantian (Upper Impure) Limestones or ‘Calp’ limestone that is dark grey to black limestone and shale of the Lucan Formation. The depth to bedrock throughout the site was confirmed as 1.1-3.2mbgl. No bedrock outcrops were identified during the site investigations.

8.7.2.6. Presently, the groundwater body in the region of the site (Dublin GWB - IE_EA_G_008) is classified under the WFD Risk Score system (EPA, 2023) as under "Review" meaning the GWB is being reviewed to determine whether or not the GWB has achieved its objectives and has either no significant trends or improving trends. The Dublin GWB was given a classification of "Good" status for the last WFD cycle (2016-2021).

8.7.2.7. In terms of geological heritage, there are no recorded sites on the development site. The Extractive Industry Register (www.epa.ie) and the GSI mineral database was consulted and there are no active quarries located in the immediate vicinity. In addition, there are no expected geohazards at this location. For radon, the site is location in a Moderate Radon Area where is it estimated that between five and ten percent per cent of the homes in this 10km grid square are estimated to be above the Reference Level.

8.7.2.8. In terms of aquifer classification, the GSI has classified this aquifer as Locally Important (Ll) i.e. an aquifer which is moderately productive only in local zones. It also classifies the aquifer in the region of the site as Extreme (E) which indicates an overburden depth of 0-3m is present and is consistent with site investigation data where the site considered to have Extreme Vulnerability.

8.7.2.9. For soil quality, a review of the representative soil quality analysis results does not indicate any notable contamination across the site and laboratory results are presented in Appendices 7.3 and 7.4, of the EIAR. Interpretative cross sections have been prepared for the site with views appropriate to the characterisation of the site in terms of the geological (and hydrogeological) environment and are illustrated in Figures 7.7 and 7.8.

Potential Effects

8.7.2.10. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.1 below.

Table 8.7.1: Summary of Potential Effects

Do Nothing	The site would have to be reinstated as a wildflower meadow which would sit within a data centre campus. This is necessary given the site clearance works undertaken to facilitate the construction compound and car parking as permitted under SD21A/0042. Loss of opportunity to maximise the productive use of the site.
Construction Phase	*Excavation and Infilling* Excavated material will be reused on site for infilling and landscaping works where possible. Import of fill would not be required. The volumes of excavation required are as follows: - Topsoil Cut: 11,300m³ (@350mm deep); and - Subsoil Cut: 18,800m³ (site cut + pond). All topsoil and subsoil will be reused, where possible, on the site and within the overall campus for berms and other landscaping purposes. *Accidental spills and leaks* During construction of the development, there is a risk of accidental pollution incidences from the following sources: - Spillage or leakage of temporary oils and fuels stored on site; - Spillage or leakage of oils and fuels from construction machinery or site vehicles; - Spillage of oil or fuel from refuelling machinery on site; and - Run-off from concrete and cement during pad foundation construction. Accidental spillages which are not mitigated may result in localised contamination of soils and groundwater underlying the site, should contaminants migrate through the subsoil's and impact the underlying groundwater. The potential impact on the soils, geology and hydrogeology during construction (EPA, 2022) is considered to have a short term – imperceptible impact with a neutral impact on quality. i.e. An impact capable of measurement but without noticeable consequences.
Operational Phase	*Indirect Discharges* Indirect discharges could occur from the following sources: - Accidental leakages from cars in the car park areas although this will be primarily directed through the surface water drainage through an interceptor; - Accidental leakage from the bunded diesel storage tanks during refuelling; - Overuse of pesticides and herbicides could impact on groundwater quality. The potential impact on the land, soils, geology and hydrogeology during operation (EPA, 2022) is considered to have a long term– imperceptible impact with a neutral impact on quality.
Cumulative Effect	Cumulative impacts have been considered with current and future developments in the vicinity of the subject site as outlined within Sections 7.86-7.89. *Construction Phase*

	The potential for impact on land, soils and groundwater during construction primarily arises from localised accidental leaks and spills to ground. Contractors for the proposed development will be contractually required to operate in compliance with a CEMP which will include the mitigation measures outlined in this EIA report. Other developments will also have to incorporate measures to protect soil and water quality in compliance with legislative standards for receiving water quality. The cumulative impact is considered to be neutral and imperceptible. *Operational Phase* There will be a local change in recharge pattern due to the increase in hardstand from the proposed development. However, based on the overall size of the underlying aquifer and measures to protect soil and water quality there will be no overall change on the groundwater body status. The operation of the proposed development is concluded to have a long term, imperceptible significance with a neutral impact on soil and water quality. There will be a loss of agricultural land, but the overall loss will be minimal therefore, the cumulative impact on the land is considered to be long-term, imperceptible significance with a neutral impact.

Mitigation

8.7.2.11. Mitigation measures are summarised in Table 8.7.2 below.

Table 8.7.2: Summary of Mitigation

Construction Phase	*Soil Removal and Compaction* - Reuse of excavated soil on site and capping with hardstand will minimise any increase in aquifer vulnerability. Construction works will require local removal of soil cover where levelling of the site is required and its use for re-instatement elsewhere on site. - Temporary storage of soil will be carefully managed in such a way as to prevent any potential negative impact on the receiving environment and the material will be stored away from any open surface water drains. Movement of material will be minimised in order to reduce degradation of soil structure and generation of dust. - Should it be determined that any of the soil excavated is contaminated, this will be disposed of by a licensed waste disposal contractor. *Fuel and chemical handling* - All oils, solvents and paints used during construction will be stored within temporary bunded areas. Drainage from the bunded area(s) shall be diverted for collection and safe disposal. - Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area (or where possible off the site) which will be away from surface water gulleys or drains. - In the case of drummed fuel or other chemical which may be used during construction, containers should be stored in a dedicated

	internally bunded chemical storage cabinet and labelled clearly to allow appropriate remedial action in the event of a spillage. *Construction Environmental Management Plan* A CEMP has been developed by Winthrop Engineering and Contracting Limited and included with the application documentation. This will be refined by the Applicant and the construction contractor prior to commencement of construction. The CEMP will incorporate the mitigation measures outlined above as they relate to the construction phase.
Operational Phase	In terms of fuel and chemical handling, each generator will be installed in an externally rated container with a self-contained belly tank (steel double wall type for leak containment and inner tank leak alarm system) with 48 hours diesel fuel storage capacity at full load. Any chemicals, oils, herbicides required for site maintenance will be stored in suitable contained areas. An environmental management plan will be prepared and followed during the operational phase incorporating mitigation measures and emergency response measures.

Residual Effects

8.7.2.12. There are no likely significant impacts on the geological or hydrogeological environment associated with the proposed development of the site. It is not anticipated that any impacts will arise following the implementation of the mitigation measures discussed above. As such the impact (EPA, 2022) is considered to have a *long term-imperceptible* significance.

Assessment / Conclusion

8.7.2.13. I have examined, analysed and evaluated Chapter 7 of the EIAR and the associated appendices. The main activities associated with the construction phase of the proposed development that can give rise to potential impacts include run-off percolating to ground, contaminants in surface water, earthworks, excavations, subsoil stripping and stockpiling, storage of hazardous materials and export of materials. The Applicant's CEMP sets out requirements and standards that must be met during the construction stage and will include the relevant mitigation measures outlined in the EIAR and subsequent planning conditions. I am satisfied that the applicant provided sufficient survey data to enable assessment of likely effects on the environment. Having regard to the detailed assessment carried out and subject to the detailed and full implementation of proposed mitigation measures, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on

land, soils, or geology of the site.

Water

8.7.3. **Issues Raised**

8.7.3.1. No issues are raised by parties to the application in respect of water.

8.7.4. **Examination, analysis and evaluation**

Context

8.7.4.1. Chapter 8 (Hydrology) of the EIAR assesses and evaluates the potential impacts of the development on the hydrological aspects of the site and surrounding area. The principal attributes (and effects) to be assessed include the following:

- River and stream water quality in the vicinity of the site (where available);
- Surface watercourses near the site and potential impact on surface water quality arising from related works including any discharge of surface water run-off;
- Localised flooding (potential increase or reduction) and floodplains including benefitting lands and drainage districts (if any); and
- Surface water features within the area of the site.

Included as an appendix to Chapter 8 are the 'Criteria for rating Site Attributes - Estimation of Importance of Hydrology Attributes (NRA)'.

Baseline

8.7.4.2. The site of the proposed development is located within the Ireland River Basin District (previously the Eastern River Basin District (ERBD)) and lies within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) and River Liffey sub-catchment (WFD name: Liffey_SC_090, Id 09_15) (EPA, 2022). The River Liffey catchment encompasses an area of approximately 1,370km^2 and the river extends from the mountains of Kippure and Tonduff in County Wicklow to the sea at Dublin Bay. The main channel covers approximately 120km and numerous tributaries enter along its course.

8.7.4.3. The Griffeen River is the nearest water course to the site and is a tributary of the River Liffey. The Griffeen River (stream) is located c. 330m east of the site and rises in the

townland of Greenoge, approximately 3.5km south of the proposed site. It flows in a northerly direction, where it is culverted beneath the Grand Canal and from there it flows north through Lucan. The EIAR notes that a section of the Griffeen River was realigned during the construction of the Grange Castle Business Park and associated access roads, and it now runs alongside the local access road in a northerly direction to the east of the Takeda facility. The Griffeen River enters the River Liffey just north of Lucan town.

8.7.4.4. The Lucan Stream is located c. 310m to the west of the overall site and runs in a northerly direction where it enters the River Liffey north of Lucan Village and to the west of the Griffeen outfall.

8.7.4.5. The Grand Canal runs in an east to west direction along the northern boundary of the overall Facility Campus and is classified as a proposed National Heritage Area (pNHA). It is stated that there is no hydrologic connectivity between the site and Grand Canal.

8.7.4.6. At the time the application was submitted, the site of the proposed development was greenfield in nature, where surface water flows via overland drainage ditches and a surface water drain into the Lucan Stream and Griffeen River. It is noted that there are several drainage ditches that line field boundary hedgerows throughout the development site.

8.7.4.7. It is stated that the site would have an indirect hydrological connection, through the Lucan Stream, the Griffeen River and the River Liffey, with the following Natura 2000 European Sites:

- North Dublin Bay Special Area of Conservation (SAC) (Site Code 000206) – c. 19 km east of the site.
- North Bull Island Special Protection Area (SPA) (Site Code 004006) – c. 19 km east of the site.
- South Dublin Bay Special Area of Conservation (SAC) (Site Code 000210) – c. 16 km east of the site.
- South Dublin Bay and River Tolka Estuary Special Protection Area (SPA) (Site

Code 004024) – c. 16 km east of the site.

8.7.4.8. In terms of surface water drainage, there is a 900mm diameter road crossing which is then connected into a 900mm diameter pipe located along a section of road on the opposite side to the subject site. This gravity sewer then runs in a northerly direction, prior to connecting into a ditch/stream network, which discharges through 3 no. aqueducts / culverts of varying sizes, and which are located beneath the Grand Canal to the east. This outfall is then drained via a tributary into the Griffeen River. The proposed data centre development will result in a hardstanding area of approximately 13,282m^2, as follows:

- Red Hatch (Concrete Areas): 6,716m^2;
- Blue Hatch (Tarmac Roads): 6,566m^2;

The site will be drained and surface water will be contained within the overall site's drainage network and managed in a sustainable manner, in accordance with relevant guidelines and specifications. Stormwater will discharge through hydrocarbon interceptors and adequately sized attenuation ponds at the northern end of the site ultimately discharging to the existing storm sewer to the north east of the site. The outflow from the attenuation ponds, will be restricted by way of a hydrobrake flow control device, which will limit the discharge to 6.6/s, which is the calculated QBAR greenfield run-off rate. A connection to the existing off site foul sewer and potable water network will be established via the already permitted network to be established on site.

8.7.4.9. Service and infrastructure have already been installed within the Grange Castle Business Park for foul water and it is proposed to connect foul water services from the proposed development to this. There are 2 no. 450mm diameter spur connections, located along the eastern boundary of the property, within the newly constructed R120 (Newcastle Road) upgrade, adjacent to the subject site. It is proposed that all foul condensate effluent from the proposed new data halls, will be connected into head manholes adjacent to the data halls. The peak wastewater flow will not be in excess of c. 0.54l/s.

8.7.4.10. In terms of water supply, there is a 16" (400mm) diameter main located along the

eastern boundary of the property, within the newly constructed R120 (Newcastle Road) upgrade, adjacent to the subject site. 2 no. 300mm diameter capped connections with sluice valves, have been left off the aforementioned trunk water main, in order to facilitate development of the subject lands and for the lands further west, known as Grange Castle West. The proposed development will result in an increased demand for water of c. 6 m^3/day (average).

8.7.4.11. Based on the indicative flood mapping and the detail provided within the Flood Risk Assessment, the development site is located within Flood Zone C (i.e., where the probability of flooding from rivers is less than 0.1% or 1 in 1000 years – probability of fluvial flooding is low risk) and the site is classified as "Less Vulnerable" and therefore the development is classified as appropriate.

Potential Effects

8.7.4.12. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.3 below.

Table 8.7.3: Summary of Potential Effects

Do Nothing	The site would have to be reinstated as a wildflower meadow which would sit within a data centre campus. This is necessary given the site clearance works undertaken to facilitate the construction compound and car parking as permitted under SD21A/0042. Loss of opportunity to maximise the productive use of the site.
Construction Phase	*Increased runoff and sediment loading* Surface water runoff during the construction phase may contain increased silt levels or become polluted from construction activities. There is also potential for an increased runoff due to the introduction of impermeable surfaces and the compaction of soils. This will reduce the infiltration capacity and increase the rate and volume of direct surface runoff. *Contamination of local water courses.* There is a risk of accidental pollution incidents from the following sources: - Spillage or leakage of oils and fuels stored on site; - Spillage or leakage of oils and fuels from construction machinery or site vehicles; - Spillage of oil or fuel from refuelling machinery on site; and - The use of concrete and cement. The overall impact during construction is considered to be Short Term of

	Moderate Significance with a neutral effect on quality in accordance with the (EPA, 2017) assessment criteria and Small Adverse in accordance with the (NRA, 2009).
Operational Phase	*Increased surface water run-off* Without proper control measures, surface water can ingress into the surrounding environment. Storm water from all car park areas and access roads / delivery areas will be drained as follows: - A series of on-site gullies and channels draining into a separate system of below ground gravity storm water sewers; - Parking bays will be constructed with Permeable paving. *Contamination of surface water* The stand-by generators to be located in the vicinity of the proposed data centres will be bulk oil storage onsite within self-contained belly tanks. If not, adequately controlled, spillage could cause contamination if allowed to enter the water environment. Accidental leakage from the diesel storage tanks during refuelling may also occur. All surface water drainage will be conducted through an interceptor system with no direct run-off to any open watercourse. *Foul water* The proposed development will lead to an increase in foul water discharge. The potential effect is considered to be short-term imperceptible *Water supply.* The proposed development will result in an increased demand for water of c. 6m3/day (average; 0.069 l/s). The potential effect is considered to be short-term imperceptible Due to the low storage of bulk chemicals on site, the absence of any substantial direct pathway to a surface water body and due to the low sensitivity of the receiving environment (see assessment above), the overall impact during construction considered to be Short term – not significant in accordance with the (EPA, 2002) assessment criteria and Negligible in accordance with the (TII, 2009) criteria from.
Cumulative Effect	Cumulative impacts have been considered with current and future developments in the vicinity of the subject site as outlined within Sections 8.95-8.104. *Construction Phase* Surface water run-off during the construction phase may contain increased silt levels or become polluted from construction activities. Contamination of local water sources from accidental spillage and leakage from construction traffic and construction materials unless project-specific CEMPs are put in place for each development and complied with. *Operational Phase* Potential cumulative impacts included in the operational phase include: - Increased hard standing areas will reduce local recharge to ground and increase surface water run-off potential if not limited to the

	green field run-off rate from the site; - Increased risk of accidental releases from fuel storage/delivery unless mitigated adequately. - Increased risk of accidental discharge of hydrocarbons from car parking areas and along roads and unless diverted to surface water system with petrol interceptor; and - Any additional foul discharges should be treated where appropriate and/or diverted to the foul sewer system and not directly to ground.

Mitigation

8.7.4.13. Mitigation measures are summarised in Table 8.7.4 below.

Table 8.7.4: Summary of Mitigation

Construction Phase	*Increased runoff and sediment loading* Surface water runoff will not be discharged directly to local watercourses. The following mitigation measures will be adopted: - The drainage system and settlement ponds will be constructed as a first step; - Any excavations required will remain open for as little time as possible before the placement of fill. This will help to minimise potential for groundwater ingress into excavations; - Silt traps will be placed in the existing drainage network around the site to minimise silt loss. These should be inspected and cleaned regularly. - Weather conditions will be considered when planning construction activities to minimise risk of run off from the site; and, - Distance between topsoil piles etc. and streams will be maintained - to protect from dampening operations. *Contamination of local water courses* - All oils, solvents, paints and fuels used during construction will be stored within temporary bunded areas and drainage from the bunded area(s) will be diverted for collection and safe disposal. - Wet concrete operations adjacent to watercourses will be avoided where possible. - The contractor will be required to make provision for removal of any concrete wash waters and any effluent generated by temporary onsite sanitary facilities will be taken off-site for appropriate treatment. - Re-fuelling of construction equipment and the addition of hydraulic oil or lubricants to vehicles/equipment will take place in designated bunded areas where possible. - The generation of runoff from stockpiles of soils, excavated during construction, will be prevented from entering watercourses by diverting runoff to the settlement ponds on site, and removing the material off-site as soon as possible to designated storage areas.
Operational Phase	*Increased surface water run-off*

	The proposed drainage system for the site in outlined in Pinnacle's Engineering Planning Report and has been designed in accordance with Greater Dublin Strategic Design System (GDSDS) specifications. *Contamination of surface water* Run-off from the car park areas and access roads / delivery areas will be drained following these options: - A series of on-site gullies and channels draining into a separate system of below ground gravity storm water sewers; - A Duraflow (or similar approved), porous asphalt product. *Foul water* The increase in flow to the existing public foul sewer is not expected to have a negative effect on the foul drainage system in the area. *Water supply* The water system will be metered to facilitate detection of leakage and the prevention of water loss. Dual & low flush toilets and water economy outlets and water saving measures will also be proposed.

Residual Effects

8.7.4.14. In terms of the construction phase, the absence of any substantial direct pathway to a water course and the implementation of mitigation measures highlighted above will ensure that the predicted impacts on the surface water environment do not occur during the construction phase and that the residual impact will be *short term-imperceptible-neutral* in accordance with the (EPA, 2022) assessment criteria.

8.7.4.15. It is stated that the implementation of mitigation measures highlighted above will ensure that the predicted impacts on the surface water environment do not occur during the operational phase and that the residual impact will be *long term-imperceptible-neutral* in accordance with the (EPA, 2022) assessment criteria.

Assessment / Conclusion

8.7.4.16. I have examined, analysed and evaluated Chapter 8 of the EIAR and the associated appendices including the reports of the Planning Authority's Water Services department which have indicated that they have no objection to the proposed development. Overall, I am satisfied that the Applicant has provided sufficient baseline data to enable assessment of likely effects on the water environment. Further, having regard to the detailed assessment carried out, the location of the development and the

proposed mitigation measures, which are standard good practice measures and which are proven to be effective at preventing adverse effects on water flows and water quality, I am satisfied that no significant, adverse direct, indirect, or cumulative effects on the water environment, water quality or WFD objectives will arise as a consequence of the proposed development.

Air Quality

8.7.5. **Issues Raised**

8.7.5.1. No issues are raised by parties to the application in respect of Air Quality.

8.7.6. **Examination, analysis and evaluation**

Context

8.7.6.1. Chapter 10 (Air Quality) of the EIAR assesses and evaluates the impacts which the proposed development may have on Air Quality during the construction and operational stages as defined in the Environmental Protection Agency (EPA) documents Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2022). An assessment of the likely dust related impacts as a result of construction activities was undertaken and used to inform a series of mitigation measures. Air dispersion modelling of operational stage emissions from the site was carried out using the United States Environmental Protection Agency's regulated model AERMOD as recommended by the EPA (EPA, 2020a). The modelling of air emissions from the site was carried out to assess concentrations of nitrogen dioxide (NO_2) at a variety of locations beyond the site boundary. The modelling was undertaken to assess the impact to ambient air quality from the continuous operation of the gas generators and the scheduled testing of the standby diesel generators and the infrequent emergency operation of the standby diesel generators. The following appendices to Chapter 10 have been included:

- Description of the AERMOD model, and,
- Description of AERMET.

Baseline

8.7.6.2. In terms of the construction phase, the assessment focused firstly on identifying the existing baseline levels of NO_2 in the region of the proposed development by an

assessment of EPA monitoring data. Thereafter, the impact of the construction phase on air quality was determined by a qualitative assessment of the nature and scale of dust generating construction activities associated with the proposed development.

8.7.6.3. For the operational phase, the modelling of air emissions from the site was carried out to assess the concentrations of NO_2 beyond the site boundary and the consequent impact on human health. The model post-processed the data to identify the location and maximum of the worst-case ground level concentration. This worst-case concentration was then added to the background concentration to give the worst-case predicted environmental concentration (PEC). The PEC was then compared with ambient air quality standards to assess the significance of the releases from the site.

8.7.6.4. Modelling was undertaken for three separate scenarios to account for emissions from the gas generation compound in isolation and secondly a full cumulative assessment to take into account all existing and proposed phases for EdgeConneX and taking into allow all IED licenced facilities in the region. The cumulative assessment of Scenario 1 and Scenario 3 above has included the following IED licensed sites: Takeda, Grange Back-Up Power and Pfizer. The source information for the modelled emission points has been summarised in Table 10.2 of the EIAR.

Potential Effects

8.7.6.5. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.5 below.

Table 8.7.5: Summary of Potential Effects

Do Nothing	Ambient air quality at the site will remain as per the baseline and will also change in accordance with trends within the wider area (including influences from new developments in the surrounding industrial estates, changes in road traffic, etc).
Construction Phase	The greatest potential impact on air quality during the construction phase is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 200m of a construction site, the majority of the deposition occurs within the first 50m. The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts etc.) and the nature of the construction activity. In addition, the potential for dust dispersion and deposition depends on local meteorological factors such as rainfall, wind speed and wind direction.

	The potential impacts associated with the construction phase of the proposed development are *short-term* in nature. When the dust minimisation measures detailed in the mitigation section of this chapter are implemented, fugitive emissions of dust from the site will *not be significant* and will pose no nuisance at nearby receptors.
Operational Phase	The potential impact to air quality during the operational phase of the proposed development is a breach of the ambient air quality standards as a result of air emissions from the gas generators and the standby diesel generators. It is stated that an iterative stack height determination was undertaken as part of the air dispersion modelling study to ensure that an adequate release height was selected for all emission points to aid dispersion of the plume and ensure compliance with the ambient air quality limit values at all locations beyond the site boundary.
Cumulative Effect	Cumulative impacts have been considered under Scenario 3 of the Applicant's modelling. The results indicate that in the worst-case year, based on the cumulative assessment involving the continuous operation of the nearby IED licenced sites, the 18 no. gas generators associated with Gas Plant 1, the 18 no. gas generators associated with Gas Plant 2, and the 19 no. gas generators associated with Gas Plant 3, the backup generators associated with Phases 1, 2, 3, 4, 5 and 6 of EdgeConneX sites can operate for 50 hours before there is a likelihood of an exceedance of the ambient air quality standard (at a 98th percentile confidence level). Figure 10.8 of the EIAR shows the statistical distribution predicted for the 98th percentile (based on 50 hours of operation per year). However, the UK guidance recommends that there should be no running time restrictions placed on standby generators which provide power on site only during an emergency power outage.

Mitigation

8.7.6.6. Mitigation measures are summarised in Table 8.7.6 below.

Table 8.7.6: Summary of Mitigation

Construction Phase	- Aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design and effective control strategies. - Application of speed limits on site roads/haulage routes. - Restriction around clearing / earth-moving works during periods of high winds and dry weather conditions. - Restrictions and management of the location and moisture content of storage piles. - Minimising spillage and blow-off of debris, aggregates and fine material onto public roads through adherence to appropriate measures.
Operational Phase	The standby diesel generators have been designed in an iterative fashion to ensure that an adequate height was selected to aid dispersion of the plume. Provided each standby diesel generator flue stack is built to a height of 25m above local ground level and based on the site layout modelled and

	hours of operation, the air impact assessment has demonstrated that mitigation measures are not required.

Residual Effects

8.7.6.7. In terms of the construction phase, the EIAR notes that when the dust mitigation measures are implemented, fugitive emissions of dust and particulate matter from the site will be short-term and not significant in nature, posing no nuisance at nearby receptors. In terms of impacts on Human Health, the mitigation measures that will be put in place during construction will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the proposed development is likely to be *short-term* and *imperceptible* with respect to human health.

8.7.6.8. The results of the modelling assessment based on the proposed development have found that ambient concentrations of NO_2, due to emissions from the gas generators, scheduled testing of diesel generators on site and standby operation of the diesel generators, are below the air quality limit values. Thus, it is predicted that the impact of the proposed development on air quality will be *long-term*, *negative* and *not significant*.

Assessment / Conclusion

8.7.6.9. I have examined, analysed and evaluated Chapter 10 of the EIAR and the associated appendices. Overall, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts and provides suitably comprehensive range of mitigation measures to reduce any potential impacts. The proposed development forms the third and final phase of the Facility Campus. The main pollutant of concern in relation to emissions from the combustion engines is NO_2 and the assessment concentrates on the impacts of NO_2 emissions on human health receptors. In relation to carbon monoxide (CO), sulphur (SO2), PM10, PM2.5 and benzene no detailed modelling was undertaken, as combustion engines emissions of these pollutants would be significantly lower when compared with NOx emissions relative to their respective ambient air quality standard.

8.7.6.10. Based on the modelling of 3 scenarios, it has been demonstrated that that ambient

concentrations of NO_2 are below the air quality limit values and I am satisfied that no significant direct or indirect effects would arise due to the nature and scale of the proposed project, the duration (18 months) of the works, the separation distance to sensitive receptors and to the comprehensive range of mitigation measures in Chapter 10 to reduce any potential impacts.

8.7.6.11. I note that the proposed development will incorporate emergency diesel generators to provide power to the data centre in the event of failure of the electricity supply. As noted earlier in this assessment, I have recommended a condition to be included which restricts the use of fossil diesel within the proposed 24 no. standby generators. Confirmation of what renewable fuel to be utilised (i.e. HVO or other renewable diesels) by the standby generators shall be submitted to the Planning Authority prior to the operation of the proposed development. I note that HVO is a low-carbon biofuel that serves as a direct replacement for regular diesel. It is a high-quality biofuel produced from treating waste plant-matter with hydrogen, which means additional carbon emissions into the atmosphere are significantly reduced. Subject to compliance with the proposed mitigation measures and suitable conditions, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on Air quality.

Climate

8.7.7. **Issues Raised**

8.7.7.1. Within an initial observation to the application, a Third Party noted that there were deficiencies in the EIAR as to how this development would address sectoral emissions under the Climate Action and Low Carbon Development (Amendment) Act 2021 nor how the provision of 24 no. diesel generators would accord with national and local environmental policies. It was also stated that the Applicant had failed to demonstrate how the development will contribute to carbon budget.

8.7.8. **Examination, analysis and evaluation**

Context

8.7.8.1. Chapter 11 (Climate) of the EIAR evaluates the impacts which the proposed development may have on Climate as defined in the EPA EIA Report Guidelines 2022.

It is noted that the facility will have 21 gas engines which will have a stack height of 25m above ground level and 24 back-up generators which will have a stack height of 25m above ground level. An overview of the methodology undertaken for the climate impact assessment is outlined as follows:

- A detailed baseline review of GHG emissions has been undertaken in order to characterise the baseline environment. This has been undertaken through review of available published GHG emission data;
- A review of the most applicable guidelines for the assessment of GHG emissions has been carried out in order to define the significance criteria for the construction and operational phases of the proposed development. These guidelines describe appropriate methods for quantifying the emissions of GHG emissions from the proposed development;
- Predictive calculations and impact assessments relating to the likely operational phase climatic impacts of the proposed development have been undertaken;
- An assessment of the vulnerability of the proposed development to climate change has been undertaken; and
- A schedule of mitigation measures has been incorporated where required to reduce, where necessary, the identified potential climatic impacts associated with the proposed development.

Baseline

8.7.8.2. For the purpose of the qualitative climate assessment of the construction phase, the combined impact of concurrent construction of all proposed buildings at the site has been assumed to occur together. The assessment thus focused on identifying the impact of the construction phase on climate and was determined by a qualitative assessment of the nature and scale of GHG generating construction activities associated with the proposed development.

8.7.8.3. For the operational phase, the assessment for the proposed development was based on the use of electricity to power the facility in addition to the emergency operation of the backup generators for 72 hours per year. It is again noted that the back-up generators are only used in the event of a power failure at the site. The criteria for

determining the significance of effects are a two-stage process that involves defining the magnitude of the impacts and the sensitivity of the receptors. In relation to climate, there is no project specific assessment criteria, but the project was assessed against the recommended IEMA (IEMA, 2022) significance determination. The impact of the operational phase of the proposed development on climate was determined by an assessment of the direct (due to natural gas and infrequent diesel usage) and indirect CO_2 emissions associated with electricity over the period 2025 to 2030. The change in the renewable fraction of electricity from the national grid and the biomethane fraction of natural gas with time have also been considered.

Potential Effects

8.7.8.4. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.7 below.

Table 8.7.7: Summary of Potential Effects

Do Nothing	No construction works will take place and the previously identified impacts of GHG emissions and emissions from equipment and machinery will not occur. Section 11.80 notes that the main GHG emissions will be indirect emissions associated with the use of electricity for the operation of the DUB04 data centre, the use of gas engines to provide power to the DUB05 data centre and infrequent operation of the backup generators. I note that these are the permitted data centres within the wider Facility Campus. The indirect (due to electricity) and direct (due to natural gas and diesel usage) CO_2 emissions to operate the Do Nothing scenario has been assessed in the context of Ireland's national annual CO_2 emissions. The expected emission rates for each year from 2025 to 2040 is shown in Table 11.8 for electricity and in Table 11.9 for natural gas/biomethane mix. For the Do Nothing Scenario, it is stated that the electricity provided through the national grid and the onsite gas engines will fully operate under the EU-wide Emission Trading System (ETS)
Construction Phase	Construction traffic would be expected to be the dominant source of direct greenhouse gas emissions during the construction phase as construction vehicles and machinery will give rise to CO_2 and N_2O emissions during construction. Initial commissioning activities will involve testing of the gas turbines and back-up generators on site in a similar manner to the operational phase testing.
Operational Phase	The operation of the gas generators in the energy centre and the scheduled testing of the back-up generators in the data storage facilities will release

	GHG emissions. The infrequent emergency operation of the back-up generators for the data storage facilities in the event of a power outage would release GHG emissions. Road traffic accessing the site will emit GHG emissions. However, the operational phase of the proposed development is not expected to contribute a significant volume of additional traffic on the local road network. The direct air emissions, based on operation of the gas generators will have an impact on air emissions.
Cumulative Effect	Section 11.114 notes that all global cumulative GHG sources are relevant to the effect on climate change. As a result, the effects of GHG emissions from specific cumulative projects therefore in general should not be individually assessed. It is stated that this is due to the fact that there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other (IEMA, 2022).

Mitigation

8.7.8.5. Mitigation measures are summarised in Table 8.7.8 below.

Table 8.7.8: Summary of Mitigation

Construction Phase	- All vehicles will be required to switch off engines when stationary (no idling); - All vehicles will be serviced and maintained to ensure emissions are minimised; - Embodied carbon will be investigated at detailed design stage; - Where practicable, materials will be reused within the extent of the Proposed Development; and - Where practicable, materials will be sourced locally to reduce the embodied emissions associated with transport.
Operational Phase	- The gas engines and diesel generators will be regularly serviced to ensure that they operate to their maximum efficiency. - Solar PV panels will be installed at roof level. - Waste heat associated with the facility will have the capacity to connect with a future district heating scheme developed by others. In addition to the above factors. The following measures will be employed by the facility. - The facility will purchase GO RECS to offset the carbon footprint at 100% carbon free for 2021 and onwards, - 24/7 Green Energy Renewable Matching will be committed to as part of the development. The Applicant will enter into binding agreements that will obligate the end user, to enter into arrangements which are capable of underpinning new

	renewable energy generation calculated to offset the energy consumed by the proposed development from the electricity grid or onsite gas generators. This would achieve the objective of operating the proposed development on a net zero carbon basis that would not impact Ireland's overall climate targets.

Residual Effects

8.7.8.6. In terms of the construction phase, based on the scale and temporary nature of the construction works and the intermittent use of equipment, the potential impact on climate change is deemed to be *short-term, imperceptibly negative* and *not significant* in relation to Ireland's obligations under the EU 2030 target.

8.7.8.7. In terms of the operational phase, the impact of climate change on the proposed development is deemed to be imperceptible. When considering the impact of the operational phase of the development on climate, the main GHG emissions will be the use of the gas engines to provide power to the data centre and infrequent operation of the backup generators. The direct (due to natural gas and diesel usage) CO_2 emissions to operate the proposed development has been assessed in the context of Ireland's national annual CO_2 emissions and the expected emission rates for each year from 2025 to 2040 is shown in Table 11.9 of the EIAR. For the Proposed Scenario, the gas engines will fully operate under the EU-wide Emission Trading System (ETS) which will gradually increase the carbon price in future years in order to ensure all EU-wide GHG emission targets are met under the scheme.

8.7.8.8. As the proposed development and overall development are over 20 MW thermal input, a greenhouse gas emission permit will be required for the facility which will be regulated under the ETS. Through a series of measures including project replacement, a reduction in residual emissions through best practice and the implementation of a series of adaptive design measures, the net impact of the proposed development is deemed to be not significant. Given that the use of electricity to power the facility will achieve net zero by 2050 and the commitment to offset all interim fossil fuel derived GHG emissions by the purchase of Corporate Power Purchase Agreements (CPPAs) the predicted impact to climate is deemed to *be indirect, long-term, negative* and *minor adverse*. The operational phase impact of the proposed development, based on the EPA EIAR Guidelines (EPA, 2022), is considered *long-term*, *localised, negative* and

slight.

Assessment / Conclusion

8.7.8.9. I have examined, analysed and evaluated Chapter 11 of the EIAR and the associated appendices. Overall, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts during the construction and operational phases of the proposed development on the climate and provides suitably comprehensive range of mitigation measures to reduce any potential impacts. The proposed development forms the third and final phase of the Facility Campus and permission has been previously granted for the gas power plant that will partly serve the proposed data centre.

8.7.8.10. Chapter 11 demonstrates that the proposed development will operate under the ETS and will thus be required to operate within the limits of the system which includes carbon pricing and a linear reduction in GHG emissions going forward. The 2050 target as outlined under the EU Climate Law is one of achieving climate neutrality ('Net Zero') by 2050, and thus aligns with the commitment Ireland has undertaken under the Climate Action and Low Carbon Development Act 2015 (as amended in 2021) and all reductions achieved by Irish EU ETS-participating installations will contribute towards that.

8.7.8.11. I note that the permitted Gas Plant (SD22A/0289) that will partly serve the proposed development have been designed so that they can be powered by green gas and / or hydrogen (or similar fuels) as these fuel sources become more readily available to the market. In addition, there are conditions (i.e. Condition no. 3 (ii) and 3 (iii)) which have a direct impact on the operation of the proposed development as they require the operator to undertake a review of the ability to serve the Gas Plant with these renewable fuel sources and which requires implementation if feasible, all within agreed timelines. In addition, the condition requires the Gas Plants to be removed from the entire site if a firm connection to the national grid (without the need for the Gas Plant) can be achieved. As noted earlier in this report, it is also my recommendation that a condition be attached to a grant of permission which requires details of a Corporate PPA with a renewable energy be provided for the operation of the data centre prior to

the commencement of operations.

8.7.8.12. Further to the above, I note that I have recommended a condition to be included which restricts the use of fossil diesel within the proposed 24 no. standby generators. The Applicant shall be required to confirm with the Planning Authority, what renewable fuel is to be utilised (i.e. HVO or other renewable diesels) prior to the operation of the proposed development. In addition, it is my view that a condition should also be attached which requires the Applicant to demonstrate how a connection to a future district heating network can be facilitated onsite. Subject to compliance with the proposed mitigation measures and various conditions discussed above, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on Climate.

8.8. Noise and Vibration

8.8.1. Issues Raised

8.8.1.1. Within their initial assessment of the application, the Planning Authority requested the Applicant to submit an acoustic assessment describing and assessing the impact of noise emissions from the proposed development to include cumulative noise impacts.

8.8.2. Examination, analysis and evaluation

Context

8.8.2.1. The following methodology has been provided within Chapter 9 of the EIAR.

- Review appropriate guidance and previous planning noise conditions in order to identify appropriate noise criteria for the site;
- Carry out noise monitoring at a number of locations (e.g. in the vicinity of nearest sensitive properties/boundaries) to identify existing levels of noise in the vicinity of the development;
- Development of a detailed 3D noise model to consider the proposed site and the previously permitted development phases; and
- Comment on predicted levels against the appropriate criteria and existing noise levels and outline required mitigation measures (if any).

8.8.2.2. Included as appendices to the Chapter are:

- Glossary of acoustic terminology
- Noise modelling details
- Indicative construction noise & vibration management plan
- Noise modelling details
- Modelling calculation parameters

Baseline

8.8.2.3. A set of noise surveys were carried out in 2016 and 2020 in support of the DUB 05 application and full details of the noise monitoring are presented in Appendix 9.2 of the appendices. Noise measurements were conducted at five positions on and in the vicinity of the application site that are representative of noise environment expected at the nearest noise sensitive locations, the locations of which are identified in Figure 9.3.

8.8.2.4. When considering criteria for rating noise impacts during the construction phase, it is highlighted that there is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. In the absence of specific noise limits, appropriate criteria relating to permissible construction noise levels for a development of this scale may be found in the British Standard BS 5228 – 1: 2009+A1:2014: Code of practice for noise and vibration control on construction and open sites – Noise.

8.8.2.5. In terms of criteria for rating vibration impacts, vibration standards come in two varieties: those dealing with human comfort and those dealing with cosmetic or structural damage to buildings. In both instances, it is appropriate to consider the magnitude of vibration in terms of Peak Particle Velocity (PPV).

8.8.2.6. In the context of the operational phase of the proposed development, Section 9.33 of the EIAR notes that South Dublin County Council (SDCC) do not outline absolute noise limits or specific noise guidance in relation to industrial developments such as the operations considered here. In the absence of such guidance, consideration is given to the relevant content of the following documents:

- Planning conditions for previous phases development on the wider side issued

by SDCC;

- Planning condition for the adjacent DUB04 development (SD19A/0042 / ABP Ref. PL06S.305948) as issued by An Bord Pleanála (ABP) on the lands to the south;
- Planning condition for the adjacent DUB05 development (SD21A/0042 as issued by SDCC on the lands to the west; and
- Environmental Protection Agency: "Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)".

8.8.2.7. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.8.1 below.

Table 8.8.1: Summary of Potential Effects

Do Nothing	In this scenario the existing noise environment would remain. It is stated that levels of ambient and background noise may increase slightly over time due to growth in traffic volumes on local and distant road networks.
Construction Phase	The construction programme will create typical construction activity related noise on site. During the construction phase, a variety of items of plant will be in use, such as excavators, lifting equipment, dumper trucks, compressors and generators. Due to the nature of daytime activities undertaken on a construction site of this nature, there is potential for generation of significant levels of noise. The flow of vehicular traffic to and from a construction site is also a potential source of relatively high noise levels. The potential for vibration at neighbouring sensitive locations during construction is typically limited to excavation works and lorry movements on uneven road surfaces. Due to the proximity of sensitive locations to site works however, there is little likelihood of structural or cosmetic damage to existing neighbouring dwellings as a result of vibration.
Operational Phase	The primary sources of outward noise in the operational context are deemed medium term and will involve: - building services noise; - emergency site operations; and - additional vehicular traffic on public roads.
Cumulative Effect	The potential cumulative noise emissions from the proposed development and neighbouring permitted developments, including the Microsoft and Interxion Data Centres have been considered under Sections 9.89 -9.92 which demonstrate that the predicted cumulative plant noise emissions are therefore within the daytime, evening and night-time limit values as illustrated in Table 9.20

Mitigation

8.8.2.8. Mitigation measures are summarised in Table 8.8.2 below.

Table 8.8.2: Summary of Mitigation

Construction Phase	Mitigation measures to be implemented and applied during the construction phase include: - Limiting the hours during which site activities likely to create high levels of noise or vibration are permitted; - Establishing channels of communication between the contractor/developer, Local Authority and residents; - Appointing a site representative responsible for matters relating to noise and vibration; - Monitoring levels of noise and/or vibration during critical periods and at sensitive locations; - All site access roads will be kept even so as to mitigate the potential for vibration from lorries. - A solid site hoarding of 2.4m height will be erected around the site boundary. It is recommended that vibration from construction activities to off-site residences be limited to the values set out in Table 9.6 of the EIAR.
Operational Phase	*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 of the EIAR through selection of plant items, incorporating appropriately specified in line attenuators where necessary. 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.

Residual Effects

8.8.2.9. In terms of the construction phase, the application of noise limits and hours of operation, along with the implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact is kept to a minimum and any construction related noise impacts will be short term.

8.8.2.10. For the operational phase, proprietary noise and vibration control measures will be employed in order to ensure that noise emissions from building services plant do not exceed the adopted criterion at the façade of any nearby noise sensitive locations. In addition, noise emissions will be broadband in nature and will not contain any tonal or impulsive elements. The resultant noise impact is not significant.

Assessment / Conclusion

8.8.2.11. I have examined, analysed and evaluated Chapter 9 of the EIAR and all of the associated documentation and submissions on file in respect of noise and vibration. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028). Overall, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on noise and vibration. Subject to compliance with the proposed mitigation measures and various conditions discussed above, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

8.9. Traffic and Transportation

8.9.1. Issues Raised

8.9.1.1. No issues raised by parties.

8.9.2. Examination, analysis and evaluation

Context

8.9.2.1. Chapter 12 (Traffic and Transportation) of the EIAR assesses the likely effects of the proposed development in terms of vehicular, pedestrian and cycle access during the construction and operational phases of the proposed development. It is noted that the rationale for the car parking strategy is set out within the Traffic and Transport Assessment that accompanies the application.

Baseline

8.9.2.2. Grange Castle Business Park to the east of the site is accessed from a roundabout junction on the R136 Grange Castle Road. Access to the business park from this junction consists of a wide dual carriageway road, with a 1.5m cycle track and 1.5m footpath set back from the carriageway on either side. The internal Grange Castle Business Park road network provides access to the eastern edge of the site via the roundabout on the R136 Grange Castle Road on to the realigned R120. The site location and local road network are shown on Figure 13.1 of the EIAR. Adamstown Road (R120) and Nangor Road (R134) Improvement Scheme involved the re-

alignment of the existing Adamstown (R120) and Nangor (R134) Regional Roads, immediately adjacent to Grange Castle Business Park and the subject site and these works are now complete.

8.9.2.3. The R136 forms a grade separated junction with the N4 approximately 3km north of its roundabout junction with Grange Castle Business Park, as well as the N7 approximately 3km to the south. The M50 is located approximately 5km to the east of the site and forms an orbital motorway ring road around Dublin. The M50 is intersected by the principal radial routes, including the N4 at Junction 7, and the N7 at Junction 9, also known as the Red Cow Interchange. The EIAR concludes that the site is strategically situated to facilitate trips by vehicles, with road infrastructure in place and built to a high standard.

Baseline Traffic Data

8.9.2.4. To quantify the volumes of traffic movements at key points on the road network adjacent to the site, a set of classified turning movement traffic counts were commissioned. Accordingly, classified counts were carried out in May 2022 at the site access and the results of the traffic surveys are also set out in Appendix A of the Transport Statement by Pinnacle Consulting Engineers that accompanies the application and Table 8.9.1 below.

Table 8.9.1

R120 Survey Results		
	AM	PM
North Bound	346	506
South Bound	535	222
Two-way	881	728

Pedestrian and Cycling Facilities

8.9.2.5. The realignment of the R120 created cycle paths on either side of the road that will connect into other cycle paths along the realigned R134. There is a current planning application proposed to the north of the canal to the immediate north of the site by South Dublin County Council to extend the greenway to the west of the 12th lock and bridge. A cycle greenway already runs along the Royal Canal with access on to the

R136. In addition, pedestrian and cycleways are available on all internal roads within Grange Castle Business Park, and along the R136.

Public Transport Accessibility

8.9.2.6. In terms of bus services, there are a number of bus stops within 700-800m walking distance of the application site. The nearest stops are on route no. 68 that connects Newcastle with the city centre. These stops are some 700m to the south of the subject site. The bus stops within the Grange Castle Business Park, such as those serving the no. 13 and 151 buses also have the ability to serve the site and contain stops within 800m of the site.

8.9.2.7. For rail, the nearest stations are Adamstown, approximately 2.4km to the north-west of the site and Clondalkin-Fonthill approximately 6km to the east of the site. These stations are served by around 20 suburban commuter trains in each direction during weekdays.

Trip Generation

8.9.2.8. The site will employ 100 people working in 3 shifts with peak hour trip rates identified in Table 13.3 of the EIAR. The AM Peak hour will have 40 arrivals and 20 departures resulting in a total of 60 two-way trips. The shift change occurs at 16:00 which would be outside the traditional PM Peak between 17:00 and 18:00.

Potential Effects

8.9.2.9. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.9.2 below.

Table 8.9.2: Summary of Potential Effects

Do Nothing	Should the proposed development not take place, the access roads and infrastructure will remain in their current state and there will be no change. Background traffic would be expected to grow over time.
Construction Phase	At the peak of construction, it is anticipated that there will be a requirement for approximately c.100-120 construction workers, which with an allowance for shared journeys could equate to a maximum of around 60-80 arrivals and departures per day. This will vary over the lifetime of the project. The cut and fill exercise is expected to take up to 6 months to complete.

	This equates to, on average, 10 soil removal related trips per day/20 two-way trips or 1000 HGV trips over the 6 month period. Based on experience of similar sites it is considered that the number of construction related heavy goods vehicle movements to and from the application site will be approximately 10 arrivals and departures during the first 5-6 months of works and decreasing to 3 to 5 thereafter.
Operational Phase	The impact of traffic associated with the proposed overall development is approximately 6.26% of the estimated flow for the upgraded Adamstown Road (R120). As the traffic dissipates throughout the network this impact will lessen on adjoining roads/junctions. At a maximum of 60 two-way trips in each of the peak hours for the overall development, the proposed development has a traffic generation less than the first criterion of 10% of the thresholds for Traffic and Transport Assessments set out by TII. The proposed development is forecast to have a maximum percentage impact of around 2.1% at junctions in the vicinity of R120 and R136 (currently under construction), which is again less than the criteria set out by TII.
Cumulative Effect	The subject site is Phase 3 of a development that includes similar schemes granted under SD19A/0042 / ABP Ref. PL06S.305948 and SD21A/0042. These schemes will be built sequentially. Peak traffic generation during the construction phase will occur at the start of the project carrying out demolition, groundworks etc. The final stages of the development will include the fit out of the units will minimal HGV movements generated at this time. Given the sequential nature of the construction phase, the peak cumulative impact during the construction phase will be similar to that of the predicted impact i.e. on average, 10-12 HGV movements one-way/20-24 HGV movements two-ways per day. In terms of the operational phase, the impact of traffic associated with the proposed overall development is approximately 6.26% of the estimated hourly flow capacity for the upgraded Adamstown Road (R120). It is concluded that the proposed development will have a minor impact on junctions in the vicinity of the site

Mitigation

8.9.2.10. Mitigation measures are summarised in Table 8.9.3 below.

Table 8.9.3: Summary of Mitigation

Construction Phase	The Construction Management Plan incorporates a range of integrated control measures and associated management initiatives with the objective of mitigating the impact of the proposed developments on-site construction activities. Mitigation measures included: - During the pre-construction phase, the site will be securely fenced off from adjacent properties, public footpaths and roads. - All road works will be adequately signposted and enclosed to

	ensure the safety of all road users and construction personnel. - A dedicated 'construction' site access / egress junction will be provided during all construction phases. This will coincide with the overall site access. - Provision of sufficient on-site parking and compounding to ensure no potential overflow of construction generated traffic onto the local network. - Site offices and compound will be located within the site boundary. The site will be able to accommodate employee and visitor parking throughout the construction period through the construction of temporary hardstanding areas. - A material storage zone will also be provided in the compound area. This storage zone will include material recycling areas and facilities. - A series of 'way finding' signage will be provided to route staff / deliveries into the site and to designated compound / construction areas. - Dedicated construction haul routes will be identified and agreed with the local authority prior to the commencement of constructions activities on-site. - Truck wheel washes will be installed at construction entrances if deemed necessary and any specific recommendations with regard to construction traffic management made by the Local Authority will be adhered to. - On completion of the works all construction materials, debris, temporary hardstands etc. from the site compound will be removed off site and the site compound area reinstated in full on completion of the works.
Operational Phase	- It is proposed that staff at the data centre are made aware of potential alternatives including information on walking, cycle routes and public transport. - It is proposed to provide car parking that will meet the expected-on site demand. - The marketing of new pedestrian & cyclists routes along with public transport information will further reinforce the efforts been made towards a modal shift away from car-based trips. - A Travel Plan was submitted as part of the FI request in accordance with section 12.7.3 of the current Plan and the applicant has committed to implementing a Mobility Management Plan will be developed and implemented within six months of the commencement of the operation of the proposed development.

Residual Effects

8.9.2.11. In terms of the construction phase, all construction activities will be governed by the Construction and Environmental as well as the Traffic Management Plan (CTMP), and an outline Construction and Environmental Management Plan (CEMP) is included with this application and the details of which will be agreed with the local authority prior to commencement of construction on site. The contractor will be contractually required

to ensure that the elements of this outline CTMP shall be incorporated into the final CTMP. The contractor shall also agree and implement monitoring measures to confirm the effectiveness of the mitigation measures outlined in the CTMP. On finalisation of the CTMP, the contractor shall adopt the plan and associated monitoring measures. A construction car park for workers immediately adjacent to the new access from Grange Castle Business Park will be created on the start of works by the laying of a temporary surface for vehicles. This number of construction vehicle movements is considered to be relatively low compared to the wider road network.

8.9.2.12. For the operational phase, the impact of traffic associated with the proposed overall development is approximately 6.26% of the estimated hourly flow capacity for the upgraded Adamstown Road (R120). As the traffic dissipates throughout the network this impact will lessen on adjoining roads/junctions. These criteria are widely considered to be best practice in determining the scope for road capacity impacts. At a maximum of 60 two-way trips in each of the peak hours for the overall development, the proposed development has a traffic generation less than the TII criterion of 10% set out above. Additionally, the proposed development is forecast to have a maximum percentage impact of around 6.26% at junctions in the vicinity of R120 and R136 which is again less than the criteria set out by TII. As a result of the above, it is concluded that the proposed development will have a minor impact on junctions in the vicinity of the site. Therefore, it is not considered necessary to undertake any further junction assessment.

Assessment / Conclusion

8.9.2.13. I have examined, analysed and evaluated Chapter 12 of the EIAR and all of the associated documentation and submissions on file in respect of traffic and transportation, including the report on file from the Planning Authority's Road's Department. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028). Overall, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on traffic and transportation. The proposed development will not generate traffic levels during construction and operational phases that will give rise to a significant impact.

The impact is assessed cumulatively with the permitted development during the construction phase, and it is concluded that the increased traffic levels at peak times attributed to the proposed development are minimal. Subject to compliance with the proposed mitigation measures discussed above, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

8.10. Waste Management

8.10.1. Issues Raised

8.10.1.1. No issues raised by parties.

8.10.2. Examination, analysis and evaluation

Context

8.10.2.1. Chapter 15 (Waste Management) of the EIAR evaluates the potential environmental impacts associated with waste generation and management during the construction and operational phases of the proposed development. A site-specific Resource and Waste Management Plan (RWMP) has been prepared to deal with waste generation during the construction phase of the development.

8.10.2.2. A desk study was carried out which includes the following tasks:

- Review of applicable policy and legislation which creates the legal framework for resource and waste management in Ireland;
- Description of the typical waste materials that will be generated during the construction and operational phases; and
- Identification of mitigation measures to prevent waste generation and promote management of waste in accordance with the waste hierarchy.

Baseline

8.10.2.3. In terms of the construction phase, there will no demolition required to facilitate construction of the proposed development. The proposed development is to be located on an undeveloped portion of an existing data centre campus. During the construction phase, waste will be produced from surplus materials such as broken or offcuts of timber, plasterboard, concrete, tiles, bricks, etc. Waste from packaging (cardboard, plastic, timber) and oversupply of materials may also be generated. The construction

contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

8.10.2.4. There will be soil excavation works required during the construction phase to facilitate site levelling, foundation construction, service trenches and access routes. It is anticipated that excavated soils/stones will be inert/non-hazardous material suitable for re-use on site. The project engineers (Pinnacle) have estimated that c. 11,300m^3 of topsoil and 18,800m^3 of subsoil will be excavated. It is currently proposed that all of this excavated material will be reused on site for berms and other landscaping purposes, wherever possible, and if not, it will be exported to a suitable waste facility. These estimates will be refined prior to commencement of construction.

8.10.2.5. Waste will also be generated from construction workers e.g. organic/food waste, dry mixed recyclables (waste paper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables and potentially sewage sludge from temporary welfare facilities provided onsite during the construction phase.

8.10.2.6. The proposed development will give rise to a variety of waste streams during the operational phase, i.e. when the project is completed, and fully operational. The majority of waste will be generated from packaging for equipment deliveries to the facility which is likely to be at its peak in the early months of operation but will reduce as the data halls are filled with servers and other equipment. Waste will also be generated from the occupants of the building during operations. These waste types will mainly be non-hazardous.

Potential Effects

8.10.2.7. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.10.1 below.

Table 8.10.1: Summary of Potential Effects

Do Nothing	No impact is predicted from the Do-nothing scenario as it will remain in its natural condition.
Construction Phase	The proposed development will generate a range of non-hazardous and hazardous waste materials during site excavation and construction. In the absence of mitigation, the effect on the local and regional environment is

	likely to be *short-term, not significant* and *negative*. The use of non-permitted waste contractors or unauthorised waste facilities could give rise to inappropriate management of waste and result in indirect negative environmental impacts or pollution. In the absence of mitigation, the effect on the local and regional environment is likely to be *long-term, slight* and *negative.* Wastes arising will need to be taken to suitably registered/permitted/licenced waste facilities for processing and segregation, reuse, recycling, recovery, and/or disposal as appropriate. In the absence of mitigation, the effect on the local and regional environment is likely to be *short-term, not significant* and *negative.* There is a quantity of excavated material which will need to be excavated to facilitate the proposed development. It is currently proposed that all of the excavated topsoil and subsoil will be reused on site, wherever possible, and within the overall data centre campus for berms and other landscaping purposes. As the material has already been sampled and classified and the likelihood that contaminated material will be encountered is low, the effect on the local and regional environment is likely to be *short-term, not significant* and *negative.* The overall potential impact of waste generation and management on the local and regional environment during the construction phase, in the absence of mitigation, is likely to be *negative, not significant-slight,* and *short term*.
Operational Phase	The potential impacts on the environment of improper, or a lack of, waste management during the operational phase would be a diversion from the priorities of the waste hierarchy which would lead to small volumes of waste being sent unnecessarily to landfill. In the absence of mitigation, the effect on the local and regional environment is likely to be *long-term, not significant* and *negative.*
Cumulative Effect	The anticipated cumulative effect of the proposed development with any/all relevant other planned developments as outlined in Chapter 2 or permitted developments as outlined in Chapter 3 has included the permitted data centres and gas generation plant (SD19A/0042 / ABP Ref. PL06S.305948 and SD21A/0042) on the overall data centre campus site. Provided mitigation measures set out in the planning permissions / EIA Reports for these developments are implemented during construction of the proposed development, the cumulative effect will be *neutral, imperceptible,* and *short-term.* In terms of the operational phase, the proposed development and other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will minimise/mitigate any potential cumulative effects associated with waste generation and waste management. As such it is considered that the cumulative effect relating to waste management will be *neutral*, *imperceptible,* and *long-term.*

Mitigation

8.10.2.8. Mitigation measures are summarised in Table 8.10.2 below.

Table 8.10.2: Summary of Mitigation

Construction Phase	A project specific RWMP has been prepared in line with the requirements of the requirements of the EPA, *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects'* (2021) and is included as Appendix 15.1. The mitigation measures outlined in the RWMP will be implemented in full and form part of mitigation strategy for the site. The Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.
Operational Phase	All waste materials will be segregated into appropriate categories and will be temporarily stored in appropriate bins or other suitable receptacles in a designated, easily accessible areas on the site.

Residual Effects

8.10.2.9. In terms of the construction phase, it is stated that a carefully planned approach to waste management as set out in Sections 15.53 – 15.57 and adherence to the RWMP during the construction phase will ensure that the predicted effect on the environment will be neutral, imperceptible, and short-term.

8.10.2.10. For the operational phase, a structured approach to waste management as set out in Sections 15.58 – 15.59 will promote resource efficiency and waste minimisation. Provided the mitigation measures are implemented, and a high rate of reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be neutral, imperceptible, and long-term.

Assessment / Conclusion

8.10.2.11. I have examined, analysed and evaluated Chapter 15 of the EIAR and all of the associated documentation and submissions on file in respect of waste management, including the reports on file from the Environmental Health Officer (EHO). I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028). Overall, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential environmental impacts associated with waste generation and management during the construction and operational phases of the proposed development. Subject

to compliance with the proposed mitigation measures discussed above, the suggested monitoring (15.64-15.66) and appropriate conditions, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

8.11. Material Assets, Cultural Heritage and the Landscape

Material Assets

8.11.1. Issues Raised

8.11.1.1. I note that planning permission has been refused by the Planning Authority, in part, due to the existing insufficient capacity in the electricity network (grid) to cater to the proposed development. It was therefore considered that the applicant had failed to demonstrate that the proposed use is acceptable on EE zoned lands, in accordance with EDE7 Objective 2 and Section 12.9.4 of the current Plan. Similar concerns had been raised by Third Parties at application and appeal stage.

8.11.2. Examination, analysis and evaluation

Context

8.11.2.1. Chapter 16 of the EIAR provides a description of factors likely to be affected by the proposed development and will identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on material assets.

8.11.2.2. The EPA EIA Report Guidelines 2022 (Table 3.1) state that material assets are now taken to mean built services and infrastructure, roads and traffic as well as waste management. I note that the impacts on some of the material assets described are addressed in my assessment of Chapter 13 (Traffic & Transportation) and Chapter 15 (Waste Management) of the Applicant's EIAR.

8.11.2.3. This chapter of the EIAR assesses ownership and access (including buildings and other structures), built services and infrastructure, which have not already been addressed elsewhere in this EIAR. The potential impacts on built services and infrastructure, if any, are assessed in terms of the following:

- Power and Electricity supply;
- Telecommunications;

- Surface water infrastructure;
- Foul drainage infrastructure; and,
- Water supply.

Baseline

8.11.2.4. In terms of power supply*, t*he main power supply to the proposed development is from the ESB national grid. This power network is known to be constrained in terms of providing electrical grid power to the area. The permanent power solution for the proposed development and the adjacent permissions granted under SD19A/0042 and SD21A/0042 would be provided by the EirGrid connection. To increase resilience of the power network and ensure power supply for the proposed development, and the already permitted developments on site (Planning Ref. SD19A/0042 and SD21A/0042) they will all also connect to the permitted three power plants that were granted under SD21A/0042 that are located to the south-west of the overall site. The power requirements for the proposed development would be provided via a connection to the 110 kV Kilmahud substation. The transmission lines that will connect this substation to the wider power network have now been permitted under ABP-314567-22. The already permitted substation would then provide a medium voltage connection throughout the site to the proposed development and the permitted developments.

8.11.2.5. The permitted Power Plants would have the capacity to provide equal energy to the amount consumed by the proposed development and the already permitted data centres on the overall site. The Power Plants have capacity to dispatch energy equivalent to or greater than the permitted and proposed development's demand into the national grid and would be called upon for use on if the local network drops, in response to EirGrid's Data Centre Connection Offer Policy and Process (DCCOPP) regulations. Once the Eirgrid connection is realised the permitted Power Plant will only ever be utilised to reinforce the national grid. In that scenario, the plant is only envisaged to run at the request of Eirgrid in response to a grid event as per their flexible demand policy. The plant will therefore provide security of supply to the national grid as a whole by providing additional capacity under the terms of the flexible connection agreement.

8.11.2.6. It is stated that the site is served by the Gas Networks Ireland (GNI) network, which is a natural gas network, where supply is understood to not be constrained in the area.

8.11.2.7. In terms of telecommunications, multiple connection service lines currently exist along the Newcastle Road (R120) adjacent to the site and there is sufficient capacity in the network for the proposed development. It is noted that a fibre optic cable distribution network will be installed within the site to serve the permitted development and will be extended within the site to serve the proposed development.

8.11.2.8. In terms of drainage, it is proposed that surface water will be directed into an onsite reticulation system before being discharged to two attenuation ponds to the north of the site. For foul drainage, the development will discharge via a 225mm gravity sewer to the existing 450mm connection granted SD19A/0042 / ABP-305948-19 and SD21A/0042 and then into a 450mm spur connection located along the eastern boundary of the site. All foul effluent generated is directed via gravity and regional pumping stations to the regional Wastewater Treatment Plant at Ringsend in Dublin for ultimate disposal

8.11.2.9. For water supply, the proposed development site will be supplied from the mains water supply from the previously permitted 150mm network within the site.

Potential Effects

8.11.2.10. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.11.1 below.

Table 8.11.1: Summary of Potential Effects

Do Nothing	No impact is predicted from the Do-nothing scenario as it will remain in its natural condition.
Construction Phase	
Power and Electrical Supply	During construction, contractors will require power for heating and lighting of the site and their facilities. Some on site equipment/plant will also require power and a construction compound and temporary power supply would be installed for the demolition and construction stage. The potential impact associated with power and electrical supply for the construction phase will be a *short to medium term, neutral and imperceptible* in terms of EIA.
Gas Supply	There is currently no gas supply to the site and supply is not anticipated to be required during the demolition and construction stage. Overall, effects

	during the construction stage are considered to be *Temporary, Imperceptible and Neutral i.e. Not Significant* in terms of EIA.
Telecommunications	Telecommunications including fibre required during the construction phase will be provided via a temporary mobile connection and fibre optic cable distribution network will be installed within the site. The potential impact associated with telecommunications for the construction phase will be a *short to medium term, neutral and imperceptible*.
Surface water infrastructure	Contaminated water which arises from construction sites can pose a risk to surface water quality within the stream. The potential main contaminants include: - Increase in suspended solids due to muddy water with increase turbidity, arising from excavation and ground disturbance; - Spills and releases of cement and concrete causing an increase turbidity and pH arising from the use of these construction materials; - Spills and releases of wastewater (nutrient and microbial rich) arising from poor on-site toilets and washrooms. There also is a risk of accidental pollution incidences. The potential effects on surface water for the construction phase is *short to medium term, neutral* and *imperceptible* i.e., Not Significant in terms of EIA.
Foul drainage infrastructure	Welfare facilities (canteens, toilets etc.) will be required for the construction compound and workers on site. Portable toilets will be provided onsite for construction staff. A temporary connection to the local foul water drainage network may also be required to accommodate the site welfare facilities during construction. Foul drainage effects on the public sewerage network during the demolition and construction stage are considered to be *short to medium term, neutral* and *imperceptible* ie. Not significant in terms of EIA.
Water supply	Welfare facilities (canteens, toilets etc.) will be required for the construction staff and will be provided by a temporary connection into the existing watermain along the eastern boundary of the site, which is fed from the public supply. Effects associated with water supply for the construction phase is *short to medium term, neutral* and *imperceptible* ie. *Not significant* in terms of EIA.
Operational Phase	
Operational Phase	The power requirements for the proposed development would be provided via a connection to EirGrid via a 110 kV EirGrid substation, which is subject to a SID application to ABP (I note that this has now been permitted under ABP-314567-22). The EirGrid connection is secured through an existing connection agreement with EirGrid. The Proposed Development will have a maximum operational electrical demand of 30MW. The proposed development would also be powered via the onsite Power Plant. The power network is known to be constrained in terms of providing electrical grid power to the area and therefore the proposed development would also connect to the Power Plant through an internal connection within the site, which forms part of the permitted development as granted under SD21A/0042. By making high efficiency flexible gas generation available at scale at the immediate point of demand, this reduces the requirement for future grid reinforcements and relieves congestion in the

	locality, thus reducing cost to consumer through lower transmission reinforcement costs. Due to the secured EirGrid connection agreement and the resilience to the network the permitted Power Plant provides, the effects on power and electrical supply are considered to be *long-term, neutral, moderate* ie. not significant in terms of EIA.
Gas Supply	No gas supply is required as part of the proposed development (as gas supply to the Power Plant is already permitted as part of the consented scheme under SD21A/0042). As such, it is considered there is *no effect* on gas supply.
Telecommunications	Multiple connection service lines currently exist along the R120 and there is understood to be sufficient capacity available in the network to supply the proposed development with telecommunications. As such, effects associated with telecommunications during the operation stage are considered to be *long-term, Imperceptible*, and *Neutral* i.e., Not Significant in terms of EIA.
Surface water infrastructure	Surface water from the proposed development has been designed in accordance with the Greater Dublin Strategic Drainage Strategy under Best Management Practice. It is proposed to collect the surface water runoff from the Proposed Development and discharge an attenuated flow via the proposed attenuation ponds to the existing surface water drainage network. The potential impact associated with surface water for the operational phase is *long term, neutral* and *imperceptible*. i.e. not significant in terms of EIA.
Foul drainage infrastructure	It is understood that the foul water drainage network has sufficient available capacity for the wastewater discharges during operation. As such the foul drainage effects on the foul drainage network for the operational phase are considered *long term, neutral* and *imperceptible.* i.e. not significant in terms of EIA.
Water supply	The water supply will be sourced from mains water supply via a 150mm connection from the already permitted connection of the permitted development to serve the proposed development site. The potential impact associated with water supply for the operational phase is *long term, neutral* and *imperceptible* i.e. not significant in terms of EIA.
Cumulative Effect	In terms of cumulative impacts, intra-project effects are considered and explained within Chapter 2 of this EIAR. Inter-project effects are identified in Table 16.1 of the EIAR and provides a summary of the likely cumulative effects resulting from the proposed development and the cumulative developments

Mitigation

8.11.2.11. No additional mitigation measures are proposed and no enhancements aside from those to Biodiversity and Landscape as detailed in Chapter 6 and Chapter 12 of the EIAR.

Residual Effects

8.11.2.12. The residual construction effects remain as reported in the assessment of effects section:

- *short to medium term, neutral* and *imperceptible effects* on power and electrical supply;
- *temporary, imperceptible* and *neutral effects* on gas supply;
- *short to medium term*, *neutral* and *imperceptible effects* on surface water infrastructure, foul drainage infrastructure, water supply and telecommunications.

8.11.2.13. The residual operational effects remain as reported in the assessment of effects section, as being:

- *long-term, neutral, moderate* effect on power and electrical supply;
- no effect on gas supply;
- *long term, neutral* and *imperceptible* effects on surface water infrastructure, foul drainage infrastructure, water supply and telecommunications.

Assessment / Conclusion

8.11.2.14. I have examined, analysed and evaluated Chapter 16 of the EIAR and all of the associated documentation and submissions on file in respect of material assets. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028). As detailed earlier, planning permission has been refused by the Planning Authority, in part, due to the existing insufficient capacity in the electricity network (grid) to cater to the proposed development. Notwithstanding this, I have addressed this issue in detail in Section 7.2 of my report and I am satisfied that the Applicant has demonstrated that the proposed development is acceptable on the EE zoned lands and the proposal is in accordance with EDE7 Objective 2 and Section 12.9.4 of the current Plan. Similar concerns had been raised by Third Parties at application and appeal stage. Overall, the information submitted in the EIAR adequately demonstrates an understanding of the potential impact of the proposed development on material assets and I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

Cultural Heritage

8.11.3. **Issues Raised**

8.11.3.1. No issues are raised by parties to the application in respect of cultural heritage.

8.11.4. **Examination, analysis and evaluation**

Context

8.11.4.1. Chapter 14 (Cultural Heritage) of the EIAR is an assessment of archaeological, architectural and cultural heritage impacts of the proposed development. Included as an appendix to Chapter 14 are;

- Record of Monuments and Places,
- Archaeological finds,
- Previous excavations,
- National Inventory of Architectural Heritage,
- Archaeological figures the 'Criteria for rating Site Attributes - Estimation of Importance of Hydrology Attributes (NRA)'.

8.11.4.2. For the purpose of setting the site within its wider archaeological, architectural and cultural heritage landscape, a desk-based assessment was undertaken as part of the EIAR. The site was visited on a number of occasions between December 2018 and August 2019, prior to any development at the site (see Figure 6, Appendix 14.5 for field locations). The site assessments involved the examination of recorded archaeological, architectural and cultural heritage constraints and the identification of previously unrecorded features of archaeological, architectural and cultural heritage interest within the site.

8.11.4.3. A geophysical survey was conducted by Joanna Leigh of JML Surveys as part of the archaeological impact assessment undertaken of the proposed development by CRDS Ltd. The aim of the geophysical survey was to locate and identify any responses of potential archaeological interest within the site. In addition, archaeological testing was undertaken at the site under Licence No. 19E0038 (also Detection License No. 19R0086) by AMS Ltd, issued by the Department of Culture, Heritage and the Gaeltacht. The aim of the testing was to assess the potential features identified in geophysical survey and sample the remaining areas. A number of archaeological

features were identified (to the south and southwest of the current proposed development site).

Baseline

8.11.4.4. The site assessments involved the examination of recorded archaeological, architectural and cultural heritage constraints and the identification of previously unrecorded features of archaeological, architectural and cultural heritage interest within the site. The overall study area comprises a buffer of approximately 1km from the proposed development and is characterised by upstanding archaeological monuments dating to the medieval period. Full details are provided within Sections 14.11 – 14.24 of the EIAR. The site assessments involved the examination of recorded archaeological, architectural and cultural heritage constraints and the identification of previously unrecorded features of archaeological, architectural and cultural heritage interest within the site. The results of which are identified in Sections 14.25 – 14.34. In terms of the results of the geophysical survey, the findings for each field are provided in Sections 14.36 – 14.41. The results of Archaeological Testing and Excavation is summarised in Sections 14.42 – 14.46.

Potential Effects

8.11.4.5. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.11.2 below.

Table 8.11.2: Summary of Potential Effects

Do Nothing	The 'do-nothing' scenario will have no impact on archaeological, architectural and cultural heritage.
Construction Phase	The development site has been subjected to substantial archaeological investigation, including desk-based research, a site walkover, geophysical survey and archaeological testing, which identified a number of archaeological features. These have been excavated under license. There is a potential for discrete archaeological features to be encountered during the construction phase in areas not subjected to intensive testing.
Operational Phase	The operational phase of the project will have no impact on archaeological, architectural and cultural heritage.
Cumulative Effect	As archaeological assessment will be completed in advance of development. The cumulative impact of the proposed development and surrounding developments during the construction phase is deemed to be neutral and not significant. No cumulative impacts on archaeological, architectural and cultural

	heritage are expected as a result of the operational phase of the proposed development.

Mitigation

8.11.4.6. Mitigation measures are summarised in Table 8.11.3 below.

Table 8.11.3: Summary of Mitigation

Construction Phase	A programme of licensed archaeological monitoring will be agreed with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht, for areas not previously subjected to archaeological testing. A report outlining the results of the programme of archaeological monitoring will be prepared and will include a detailed method statement for any archaeological excavation of features identified, agreed in advance with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht. The report will include a schedule of works detailing timeframes, personnel and logistical requirements.
Operational Phase	No remedial or reductive measures are considered necessary during the operational phase of the proposed development, as the operational phase will not give rise to any adverse impacts.

Residual Effects

8.11.4.7. In terms of the construction phase, the proposed development will not impact directly on any sites included in the Record of Monuments and Places. Geophysical survey and testing identified a number of archaeological features which were subsequently excavated. Should any further sub-surface archaeological features survive in areas not already subjected to testing, the ground disturbance phase of the proposed development would impact negatively on them.

8.11.4.8. The operational phase of the proposed development is not predicted to have any impact on archaeological, architectural and cultural heritage.

Assessment / Conclusion

8.11.4.9. I have examined, analysed and evaluated Chapter 14 of the EIAR and all the information provided in respect of archaeological, architectural and cultural heritage. I am satisfied that the applicant's understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on cultural heritage have been identified. Subject to compliance with the proposed mitigation measures during the construction phase discussed above, I am

satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

Landscape

8.11.5. **Issues Raised**

8.11.5.1. Within their assessment of the Applicant's FI response, the Planning Authority noted that the proposed development would add to the bulky built form and massing along the R120. Given its location relative to the permitted public park and Grand Canal to the north, they formed the view that further measures should be provided to help break up the massing and form of the building and further glazing and/or variation in materials should be provided to the proposed development, in particular the office element of the building. The Planning Authority noted that this could be agreed through condition in the event of a grant of permission. Similarly, boundary treatments and fencing could also be addressed by way of condition.

8.11.6. **Examination, analysis and evaluation**

Context

8.11.6.1. The purpose of Chapter 12 (Landscape and Visual Impact) of the EIAR is to analyse the existing landscape and to assess the likely potential visual impacts arising from the proposed development on the existing landscape and any mitigation measures proposed. Included as appendices to the chapter are

- Proposed Landscape Plan, and,
- Tree survey.

8.11.6.2. In terms of methodology, the assessment was carried out by visiting the site and its surroundings in June 2022, by analysis of the proposals through photomontages, plans, aerial photographs, the tree survey by The Tree File Ltd. (updated as part of this FI response), historic maps and by reference to the South County Dublin Development Plan 2022-2028 and the Landscape Character Assessment of South Dublin County Council (Appendix 9, South County Dublin Development Plan 2022-2028). The subject lands were assessed in relation to their surrounding environment to identify a study area in which both visual and landscape character impacts would be perceivable. Important landscape features on subject lands and in the wider area

were identified as part of this process. Various viewpoints were selected to provide a well-rounded and realistic representation of how the development will look from different aspects. Views are located, from all directions towards the subject lands, both at close-range and long-range, and have been selected to overlook important local features such as the Grand Canal and the protected structures at the lock. The ratings may have negative, neutral or positive application where:

- Positive effect - a change which improves the quality of the environment,
- Neutral effect – no effects or effects that are imperceptible, within normal bounds of variation or within the margins of forecasting error,
- Negative effect - a change which reduces the quality of the environment.

Baseline

8.11.6.3. The proposed development is located 135m south of the Grand Canal tow path at its closest point. The site is situated to the west of the Grange Castle Business Park, separated by the R120 road. The total land area of the application site measures 5.14ha. The application site is a smaller portion of the overall site. The ground levels within the overall site area are generally flat with a slow and gradual fall from the western edge of the overall site towards the north-eastern corner. There is a localised high ridge line on a berm created by spoil in the north of the overall site. The berm is approximately 80m long on the east west axis and stands at between 2-3m higher than the surrounding ground levels. According to the Tree Survey and Report, by the Tree File Ltd. (Appendix 12.2) the historic tree cover on the overall site is primarily contained within the agricultural hedgerows on the northern boundary.

8.11.6.4. In the wider landscape, the site is in a generally flat landscape on the edge of two landscape types. The landscape to the east and south east is characterised by large built developments and new tree lined roads. Between these built developments are large flat green areas that were used for agriculture and the landscape is still of a traditional field and hedgerow boundary typology. To the west and south the landscape is that of a traditional agricultural landscape with medium to large field patterns. The landscape to the north beyond the canal is that of the urban fringe characterised by the transition from rural landscape to a built urban environment.

8.11.6.5. There are no protected trees or tree groups, nor are there views or prospects that include the subject lands as listed in the current Plan (2022-2028). In the Landscape Character Assessment of the current Plan (Appendix 6), the subject lands are designated as being in the 'Urban Fringe/ Peri-urban Character Area' which is an area listed as being low/none in terms of landscape sensitivity.

Potential Effects

8.11.6.6. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.11.4 below.

Table 8.11.4: Summary of Potential Effects

Do Nothing	In the event of this scenario the lands would continue to be left in the 'transition state' as it is currently, for a period. Without proper management of the landscape it would go into decline as the field reverts to scrub areas.
Construction Phase	- Visual impacts due to the introduction of new structures, access roads, machinery, materials storage, associated earthworks, car parking, lighting and hoarding; - Change of character due to the change in use; and - Visual impacts due to change in ground levels and earthworks.
Operational Phase	- Visual impacts due to the introduction of new buildings and built structures; - Visual impacts due to the introduction of new roads, mechanical plant and lighting; - Change of character due to the change in use; - Visual impact of landscape proposals – earth modelling, hard surfaces etc; and - Landscape and visual impacts due to the installation of trees and vegetation.

Mitigation

8.11.6.7. Mitigation measures are summarised in Table 8.11.5 below.

Table 8.11.5: Summary of Mitigation

Construction Phase	None required.
Operational Phase	The following landscape design mitigation measures have been made: i. Earth modelling and large tree planting reinforced with woodland whip planting in belts is proposed to provide a high level of visual screening of the most sensitive views of the development; ii. The creation of a wetland and woodland habitat in a buffer zone between the canal and the built development and provision of public access to some of these habitats; iii. The colour palette chosen for the building aims to further reduce any visual impact of the building;

	iv.	Green walls are proposed to the south and east that will enclose the water tower and pump house compound.
	v.	The planting of a native hedgerow along the southern and western site boundaries to connect to the woodland belt in permitted development (SD19A/0042 / ABP PL06S.305948)

Residual Effects

8.11.6.8. In terms of the construction phase, the initial construction operations created by the clearance of the greenfield sections of the site and the construction of the buildings and plant will give rise to temporary or short-term impacts on the landscape character, through the introduction of new structures, machinery etc. and the removal of vegetation. The construction compounds, temporary car parking and storage facilities etc. will be located sensitively to avoid any visually sensitive areas. The activities that will cause the most significant visual impact are not close to the most sensitive views along the canal. Furthermore, as the site is located within an overall site with an extant permission for a similar type and scale of development. The negative visual impact on the landscape character during construction would be considered *moderate* in magnitude and *short-term* in its duration.

8.11.6.9. For the operational phase of development, the initial removal of a section of the agricultural field landscape to be replaced with built development would be considered a negative impact on the landscape character. However, the landscape measures proposed with this development and the previously permitted schemes on the overall site, will significantly improve the quality of the landscape character in this area. In the long-term as the habitats establish, and the impact of the change in the landscape is reduced, the impact on the landscape character of this area would be considered positive in nature.

8.11.6.10. The proposed landscape, combined with that permitted under the extant planning permission, includes native wetland, woodlands, hedgerow scrub and meadows that will contribute positively to the landscape corridor of the canal and the biodiversity of the wider environs and would therefore be in accordance with the relevant policy objectives of the current Plan as listed in Section 12.27.

8.11.6.11. The photomontages assessed in this Chapter 12 are also included in a separate A3

document by Digital Dimension Ltd. and this assessment considers two scenarios that are shown from each viewpoint i.e. the existing scenario and the proposed and permitted development on day one of operations. Photomontages from a total of 10 no. viewpoints have been taken from within the surrounds of the appeal site. The results of the assessment are summarised in Table 8.11.6 below.

Table 8.11.6

View Point No.	Location	Impact (Construction)	Impact (Operational)
1	From the bridge at the 12th Lock, Grand Canal and the R120 public road.	*negative* but of '*not significant*' magnitude, and *temporary* in duration.	*negative*, *not significant* and *medium-term* in duration.
2	From the proximity of the protected structure at the 12th Lock to the south-west.	*slight* in magnitude, and *temporary* in duration.	*negative*, *not significant* and *medium-term* in duration.
3	From the Grand Canal Way, Green Route to the south.	*will not result in a noticeable visual impact on this view.*	*will not result in any visual impact on this view.*
4	From the Grand Canal Way, Green Route to the south east.	*negative*, *imperceptible* in magnitude, and *temporary* in duration.	*negative, imperceptible* and *medium-term* in duration.
5	From the R120 public road in the proximity of a cluster of residences towards the north-west	*negative*, *slight* in magnitude, and *temporary* in duration.	*will not result in any visual impact on this view.*
6	From the R120 to the north across fields to the south of the application site	*negative*, however '*not significant*' in magnitude, and *temporary* in duration.	*negative*, *not significant* and *medium-term* in duration.
7	From the R120 public road towards the west	*will not result in any visual impact on this view.*	*will not result in a noticeable visual impact on this view.*
8	From the tow path on the canal, west of the 12th Lock, to the south-west	*negative, slight in magnitude, and temporary in duration.*	*negative, moderate, and medium term in duration.*
9	From Gollierstown Bridge along the Grand Canal Way, Green Route	*will not result in a noticeable visual impact on this view.*	*will not result in any visual impact on this view.*
10	From the R120 public road	*negative but of 'not significant' magnitude, and temporary in duration.*	*slight and medium-term in duration.*

Assessment / Conclusion

8.11.6.12. I have examined, analysed and evaluated Chapter 12 of the EIAR and all the information provided in respect of landscape and I am satisfied that the information

submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project. I have also inspected the site and the surrounding area.

8.11.6.13. As noted in Section 8.11.5.1, the Planning Authority formed the view that the proposed development would add to the bulky built form and massing along the R120. Given its location relative to the permitted public park and Grand Canal to the north, it was considered that further measures should be provided to help break up the massing and form of the building and further glazing and/or variation in materials should be provided to the proposed development, in particular the office element of the building. Towards the eastern end of the northern façade of the proposed data halls, the design has incorporated louvres and cladding elements of varying colours. Whilst this façade treatment helps to reduce the overall bulk of facade, it does not go far enough in my view and I would share the concerns of the Planning Authority. I note the that data centre developments which are operated by the Applicant to the east of the site have incorporated a similar façade treatment. However, the varied palette of finishes has been more extensively provided, similar to what has been proposed on the front elevation of the proposed development. Therefore, it is my recommendation that a condition be included which requires the Applicant to submit details of the proposed materials, finishes and boundary treatments which require agreement with the Planning Authority, prior to the commencement of development. The revised palette of materials and finishes shall have regard to the foregoing.

8.11.6.14. Having regard to the scale, form and design of the proposed development, the comprehensive suite of landscaping proposals and subject to compliance with appropriate conditions, mitigation measures and monitoring, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

8.12. Interactions

8.12.1. Issues Raised

8.12.1.1. No issues have been raised in the course of the planning application in respect of significant environmental effects arising from interactions of impacts.

8.12.2. **Examination, analysis and evaluation**

Context

8.12.2.1. Chapter 17 (Interactions) of the EIAR addresses potential interactions and inter-relationships between the environmental factors discussed in the preceding chapters during both the construction and operational phase of the proposed development. Chapter 17 presents an assessment of the identified interactions, a summary of which is provided in Table 8.12.1 below.

Table 8.12.1: Summary of Interactions

Positive Impacts	
Planning and Alternatives on:	*Population and Human Health* Employment creation which will have a long-term, positive and short – medium term effect on employment in the west Dublin and wider area.
Landscape and Visual on:	*Biodiversity* The replacement of existing hedgerows within the site by other already permitted suitable landscaping treatments and overall will have a long-term, slight and positive impact.
Neutral Impacts	
Land, Soils, Geology and Hydrogeology on:	*Population and Human Health* Loss of land for agricultural use. However, due to employment creation on zoned land, impact is long-term, imperceptible and neutral. *Hydrology* Potential impacts of the construction works proposed is on surface water and groundwater quality. The implementation of a CEMP will ensure the effect will be short to medium term, imperceptible and neutral. *Biodiversity* The local loss of agricultural land as a result of site development, which is considered to be of no significant ecological value, is negligible. *Air Quality and Climate* Impact on air quality in terms of dust generation but mitigation measures and implementation through CEMP, will ensure a short to medium term, not significant and neutral effect. *Cultural Heritage* Potential to impact on unidentified archaeological features during construction works. However, mitigation measures will ensure that the effect is long-term, imperceptible and neutral. *Waste Management* C. 30,100m^3 of excavated soil and sub-soil may be generated from the site preparation, excavations and levelling works required to facilitate construction. Adherence mitigation measures the requirements of the C&D Waste Management Plan will ensure the effect is long-term, imperceptible and neutral.
Hydrology on:	*Population and Human Health* The Proposed Development will generate wastewater emissions (foul water) from the site. The effect is considered to be long-term, imperceptible and neutral.

	Land, Soils, Geology and Hydrogeology Potential for direct run-off to a watercourse to off the site via local drainage ditches. Any surface water run-off will be attenuated to the greenfield runoff rate for the site. The effect will be short to medium term, imperceptible and neutral. *Biodiversity* Increased surface water run-off. European Sites are considered to fall well outside the zone of influence of the Proposed Development due to the lack of source-pathway-receptor links. The predicted effect will be long-term and neutral. *Waste Management* Waste streams will be managed in accordance with the relevant legislation identified in Chapter 15 such that the effect of the waste generation will be neutral, imperceptible, and long-term.
Air Quality and Climate on:	*Hydrology* Mitigation measures will ensure that the deposition of dust is minimised and therefore the predicted effect from air (including dust) on the water environment during construction is short to medium term, imperceptible and neutral. The facility will comply with all ambient air quality legislative limits and therefore the predicted impact from air (including dust) on the water environment is long term, imperceptible and neutral. *Biodiversity* including emissions from back-up generators during the operational phase show that the emissions from the facility will comply with the relevant air quality legislative limits, and as such there will be a long-term, imperceptible, neutral effect on biodiversity.
Noise and Vibration on:	*Population and Human Health* Due to the distance between the site and the nearest sensitive locations, vibration impacts generated during construction are expected to be negative but short-term. The noise levels that are encountered at the nearest noise sensitive locations are predicted to be within relevant noise criteria and as such there will be a long term, not significant, neutral effect on human health as a result of the operation phase of the Proposed Development.
Waste Management on:	*Population & Human Health* A carefully planned approach to waste management and adherence to the project specific RWMP and the mitigation measures, will ensure appropriate management of waste and avoid any negative impacts on the local population is neutral, imperceptible and long-term. *Land, Soils, Geology and Hydrogeology* Excavated soil and stone will be generated from the site preparation, excavations and levelling works required to facilitate construction. Adherence to the mitigation measures will ensure that soils take from site are reused appropriately, will ensure the effect is neutral, imperceptible, and short-term. *Hydrology* Hydrocarbon sludge waste and debris will be managed in accordance with the relevant legislation such that the effect of the waste generation will be long-term, imperceptible and neutral. *Traffic* The increase in vehicle movements as a result of waste generated during the construction phase will be temporary in duration. There will be an

	increase in vehicle movements in the area as a result of waste collections during the operational phase but these movement will be imperceptible. Subject to mitigation, the effects should be short to neutral, imperceptible, and long-term.
Traffic on:	*Air Quality* Temporary negative impacts to human health may be likely during the construction phase due to noise, dust, air quality and visual impacts which are discussed in other chapters within this EIAR. The traffic impacts, which would also be temporary in duration are not considered to be significant due to the implementation of the mitigation measures identified. *Human Health* A number of temporary risks to human health may occur during construction phase related to noise, dust, air quality and visual impacts which are addressed in other sections of this EIAR. Traffic impacts are considered to be negligible due to the implementation of mitigation measures identified. There will be a slight increase in traffic on the local road network.
Material Assets on:	*Population and Human Health* Impact on material assets such as surface water drainage, water supply, wastewater drainage, power supply and road infrastructure. Due to the capacities of the available infrastructure and the implementation of the mitigation measure proposed, there are no residual negative impacts on the local population and the predicted effect is therefore imperceptible to not significant and neutral. *Hydrology* Changes to surface water drainage, water supply and wastewater networks. Considering measures to be implemented and the capacity already built into these networks, these changes will result in a long-term, imperceptible and neutral impact.
Negative Impacts	
Noise on:	*Biodiversity* Noise generated during the construction phase of the Proposed Development will have a short to medium term negative impact on fauna which are likely to be displaced during construction works.
Air Quality and Climate on:	*Landscape* The site is part of a zoned commercial/industrial area and the design of the development, including the flues, will be consistent with the emerging landscape character of the area and will be minimal. The residual impact will not be significant and will generally range from imperceptible/not significant and negative / neutral from the surrounding area. *Population and Human Health* The mitigation measures (Chapters 10 and 11) will ensure that the impact of the facility complies with all ambient air quality legislative limits and therefore the predicted impact is long term, imperceptible to slight and negative.
Land, Soils, Geology and Hydrogeology on:	*Noise* Impacts associated with excavation works will be transient in nature and have a short to medium term impact on the noise environment, which will be mitigated by the implementation of the construction noise and vibration management plan outlined in Appendix 9.3. The effect will be slight, negative and short to medium term in duration.
Landscape and Visual on:	*Population and Human Health* The Proposed Development includes architectural and landscape proposals that will ensure the development is integrated into its setting. Residual landscape and visual effects from the wider locality arising from the Proposed Development will not be significant, and will generally range from not significant to moderate, and negative but in accordance with emerging trends in the area.

Mitigation

8.12.2.2. The EIAR refers to the mitigation measures which are set out for each environmental parameter and set out in the Schedule of Mitigation Measures included within Appendix 2.2.

Residual Effects

8.12.2.3. Any potential interactive negative impacts have been identified and are addressed by the mitigation measures included in the relevant sections of the EIAR, with residual effects as presented in each relevant chapter.

Assessment / Conclusion

8.12.2.4. I have examined, analysed and evaluated Chapter 17 of the EIAR and the associated chapters of the EIAR. I am satisfied that the applicant has identified the key interactions arising for the subject development.

8.13. Reasoned Conclusion

8.13.1. Having regard to the examination of environmental information set out above, to the EIAR submitted with the application on 16th August 2022, the revised EIAR received by way of FI on 26th May 2023, other information provided by the developer, and to the submissions from the planning Authority, prescribed bodies and third parties in the course of the application and appeal, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

Population and Human Health

8.13.2. Slight, but short term direct and indirect negative effects arising from the construction phase of the proposed development on residential amenity. These effects will be mitigated by the implementation of standard good construction practices, management of construction traffic and adherence to noise and vibration limits. Slight and long term positive effects will arise through job creation.

Biodiversity

8.13.3. The significant direct and indirect effects of the development on biodiversity are the loss of the dry meadow and grassy verges (GS2) habitat type and hedgerows arising

from the footprint of the development and the potential loss of commuting and foraging routes for bats (hedgerow removal). To mitigate the loss of these habitats, the proposed development has proposed to provide replacement hedgerow planting within the site and the creation of new wetland habitats through the provision of attenuation basins and bio swales within the appeal site and parkland area to the site's north. In addition, the impacts will be mitigated by the application of best practice construction methodologies, as set out in the project documentation and the application of proposed site and species specific mitigation measures, such that no significant adverse effects arise.

Land, Soil, Water, Air and Climate

8.13.4. It is not anticipated that any impacts will arise on land and soils following the implementation of the mitigation measures. As such the impact (EPA, 2022) is considered to have a long term-imperceptible significance.

8.13.5. In terms of water, the absence of any substantial direct pathway to a water course and the implementation of mitigation measures will ensure that the predicted impacts on the surface water environment do not occur during the construction phase and that the residual impact will be short term, imperceptible and neutral. In addition, the mitigation measures will ensure that the predicted impacts on the surface water environment do not occur during the operational phase and that the residual impact will be long term, imperceptible and neutral.

8.13.6. In terms of Impacts on Air Quality, the mitigation measures that will be put in place during construction will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health, with the impact being short-term and imperceptible. For the operational phase, the results of the modelling assessment have found that ambient concentrations of NO_2, due to emissions from the gas generators, scheduled testing of diesel generators on site and standby operation of the diesel generators, are below the air quality limit values. Thus, it is predicted that the impact of the proposed development on air quality will be long-term, negative and not significant.

8.13.6.1. In terms of the construction phase, the potential impact on climate change is deemed to be short-term, imperceptibly negative and not significant in relation to Ireland's obligations under the EU 2030 target due to the scale and temporary nature of the construction works and the intermittent use of equipment. For the operational phase, the gas engines will fully operate under the EU-wide Emission Trading System (ETS). Through a series of measures including project replacement, a reduction in residual emissions through best practice and the implementation of a series of adaptive design measures, the net impact of the proposed development is deemed to be not significant. Given that the use of electricity to power the facility will achieve net zero by 2050 and the commitment to offset all interim fossil fuel derived GHG emissions by the purchase of Corporate Power Purchase Agreements (CPPAs) the predicted impact to climate is deemed to be indirect, long-term, negative and minor adverse.

Material Assets, Cultural Heritage, and the Landscape

8.13.7. In terms of material assets, a long-term, neutral and moderate effect on power and electrical supply has been identified.

8.13.8. Potential direct impacts on unknown features of archaeology may arise during the construction phase. However, these impacts will be mitigated by archaeological monitoring of groundworks and compliance with the various mitigation measures.

8.13.8.1. In the context of landscape, the initial removal of a section of the agricultural field to be replaced with the proposed development would be considered a negative impact on the landscape character. However, the permitted and proposed landscape measures will significantly improve the quality of the landscape character in this area. In the long-term as the habitats establish, and the impact of the change in the landscape is reduced, the impact on the landscape character of this area would be considered positive in nature.

8.13.8.2. The EIAR has considered that the main significant direct and indirect effects of the proposed development on the environment would be primarily mitigated by environmental management measures, as appropriate. The assessments provided in many of the individual EIAR chapters are satisfactory to enable the likely significant

environmental effects arising as a consequence of the proposed development to be satisfactorily identified, described and assessed. Therefore, having regard to the foregoing, I am satisfied that the proposed development would not have any unacceptable significant direct, indirect, or cumulative effects on the environment.

9.0 Recommendation

9.1. Grant of permission is recommended.

10.0 Reasons and Considerations

10.1. Having regard to:

(a) the 'EE' (Enterprise and Employment) zoning objective that pertains to the subject site;

(b) the policies and objectives of the South Dublin County Development Plan, 2022-2028;

(c) The established use on wider landholding, of which the proposed development will represent the third and final phase,

(d) The proposal's general compliance with the Agreed Principles contained within the Statement on the Role of Data Centres in Ireland's Enterprise Strategy, July 2022.

(e) The existing 'Flexible Demand' offering that benefits the proposed development which are only provided in constrained areas,

(f) The potential to utilise significant renewable energy generation on site and the conditions that apply to the Power Plant that will serve the proposed data centre (Condition Nos. 3(ii) & (iii) of SD22A/0289), which will facilitate this transition, and,

(g) The overall design and layout of the development which has sought to provide extensive mitigatory tree and hedgerow planting throughout the site and within the wider Facility Campus.

it is considered that, subject to compliance with the conditions set out below, including conditions which will require the Applicant to enter into a Corporate Power Purchase Agreement (PPA) with a renewable energy provider for the proposed data centre prior to it commencing operations and a restriction on the use of fossil diesel within the proposed 24 no. standby generators, the proposed development:

i. has incorporated strong energy efficiency measures to reduce its carbon footprint,
ii. has demonstrated engagement with PPAs,
iii. has demonstrated that there is sufficient capacity within the relevant water, wastewater and electricity network to accommodate the proposed use,
iv. has sought to protect and enhance the biodiversity and ecological value of the existing Green Infrastructure network, where possible,
v. would not seriously injure the residential or visual amenities of the area,
vi. would be acceptable in terms of the safety and convenience of pedestrians and road users, and,
vii. would not be prejudicial to public health.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

11.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and as amended by the further plans and particulars received by the planning authority on the 26th day of May 2023, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.
   Reason: In the interest of clarity.

2. The mitigation measures identified in the Environmental Impact Assessment Report (EIAR) submitted (and revised EIAR dated May 2023) and other plans and particulars submitted with the planning application, shall be implemented in full by the developer in conjunction with the timelines set out therein, except as may otherwise be required in order to comply with the conditions of this permission.
   Reason: In the interest of clarity and protection of the environment during the

construction and operational phases of the proposed development.

3. Prior to the commencement of development, the Applicant shall submit details to demonstrate how a connection to a future district heating network will be facilitated on site. A draft agreement shall be submitted to the Planning Authority which affirms that they are willing to connect to the future district heating network should it become available in the future.
   Reason: In the interest of the proper planning and sustainable development of the area.

4. Prior to the operation of development, the Applicant shall submit details of a Corporate Power Purchase Agreement with a renewable energy provider for the operation of the proposed data centre and its associated power plant.
   Reason: In order to power the proposed development through renewable energy.

5. The 24 no. standby generators shall be powered by renewable fuel sources and there shall be a restriction on the use of fossil diesel. Prior to the operation of the development, the Applicant shall submit to the Planning Authority, written confirmation of what renewable fuel source is to be utilised (i.e. HVO or other renewable diesels).
   Reason: In order to power the proposed development through renewable energy.

6. The developer shall comply with the following general requirements:
   i. The developer shall submit full details in relation to all external finishes. This shall include revisions to the northern elevation of the data centre to provide the cladding elements of varying colours along the entirety of the facade. Additional articulation of the eastern (front) elevation is also required (i.e. further glazing and/or variation in materials).
   ii. Site boundary details shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.
   iii. Cables within the site shall be located underground.
   iv. No additional signage or advertising shall be erected on the lands or

buildings without a prior grant of planning permission.

v. The applicant shall put in place a pest control contract for the site for the duration of the construction works.

Reason: In the interest of residential and visual amenity.

7. The disposal of surface water shall comply with the requirements of the planning authority for such works and services. Final detailed design of the pond edge detail and planting plan shall be submitted to the Planning Authority (Water Services and Parks and Public Realm Sections) prior to the commencement of development.
   Reason: To prevent flooding and in the interests of sustainable drainage.

8. Prior to the commencement of development, the developer shall enter into a Connection Agreement (s) with Uisce Éireann (Irish Water) to provide for a service connection(s) to the public water supply and/or wastewater collection network.
   Reason: In the interest of public health and to ensure adequate water/wastewater facilities.

9. Prior to the commencement of any works associated with the development hereby permitted, the developer shall submit a detailed Construction Environmental Management Plan (CEMP) for the written agreement of the planning authority. The CEMP shall incorporate details for the following:
   - collection and disposal of construction waste,
   - surface water run-off from the site, and
   - environmental management and mitigation measures during construction including working hours, noise control, dust and vibration control and monitoring of such measures.

   A record of daily checks that the construction works are being undertaken in accordance with the CEMP shall be kept at the construction site office for inspection by the planning authority. The CEMP shall be prepared in conjunction with and signed off by the project ecologist and shall incorporate the relevant mitigation measures included within Appendix 2.2 of the EIAR

dated May 2023. The agreed CEMP shall be implemented in full in the carrying out of the development.

Reason: In the interest of environmental protection.

10. Public lighting shall be provided in accordance with a scheme which shall be submitted to and agreed in writing with the planning authority prior to the commencement of development.

    Reason: In the interest of amenity and public safety.

11. The applicant shall engage with the Property Management Branch of the Department of Defence to undertake a preliminary screening assessment to confirm that the proposed development and any associated cranes that would be utilised during its construction would have no impact on the safety of flight operations at Casement Aerodrome.

    Reason: In the interests of orderly development and safety.

12. Transport

    i. The applicant shall provide 8 No. EV charging spaces with the remaining spaces to be ducted for future charging points. (Section 12.7.5 of the SDCC Development Plan 2022-2028).

    ii. The applicant shall provide adequate bicycle parking spaces with reference to the Minimum Bicycle Parking Rates set out in Table 12.23 of the SDCC Development Plan 2022-2028.

    iii. The Applicant shall submit amended proposals for the pedestrian and cyclist routes within the site to improve accessibility to the footpath and cycle infrastructure along the R120.

    Reason: In the interest of the proper planning and sustainable development of the area.

13. A detailed Construction Traffic Management Plan shall be submitted to and agreed in writing with the planning authority prior to commencement of development. The plan shall include details of arrangements for routes for construction traffic, parking during the construction phase, the location of the

compound for storage of plant and machinery and the location for storage of deliveries to the site.

Reason: In the interest of sustainable transport and safety.

14. Prior to commencement of works, the developer shall submit to, and agree in writing with the planning authority, a Construction Management Plan, which shall be adhered to during construction. This plan shall provide details of intended construction practice for the development, including hours of working, noise and dust management measures and off-site disposal of construction/demolition waste.

    Reason: In the interest of public safety and amenity.

15. Site development and building works shall be carried out between the hours of 8am to 6pm Mondays to Fridays inclusive, between 9am to 2pm on Saturdays and not at all on Sundays and public holidays. Deviation from these times shall only be allowed in exceptional circumstances where prior written agreement has been received from the planning authority.

    Reason: To safeguard the amenity of property in the vicinity.

16. The landscaping scheme shown on the application drawings, and the revised drawings submitted to the planning authority on 26th May 2023 shall be implemented within the first planting season. All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of 5 years from the completion of the development, shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

    Reason: In the interest of residential and visual amenity.

17. Prior to the commencement of development, revised landscaping proposals shall be submitted which incorporate additional measures to enhance Green Infrastructure, biodiversity and the ecology values of the site. In tandem, the Applicant shall submit an updated Green Space Factor (GSF) Worksheet for

the proposed development, detailing how they have achieved the appropriate minimum Green Space Factor (GSF) scoring established by the land use zoning. This shall include but is not limited to the following;

i. The provision of a bird and bat boxes within the subject site;
ii. Replacement of the formal hedge along the eastern boundary of the Facility Campus with a native hedge.

Reason: In the interest of visual amenity and to enhance the ecological value of the site.

18. A schedule of landscape maintenance shall be submitted to, and agreed in writing with, the planning authority prior to occupation of the development. The schedule shall cover a period of at least three years and shall include details of the arrangements for its implementation.
Reason: To provide for the satisfactory future maintenance of this development in the interest of visual amenity.

19. The Applicant shall liaise with Parks and Public Realm Section and other relevant departments in relation to provision of Public Art within the parkland area to the north of the site.
Reason: In the interest of visual amenity and to accord with the policy of the current County Development Plan.

20. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site upon cessation of the project coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.
Reason: To ensure satisfactory reinstatement of the site.

21. The developer shall pay to the planning authority a financial contribution in

respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Enda Duignan
Planning Inspector

30th September 2024

Appendix 2

Screening for Appropriate Assessment
Screening Determination

Step 1: Description of the project

I have considered the proposed data centre development, in light of the requirements of S177U of the Planning and Development Act 2000 as amended. An Appropriate Assessment Screening Report dated July 2022 was submitted with the application and was prepared by Scott Cawley Ltd. A Technical Note and Addendum to the Screening Report accompanied the Applicant's FI response and was also prepared by Scott Cawley Ltd. In addition, the application is supported by the following documentation

- Environmental Impact Assessment Report (EIAR) (and associated appendices),
- Revised EIAR (and associated appendices) as part of the FI response,
- Arboricultural Report,
- Engineering Planning Reports,
- Flood Risk Assessment, and,
- Construction and Environmental Plan,

These documents have been prepared on behalf of the Applicant and the objective information presented informs the screening determination.

The townland of Ballymakaily, Lucan, Co. Dublin. The site has a stated area of c. 5.41ha. and forms part of a larger data centre campus which is currently under construction. I have provided a detailed description of the site location and its surrounding context in section 1 of my report, while the development is described in detail in section 2. Detailed specifications of the proposed development are provided in the AA Screening Report and in other planning documents provided by the Applicant. In summary, the development seeks planning consent for the construction of 2 no. adjoined single storey data centres with associated office and service areas with an overall gross floor area (GFA) of 15,274sq.m. The development will also include ancillary site works, connections to existing infrastructural services as well as fencing and signage and modifications to the permitted landscaping to the west of the site as granted under SD19A/0042 (ABP-305948-19) and SD21A/0042.

I note that the AA Screening Report was prepared in line with current best practice guidance and provides a description of the proposed development and identifies any European Sites within a possible zone of influence of the development. It is concluded within the AA Screening Report, following an examination, analysis and evaluation of best available information, and applying the precautionary principle, that the possibility of any significant effects on any European Sites, whether arising from the project alone or in combination with other plans or projects, can be excluded. In terms of the Technical Note, it is stated that the modifications to the proposed development do not materially affect the assessment completed by Scott Cawley of the proposed development as documented in their AA Screening report (July 2022) and do not have the potential to affect the qualifying interests (Qls), special conservation interests (SCls), or conservation objectives underpinning any European sites. Having reviewed the documents and submissions on the application, I am satisfied that the information allows for a complete examination and identification of any likely significant effects of

the development, alone or in combination with other plans or projects, on European Sites.

There are no Natura Sites within the immediate vicinity of the appeal site. The nearest designated site (Rye Water Valley/Carton (Site Code 001398)) is located c. 4.1km to the north-west of the appeal site. SACs and SPAs within 15km of the site and those with direct or indirect pathways have been identified in the Applicant's Screening Report. The AA screening Report indicates that there are 9 no European sites within c. 15km or downstream of the proposed development.

European site (SAC/SPA)	Site code	Distance to subject site	Connections (source, pathway, receptor)	Considered further in Screening (Y/N)
Rye Water Valley/ Carton SAC	001398	4.1km	No potential connections	N
Glenasmole Valley SAC	001209	9.7km	No potential connections	N
Wicklow Mountains SAC	002122	11.4km	No potential connections	N
Red Bog, Kildare SAC	000397	15km	No potential connections	N
South Dublin Bay SAC	000210	16.2km	Potential hydrological connection	Y
North Dublin Bay SAC	000206	17.9km	Potential hydrological connection	Y
Wicklow Mountains SPA	004040	14.8km	No potential connections	N
South Dublin Bay and River Tolka SPA	004024	16.9km	Potential hydrological connection	Y
North Bull Island SPA	004006	19.4km	Potential hydrological connection	y

In the case of the Glenasmole Valley SAC, Wicklow Mountains SAC, Rye Water Valley/Carton SAC, Red Bog, Kildare SAC and the Wicklow Mountains SPA, there are no direct or indirect hydrological pathways from the proposed development site to the European Sites. Therefore, it is considered that the construction and operation of the proposed development will not impact on the conservation interests of the Designated Sites and no potential impacts are foreseen.

However, an indirect hydrological connection exists between the site to SACs and SPAs associated with Dublin Bay as detailed above. The subject site has hydraulic connectivity to the Griffeen River, via the proposed surface water management system.

The Griffeen River is a tributary of the River Liffey which ultimately discharges into Dublin Bay. Applying the precautionary principle, these sites are examined in further detail below.

I note that a submission has been received on the application from IFI who have recommended a number of conditions in the event of a grant of planning permission.

Step 2: Potential impact mechanisms from the project

The SACs and SPAs within Dublin Bay are located downstream from the proposed site at a minimum hydrological distance of approximately 16.2km. Prior the use of the site as a construction compound as approved by the Planning Authority, the lands were greenfield in nature where surface water flows via overland drainage ditches and a surface water drain into the Lucan Stream and Griffeen River. Chapter 8 of the EIAR notes that there is a 900mm diameter road crossing, which was installed as part of the newly constructed R120 (Newcastle Road) upgrade, adjacent to the subject site. This pipe is then connected into a 900mm diameter pipe located along a section of road on the opposite side to the subject site. This gravity sewer then runs in a northerly direction, prior to connecting into a ditch/stream network, which discharges through 3 no. aqueducts / culverts of varying sizes and which are located beneath the Grand Canal to the east. This outfall is then drained via a tributary into the Griffeen River. The Griffeen River flows in a northerly direction where it is culverted beneath the Grand Canal and from there, it flows north through Lucan and enters the River Liffey just north of Lucan town.

This site's drainage network may have the potential for indirect impacts during the construction phase of the development on the various SACs and SPAs within Dublin Bay, given the weak hydrological connection to the site via the Griffeen River and River Liffey. In addition, foul water would be seen as output from the site during the operational phase of the development that could potentially extend to these Natura 2000 sites. With this in mind, and implementing the precautionary principle, an assessment of potential hydrological impacts on the SACs and SPAs will act as a proxy for assessing the potential for indirect hydrological impacts on them or any other Natura 2000 site, given its closest proximity. These are considered in further detail below.

Steps 3 & 4: European Sites at risk from impacts of the proposed project and likely significant effects on the European site(s) 'alone'

Natura 2000 Site	Source Pathway Receptor	Impact Assessment	Screening Conclusion
South Dublin Bay SAC (000210) To maintain or restore the favourable Conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110]	There is the potential for hydrological connectivity between the proposed site and this SAC during the construction and operational phase of the proposed development. As indicated, the site has hydraulic connectivity to the Griffeen River, via the proposed surface water management system. The Griffeen River is a tributary of the River Liffey which ultimately discharges into Dublin Bay.	In terms *habitat loss and fragmentation,* the proposed development does not overlap with the boundary of any European site. Therefore, there are no European sites at risk of direct habitat loss impacts. As the proposed development does not traverse any European sites there is no potential for habitat fragmentation to occur. The proposed development site does not support populations of any fauna species linked with the QI populations of any European site. In terms of the proposal's surface water drainage strategy, storm water from the roof areas of the proposed building units, will be directed via rain water pipes into an on-site reticulation system. The outflow from this system will be connected into the surface water drainage network collecting run-off from the road areas and will be discharged into 2 stormwater storage ponds / wetland area, located in a landscaped area to the northern end of the site. Surface water run-off will then discharge into the existing stormwater channel at a restricted rate (greenfield runoff rate), where it will further connect to the Griffeen River downstream. During the construction phase, standard pollution control measures would be put in place and are outlined in Appendix 2.2 of the EIAR. These include surface water management, material storage, waste management and other environmental management measures. Whilst these are identified as mitigation measures in the EIAR, it is my view that the measures outlined are typical and well proven construction methods and would be expected by any competent developer whether or not they were explicitly required by the terms and conditions of a planning permission. I also consider that, even if the aforementioned best practice construction management measures were not in place, the possibility of significant effects on designated sites is unlikely given the nature and scale of the development, the intervening distance between the development and the designated sites and the resultant dilution factor with	The need for AA is screened out.

		regard to the conservation objectives of the relevant designated sites and habitats and species involved. I therefore do not include these measures as 'mitigation measures' for the purposes of protecting Natura sites. Given the relatively moderate scale of the proposed development, it will make a very small contribution to the overall capacity of the licensed WWTP at Ringsend. The construction and operation of the proposed development will not impact on the conservation interests of the site and therefore, no significant effects likely.	
North Dublin Bay SAC (000206) To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. <u>Habitats</u> Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Embryonic	There is the potential for hydrological connectivity between the proposed site and this SAC during the construction and operational phase of the proposed development. As indicated, the site has hydraulic connectivity to the Griffeen River, via the proposed surface water management system. The Griffeen River is a tributary of the River Liffey which ultimately discharges into Dublin Bay.	In terms *habitat loss and fragmentation,* the proposed development does not overlap with the boundary of any European site. Therefore, there are no European sites at risk of direct habitat loss impacts. As the proposed development does not traverse any European sites there is no potential for habitat fragmentation to occur. The proposed development site does not support populations of any fauna species linked with the QI populations of any European site. In terms of the proposal's surface water drainage strategy, storm water from the roof areas of the proposed building units, will be directed via rain water pipes into an on-site reticulation system. The outflow from this system will be connected into the surface water drainage network collecting run-off from the road areas and will be discharged into 2 stormwater storage ponds / wetland area, located in a landscaped area to the northern end of the site. Surface water run-off will then discharge into the existing stormwater channel at a restricted rate (greenfield runoff rate), where it will further connect to the Griffeen River downstream. During the construction phase, standard pollution control measures would be put in place and are outlined in Appendix 2.2 of the EIAR. These include surface water management, material storage, waste management and other environmental management measures. Whilst these are identified as mitigation measures in the EIAR, it is my view that the measures outlined are typical and well proven construction methods and would be expected by any competent developer whether or not they were explicitly required by the terms and conditions of a planning permission.	The need for AA is screened out.

shifting dunes [2110] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190] Species Petalophyllum ralfsii (Petalwort) [1395]		I also consider that, even if the aforementioned best practice construction management measures were not in place, the possibility of significant effects on designated sites is unlikely given the nature and scale of the development, the intervening distance between the development and the designated sites and the resultant dilution factor with regard to the conservation objectives of the relevant designated sites and habitats and species involved. I therefore do not include these measures as 'mitigation measures' for the purposes of protecting Natura sites. Given the relatively moderate scale of the proposed development, it will make a very small contribution to the overall capacity of the licensed WWTP at Ringsend. The construction and operation of the proposed development will not impact on the conservation interests of the site and therefore, no significant effects likely.	
South Dublin Bay and River Tolka Estuary SPA (004024). To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for the SPA. Light-bellied Brent Goose (Branta bernicla hrota) [A046] Oystercatcher (Haematopus ostralegus) [A130] Ringed Plover (Charadrius hiaticula) [A137] Grey Plover (Pluvialis squatarola) [A141] Knot (Calidris	There is the potential for hydrological connectivity between the proposed site and this SAC during the construction and operational phase of the proposed development. As indicated, the site has hydraulic connectivity to the Griffeen River, via the proposed surface water management system. The Griffeen River is a tributary of the River Liffey which ultimately discharges into Dublin Bay.	The proposed development is within the normal foraging range, c. 15-20km, of SCI species of South Dublin Bay and River Tolka Estuary SPA. However, at the time the application was submitted, the site comprised limited areas of suitable foraging habitat (e.g. open amenity grassland, wetlands) due to grasslands being enclosed by hedgerows and their rank status. I note that all grassland has now been removed from the site to facilitate the construction compound and car parking as approved by the Planning Authority under SD21A/0042. Therefore, the development will not lead to any decrease in the range, timing, or intensity of use of any areas within any SPA by these SCI bird species. The development will not lead to the loss of any wetland habitat area within the SPA and no ex-situ impacts can occur. The development cannot increase disturbance effects to birds in Dublin Bay given its distance from these sensitive areas (i.e. minimum of c. 16km). There are no sources of light or noise over and above that this is already experienced in this built-up, urbanised location. Noise from the works would be localised to the vicinity of the site. Noise from the works would be deemed to have a negligible impact on the SCIs due to the distance from the SPA. In terms of the proposal's surface water drainage strategy, storm water from the roof areas of the proposed building units, will be	The need for AA is screened out.

canutus) [A143] Sanderling (Calidris alba) [A144] Dunlin (Calidris alpina) [A149] Bar-tailed Godwit (Limosa lapponica) [A157] Redshank (Tringa totanus) [A162] Black-headed Gull (Chroicocephalus ridibundus) [A179] Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Arctic Tern (Sterna paradisaea) [A194] Wetland and Waterbirds [A999]		directed via rain water pipes into an on-site reticulation system. The outflow from this system will be connected into the surface water drainage network collecting run-off from the road areas and will be discharged into 2 stormwater storage ponds / wetland area, located in a landscaped area to the northern end of the site. Surface water run-off will then discharge into the existing stormwater channel at a restricted rate (greenfield runoff rate), where it will further connect to the Griffeen River downstream. During the construction phase, standard pollution control measures would be put in place and are outlined in Appendix 2.2 of the EIAR. These include surface water management, material storage, waste management and other environmental management measures. Whilst these are identified as mitigation measures in the EIAR, it is my view that the measures outlined are typical and well proven construction methods and would be expected by any competent developer whether or not they were explicitly required by the terms and conditions of a planning permission. I also consider that, even if the aforementioned best practice construction management measures were not in place, the possibility of significant effects on designated sites is unlikely given the nature and scale of the development, the intervening distance between the development and the designated sites and the resultant dilution factor with regard to the conservation objectives of the relevant designated sites and habitats and species involved. I therefore do not include these measures as 'mitigation measures' for the purposes of protecting Natura sites. Given the relatively moderate scale of the proposed development, it will make a very small contribution to the overall capacity of the licensed WWTP at Ringsend. The construction and operation of the proposed development will not impact on the conservation interests of the site and therefore, no significant effects likely.	
North Bull Island SPA (004006) To maintain or restore the favourable conservation	There is the potential for hydrological connectivity between the proposed site and this SAC during the	The proposed development is within the normal foraging range, c. 15-20km, of SCI species of the South Dublin Bay and River Tolka Estuary SPA. However, at the time the application was submitted, the site comprised limited areas of suitable foraging habitat (e.g. open amenity grassland, wetlands) due to grasslands being enclosed by hedgerows and	The need for AA is screened out.

condition of the bird species listed as Special Conservation Interests for the SPA. Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Teal (Anas crecca) [A052] Pintail (Anas acuta) [A054] Shoveler (Anas clypeata) [A056] Oystercatcher (Haematopus ostralegus) [A130] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Knot (Calidris canutus) [A143] Sanderling (Calidris alba) [A144] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus)	construction and operational phase of the proposed development. As indicated, the site has hydraulic connectivity to the Griffeen River, via the proposed surface water management system. The Griffeen River is a tributary of the River Liffey which ultimately discharges into Dublin Bay.	their rank status. I note that all grassland has now been removed from the site to facilitate the construction compound and car parking as approved by the Planning Authority under SD21A/0042. Therefore, the development will not lead to any decrease in the range, timing, or intensity of use of any areas within any SPA by these SCI bird species. The development will not lead to the loss of any wetland habitat area within the SPA and no ex-situ impacts can occur. The development cannot increase disturbance effects to birds in Dublin Bay given its distance from these sensitive areas (i.e. minimum of c. 16km). There are no sources of light or noise over and above that this is already experienced in this built-up, urbanised location. Noise from the works would be localised to the vicinity of the site. Noise from the works would be deemed to have a negligible impact on the SCIs due to the distance from the SPA. In terms of the proposal's surface water drainage strategy, storm water from the roof areas of the proposed building units, will be directed via rain water pipes into an on-site reticulation system. The outflow from this system will be connected into the surface water drainage network collecting run-off from the road areas and will be discharged into 2 stormwater storage ponds / wetland area, located in a landscaped area to the northern end of the site. Surface water run-off will then discharge into the existing stormwater channel at a restricted rate (greenfield runoff rate), where it will further connect to the Griffeen River downstream. During the construction phase, standard pollution control measures would be put in place and are outlined in Appendix 2.2 of the EIAR. These include surface water management, material storage, waste management and other environmental management measures. Whilst these are identified as mitigation measures in the EIAR, it is my view that the measures outlined are typical and well proven construction methods and would be expected by any competent developer whether or not they were explicitly required by the terms and conditions of a planning permission. I also consider that, even if the aforementioned best practice construction management measures were not in place, the	

[A162] Turnstone (Arenaria interpres) [A169] Black-headed Gull (Chroicocephalus ridibundus) [A179] Wetland and Waterbirds [A999]		possibility of significant effects on designated sites is unlikely given the nature and scale of the development, the intervening distance between the development and the designated sites and the resultant dilution factor with regard to the conservation objectives of the relevant designated sites and habitats and species involved. I therefore do not include these measures as 'mitigation measures' for the purposes of protecting Natura sites. Given the relatively moderate scale of the proposed development, it will make a very small contribution to the overall capacity of the licensed WWTP at Ringsend. The construction and operation of the proposed development will not impact on the conservation interests of the site and therefore, no significant effects likely.	

Step 5: Where relevant, likely significant effects on the European site(s) 'in-combination with other plans and projects'

The development of the proposed data centre is catered for through land use planning, including the South Dublin County Development Plan, 2022-2028, covering the location of the application site. This has been subject to AA by the Planning Authority, which concluded that its implementation would not result in significant adverse effects to the integrity of any Natura 2000 areas. I note also the development is located on serviced and zoned lands in an emerging industrial area. As such the proposal will not generate significant demands on the existing municipal sewers for foul water and surface water.

Page 16 of the Applicant's Screening Report considered 'In-Combination' effects. This section of the Applicant's report has had regard to the planning policy context and concludes that the possibility of any other plans or projects acting in combination with the proposed development to give rise to significant effects on any European site in, or associated with, Dublin Bay can be excluded. Whilst the Screening Report has failed to mention a number of permitted development within the site surrounds, these mainly relate to other industrial/commercial developments and would be subject to the similar construction management and drainage arrangements as the subject proposal (cannot be considered as mitigation measures as they would apply regardless of connection to European Sites). As noted, permissions on the wider landholding known collectively as the Facility Campus included SD19A/0004, SD19A/0042 (ABP-305948-19), SD21A/0042 (ABP-312749-22), SD22A/0105, SD22A/0289, ABP-314567-22 and SD23A/0151. Other permissions of note within the site surrounds as detailed in Section 4 of this report include:

- SD16A/0345,
- SD17A/0027,
- SD17A/0141,
- SD17A/0392 (ABP-300752-18),
- SD18A/0298,

- SD21A/0127,
- SD22A/0009, and,
- SD23A/0301.

Therefore, I conclude that the proposed development would have no likely significant effect in combination with other plans and projects on the qualifying features of any European site(s). No further assessment is required for the project.

Overall Conclusion - Screening Determination

In accordance with Section 177U(4) of the Planning and Development Act 2000 (as amended) and on the basis of objective information I conclude that the proposed development would not have a likely significant effect on any European Site either alone or in combination with other plans or projects. It is therefore determined that Appropriate Assessment (stage 2) (under Section 177V of the Planning and Development Act 2000, as amended) is not required.

This conclusion is based on:

- Objective information presented in the AA Screening Report, Addendum No. 1(AA Screening Report submitted by way of FI), Environmental Impact Assessment Report (EIAR) (including the revised EIAR at FI stage) and its associated appendices, Construction and Environmental Plan and the Flood Risk Assessment.
- The limited zone of influence of potential impacts, restricted to the immediate vicinity of the proposed development.
- Standard pollution controls that would be employed regardless of proximity to a European site and effectiveness of same.
- Distance from European Sites.
- Impacts predicted would not affect the conservation objectives.

I note that no measures intended to avoid or reduce harmful effects on European sites were taken into account in reaching this conclusion.