

**TECHNICAL NOTE ON THE
CUMULATIVE ENVIRONMENTAL
ASSESSMENT FOR A POTENTIAL
DATA CENTRE DEVELOPMENT,
CRUISERATH, DUBLIN 15 WITH
ADJACENT
BIOPHARMACEUTICAL
DEVELOPMENT AND CPPA
RENEWABLE ENERGY
PROJECTS**

Technical Report Prepared For

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1.0 INTRODUCTION

This technical note has been prepared by AWN Consulting (AWN) to provide technical assistance in the characterisation and assessment of likely significant cumulative effects.

This document is intended to supplement the information already submitted to An Bord Pleanála (ABP) regarding cumulative assessment of effects (including Chapter 16 of the EIAR “ Cumulative Effects”) for the purposes of ABP carrying out its environmental impact assessment of the Proposed Data Centre Development in Cruiserath, Dublin 15. The EPA Guidance defines cumulative effects as follows:

Cumulative Effects: The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.

This document has been written by Sarah Robertson who is a Senior Environmental Consultant in AWN Consulting providing EIAR management and specialist input to EIAR chapters. Sarah has over ten years’ experience working in the environmental field in impact assessment, EIAR management, environmental masterplans, urban planning, waste management, specialist ecological surveys, AA screening and Natura Impact Statements. Sarah holds a BA. Hons (mod Science), MSc. and a Diploma in Environmental Engineering, and has worked in Ireland, the UK, and the USA.

The assessment will cover direct, indirect, secondary, cumulative, short, medium, long-term, permanent, temporary, positive and negative effects. To note, the conclusion on cumulative effects provided in this document is based on the more detailed technical assessments undertaken by experts and provided within the BMS (reference REG. FW23A/0342) and Cruiserath Data Center respective EIARs.

2.0 CUMULATIVE ASSESSMENT WITH BIOPHARMACEUTICAL DEVELOPMENT (REFERENCE REG. FW23A/0342)

On the 11th of January 2024, the Planning and Infrastructure Department of the Fingal County Council granted permission for a Biopharmaceutical development application located at the BMS Cruiserath site, Cruiserath and Goddamendy Townlands, Cruiserath Road, Mulhuddart, Dublin 15, immediately adjacent to the proposed Data Centre site to the east. This development was lodged post completion of the Cruiserath datacenter EIAR and therefore was not considered within the submitted EIAR.

The BMS EIA assessment included assessment of cumulative effects for the BMS development and other permitted and planned development including the Cruiserath proposed Data Center. The conclusions of this cumulative effect report has considered the cumulative assessment undertaken in the BMS EIAR and has accordingly updated the previous assessment of cumulative effect provided in Chapter 16 of the Cruiserath Data Center EIAR.

2.1 Development Description

As per site notice, the BMS development will consist of:

(a) A 2-storey Biopharmaceutical Development and Manufacturing Building sized approximately 11,670 square metres and approximately 15.5 metres high, with roof-mounted plant and equipment, including solar panels.

- (b) The refurbishment and extension of the existing 2-storey Laboratory, to include ground-mounted and roof-mounted plant and equipment, including solar panels and an extension to the existing plant room at roof level sized approximately 115 square metres and approximately 9.1 metres high.
- (c) A single story pedestrian and materials link sized approximately 420 square metres and approximately 7 metres high from the proposed Production Building to the existing Warehouse.
- (d) A single story pedestrian canopy from the proposed production building to the existing administration building, sized approximately 520 square metres and approximately 8.3 metres high.
- (e) A single storey pedestrian canopy from the proposed production building to the existing laboratory building, sized approximately 234 square metres and approximately 8.3 metres high.
- (f) Provision of new car parking spaces including an additional 185 car parking spaces, including accessible car parking spaces, electric vehicle charging, motorcycle parking, dedicated car-pooling spaces and cycle parking, all accessed from the R121.
- (g) Proposed site infrastructure includes bunded tanks, pipe-bridges, sprinkler and water tanks, surface water harvest tanks, docks and yard areas, including associated items of plant and equipment, heat-pumps, underground pumping facilities, internal roads and paths, fencing and site lighting, and the use of the existing BMS site entrances for heavy goods vehicles.
- (h) The development includes modifications to the existing internal road network.
- (i) Proposed new landscaping includes new landscaped and planted areas, modifications, replacement and reinforcement of the existing landscaping.
- (i) Proposed New Signage based at ground level and on the proposed building façade.
- (k) The works will include temporary contractor compounds including temporary construction cabins, temporary car parking and the temporary use of existing site entrance road (currently not in use) to the north of the site from the Cruiserath Road, during construction activities.
- (l) Proposed new surface water management infrastructure for the site, consisting of Sustainable Drainage features including a detention basin, rainwater harvest cisterns and distribution pipework.
- (m) Modifications to existing buildings in the Development and Manufacturing Campus including elevational alterations and modifications to the existing satellite administration, canteen and laboratory buildings to the south of the site, adjacent to the proposed development.
- (n) All Associated Site Works.

The proposed development will be built in 2 phases, with phase 2 comprising of approximately half of the proposed administrative floor area and the proposed pedestrian canopies to the existing administration and laboratory buildings.

Surface water drainage for the site will be required to be managed and may or may not require the utilisation of Sustainable Drainage Systems (SuDS) features and also may

or may not require attenuation to accommodate a 1 in 100-year return period design rainfall event plus 20% climate change allowance.

2.2 Undertaken Studies

In order to support the application for the Biopharmaceutical development, BMS has submitted to Fingal County Council a range of studies and documents addressing the potential effects originated from both construction and operational phases of the development. These studies include:

- Environmental Impact Assessment
- Natura Impact Statement
- Archaeological Report
- Aeronautical Assessment Report
- Flood Risk Assessment
- Landscape and Visual Impact Assessment
- Resource and Waste Management Plan
- Glint and Glare Assessment
- Construction Environmental Management Plan (CEMP)
- Traffic and Transport Assessment (TTA)
- Workplace Travel Plan (WTP)
- Climate Action Energy Plan

2.3 EPA Licensing Requirements

The EPA regulates the existing BMS Cruiserath facility through an IE Licence P0552-03, and the new Biopharmaceutical development will operate in accordance with BMS procedures and IE Licence requirements.

3.0 POTENTIAL AND RESIDUAL CUMULATIVE EFFECTS

The below section outlines the potential cumulative effects of the Biopharmaceutical Development granted permission by FCC at the BMS Cruiserath site with respect to the adjacent proposed Data Centre at Cruiserath. The assessment of cumulative effects of BMS Cruiserath with all know permitted or planned development is outlined in the Environmental Impact Assessment submitted as part of the planning application of reference FW23A/0342. This included consideration of the adjacent Data Center proposed development.

3.1 Population and Human Health

The likely cumulative effect of the permitted BMS development with the Proposed Development in conjunction with existing, planned and Permitted Developments on population and human health is assessed under a number of headings below; noise and vibration, air quality, traffic and visual effects. This section considers the cumulative effect in relation to local economy and employment.

Construction Impacts/Commissioning Impacts

As outlined in the Cruiserath Data Center EIAR (Chapter 16) and now taking the BMS development into account, there will be a **short-term, slight, positive** cumulative impact on local business activity during the construction phase due to the increased presence of construction workers for the Proposed Development (c 400 for the Proposed Development alone) along with employment on other planned and Permitted Developments using local facilities. The cumulative development will have indirect positive effects on the local economy and employment in terms of construction material manufacture, maintenance contracts, equipment supply and landscaping etc.

Operational Impacts

During operation, the cumulative development will result in an **imperceptible, positive** impact as a result of increased employment opportunities (c. 104 for the Proposed Development alone) in the North Blanchardstown area.

3.2 Land, Soils, Geology and Hydrogeology

Construction Impacts/Commissioning Impacts

According to Chapter 5 - Land, Soils, Geology and Hydrogeology of the EIAR submitted for BMS, the potential cumulative effects that may arise with respect to the construction of the BMS development are related to surface water runoff, stockpiled material that may contain silt, contamination of local water sources from accidental spillage and leakage from construction traffic and construction materials. The implementation of mitigation and monitoring measures, however, will ensure the residual cumulative impact of the development is **neutral, imperceptible** and **short-term**.

According to Chapter 6 - Hydrology of the EIAR submitted for BMS, the potential cumulative effects that may arise with respect to the construction of the BMS development are damage to surface water systems and receiving watercourses from surface water run-off containing increased silt levels, discharge of silt-laden water into the surrounding surface water drainage system from stockpile material and contamination of local water sources from accidental spillage and leakage from construction traffic and construction materials. The implementation of mitigation and monitoring measures as well as the compliance of the permitted development with their respective planning conditions, however, will ensure the residual cumulative impact of the development is **neutral, imperceptible** and **short-term**.

Considering the neutral and imperceptible nature of the residual cumulative impacts, it was considered that the BMS Development will not give rise to significant land, soils, geology and hydrogeology impacts during construction in accumulation with the Proposed Data Centre or other permitted or planned developments.

The above conclusions comply with the assessment of cumulative effects given in Chapter 16 of the EIAR for the Proposed Development and it is concluded (including the BMS permitted development) that the cumulative potential for change in soil quality or the natural groundwater regime is considered to be short-term **neutral and imperceptible**.

3.1 Operational Impacts

According to Chapter 5 - Land, Soils, Geology and Hydrogeology of the EIAR submitted for BMS, the potential cumulative effects that may arise with respect to the operations of the BMS development are related to the increased hardstanding areas with localised reduced recharge to ground and increase in surface run-off, increased risk of accidental discharge of hydrocarbons from car parking areas and loss of greenfield area. The implementation of mitigation and monitoring measures as well as the compliance of the permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential. The residual cumulative impact of the BMS development for the operational phase is deemed to be **neutral, imperceptible and long-term**.

According to Chapter 6 - Hydrology of the EIAR submitted for BMS, the potential cumulative effects that may arise with respect to the operations of the BMS development are related to the increased hardstanding areas with reduced recharge to ground and increase in surface run-off, increased risk of accidental discharge of hydrocarbons from car parking areas and additional foul discharges. The implementation of mitigation and monitoring measures as well as the compliance of the permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential. The residual cumulative impact of the BMS development for the operational phase is deemed to be **neutral, imperceptible and long-term**.

Considered the neutral and imperceptible nature of the residual cumulative impacts, it was considered that the BMS Development will not give rise to significant hydrology impacts during operations in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development stated that during operation, all developments are required to manage groundwater and surface water discharges in accordance with European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010 and S.I. 266 of 2016) and (Surface Water) Regulations (S.I. 272 of 2009 and S.I. 77 of 2019). As such, there will be no cumulative impact to water quality. Overall, there will be an increase in hard stand area as a result of cumulative development. However, as the area where recharge to ground is reduced as a result of development is small compared to the overall bedrock aquifer (c. 1,309 km² in size), there will be no perceptible cumulative impact on the underlying aquifer resource or groundwater flow regime.

The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be long-term **neutral and imperceptible**.

3.3 Biodiversity

Construction/Commissioning Impacts

According to Chapter 7 - Biodiversity of the EIAR submitted for BMS, the biodiversity residual impacts for the construction phase of the BMS development are deemed to be **neutral, imperceptible and long-term**.

Considered the neutral and imperceptible nature of the residual impacts, it was considered that the BMS Development will not give rise to biodiversity impacts during construction in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development concluded there will be **short term, negative, not significant** cumulative impact on local biodiversity due to the loss of existing vegetation (as any remaining greenfield is turned into hardstand as required for development). As there is no source-pathway-receptor linkage, there will be no cumulative impact on any European sites (refer to Chapter 8 and AA screening).

The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be **short term, negative, not significant** cumulative impact on local biodiversity and no *cumulative impact* on any European sites.

Operational Impacts

According to Chapter 7 - Biodiversity of the EIAR submitted for BMS, there will be no negative operational effects from the BMS development with respect to biodiversity and therefore there will be no residual effects.

Considered there will be no residual effects with respect to biodiversity, the BMS Development will not give rise to impacts during operations in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development concluded that with the employment of appropriate landscaping, the cumulative impact is considered to be **neutral, imperceptible** and **long-term effect** on biodiversity.

The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be **neutral, imperceptible** and **long-term effect** on biodiversity and no *cumulative impact* on any European sites.

3.4 Air Quality

Construction/Commissioning Impacts

According to Chapter 8 – Air Quality of the EIAR submitted for BMS, during construction stage there is potential for dust impacts to any nearby sensitive receptors in accumulation with the Proposed Data Centre. The implementation of mitigation and monitoring measures as well as the compliance of the permitted development with their respective planning conditions, however, will ensure the residual cumulative impacts on air quality during construction are **short-term, direct, negative** and **imperceptible**.

Considered the imperceptible nature of the residual cumulative impacts, it was considered that the BMS Development will not give rise to significant air quality impacts during construction in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development concluded that based on the phased approach employed for construction at the site (as per Chapter 2 of the EIAR), and the implementation of dust management measures as outlined in the CEMP and Section 9.6.1 of Chapter 9, there is minimal potential for cumulative impact on air quality from simultaneous construction of the nearby Permitted Developments and the indicative future development with the Proposed Development. The mitigation measures that will be put in place during construction of the Proposed Development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values through the suppression of dust emissions. The EU ambient air quality limit values are based on the protection of human health. Therefore, the impact of construction of the Proposed Development will be **neutral, short-term** and **imperceptible** with respect to air quality and human health.

The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be **neutral, short-term imperceptible**.

Operational Impacts

According to Chapter 8 – Air Quality of the EIAR submitted for BMS, during operations the potential cumulative effects that may arise from the BMS development are related to operational traffic, and are deemed to be **long-term, localised, direct, neutral, imperceptible** and **non-significant**. No new air emission points are proposed as part of the BMS development, therefore there is no potential for cumulative impacts. The proposed new buildings will not impact dispersion of pollutants from the existing main air emission points on site and compliance with the ambient air quality limit values and assessment levels will be maintained. Cumulative impacts are assessed to be **long-term, localised** and **imperceptible**.

Considered the neutral and imperceptible nature of the residual cumulative impacts, it is considered that the BMS Development will not give rise to significant air quality impacts during operations in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development concluded that the cumulative impacts to air quality during the operational phase of the Proposed Development may occur due to NO₂ emissions from the operation of the back-up generators in addition to NO₂ emissions from existing and Permitted Developments in the vicinity of the Proposed Development site. In terms of the potential for overlap of emission plumes the impact is largely confined to the immediate vicinity of the site and therefore, developments beyond 1 km of the Proposed Development boundary have not been included within the cumulative assessment. This is because there is minimal potential for overlap of emission plumes at increased distances. A review of relevant existing and Permitted Developments was conducted in order to inform the operational phase cumulative air quality assessment. The following developments were included within the cumulative assessment as per Section 9.2.3.1 of Chapter 9 – the IE licenced sites of BMS and Alexion as they are both within 1 km of the Proposed Development and both have licenced emissions of NO₂, the Permitted Developments on the wider site (Building A, B and C) and an indicative future development on the wider site to the north of Building G (Building D has no associated air emissions). No other developments of relevance were identified for inclusion in the cumulative modelling assessment. Emissions and proposed minimum stack heights for the 18 no. back-up diesel generators associated with the potential future Data Centre building were assumed to be the same as those for Buildings F and G for the purpose of the cumulative assessment. Building E has one associated generator and associated emission point. House generators associated with the relevant buildings were also included in the modelling assessment. The NO₂ modelling results at the maximum location at and beyond the site boundary are detailed in Section 9.8.2.1 of Chapter 9. The results indicate that the ambient ground level concentrations are within the relevant air quality standards for NO₂. For the maximum year modelled, emissions from all back-up generators lead to an ambient NO₂ concentration (including background) which is 63% of the maximum ambient 1-hour limit value (measured as a 99.8th percentile) and 83% of the annual limit value at the maximum off-site receptor.

As there are no additional air emissions from the permitted BMS development, and the results of the cumulative impact scenario modelled are in compliance with the relevant ambient air quality limit values at all locations at or beyond the site boundary, the conclusion is unchanged and is a **long-term, slight, negative** impact to air quality.

3.5 Climate

3.2 Construction Impacts

- 3.3 According to Chapter 9 – Climate of the EIAR submitted for BMS, by presenting the GHG impact of a project in the context of its alignment to Ireland’s trajectory of net zero and any sectoral carbon budgets, the assessment demonstrates the potential for the project to affect Ireland’s ability to meet its national carbon reduction target. Therefore, the assessment approach is considered to be inherently cumulative. The impact of the BMS development in relation to GHG emissions is considered **long-term, minor adverse** and **not significant**.
- 3.4 Considered the not significant nature of the impacts, it was considered that the BMS Development will not give rise to significant Climate impacts during construction in accumulation with the Proposed Data Centre.
- 3.5 Chapter 16 of the EIAR for the Proposed Development concluded that construction traffic is the primary source of GHG emissions during the construction phase. Construction vehicles and machinery will give rise to CO₂ and N₂O emissions during construction of the Proposed Development. The Institute of Air Quality Management document ‘Guidance on the Assessment of Dust from Demolition and Construction’ (IAQM, 2014) states that site traffic and plant is unlikely to have a significant impact on climate. There is the potential for the construction phase of the Proposed Development to coincide with the construction of the permitted Buildings B and C and potential future indicative development. However, as the Proposed Development will be constructed on a phased basis over an approximate 5 year period the scale of the construction works will be less than if the entire development were to be constructed simultaneously. In addition, the development of the wider site will also follow a phased approach to construction. It can be concluded that due to the duration and nature of the construction activities, CO₂ and N₂O emissions from construction vehicles and machinery will have a **short-term, negative** and **not significant** cumulative impact on climate.
- 3.6 The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be **short-term, negative** and **not significant**.

Operational Impacts

- 3.7 According to Chapter 9 – Climate of the EIAR submitted for BMS, by presenting the GHG impact of a project in the context of its alignment to Ireland’s trajectory of net zero and any sectoral carbon budgets, the assessment demonstrates the potential for the project to affect Ireland’s ability to meet its national carbon reduction target. Therefore, the assessment approach is considered to be inherently cumulative. The impact of the BMS development in relation to GHG emissions is considered **long-term, minor adverse** and **not significant**.
- 3.8 Considered the not significant nature of the impacts, it was considered that the BMS Development will not give rise to significant Climate impacts during operation in accumulation with the Proposed Data Centre.
- 3.9 Chapter 16 of the EIAR for the Proposed Development concluded that as outlined in Section 9.7.2.3 of Chapter 9, cumulative indirect electricity usage for the overall site including the Proposed Development, Permitted Development and indicative future development would be equivalent to 607,523 tonnes of CO₂eq per year. As the Proposed Development is over 20 MW, a greenhouse gas emission permit will be

required for the facility which will be regulated under the EU-wide Emission Trading Scheme (ETS). Electricity providers form part of the ETS and thus greenhouse gas emissions from these electricity generators are not included when determining compliance with the targeted 42% reduction in the non-ETS sector i.e. electricity associated greenhouse gas emissions will not count towards the Effort Sharing Decision target. Thus, any necessary increase in electricity generation due to data centre demand will have no impact on Ireland's obligation to meet the EU Effort Sharing Decision. On an EU-wide basis, where the ETS market in 2021 was approximately 1,308 million tonnes CO₂eq, the impact of the emissions associated with the Proposed Development in conjunction with the Permitted Developments and future indicative development, will be no more than 0.046% of the total EU-wide ETS market which is imperceptible.

Thus, 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 CPPAs the predicted cumulative impact to climate is deemed to be **indirect, long-term, negative** and **slight**.

As per Section 9.7.2.4 of Chapter 9 the Proposed Development in conjunction with the Permitted Developments and future indicative development, will have an estimate peak operational demand 219.7MW per year in total which translates to 1,925 GWh (gigawatt hours) annually. The nitrogen oxide (NO_x) emissions associated with this electricity over the course of one year (i.e. 1,925 GWh based on 219.7MW for 8,760 hours per annum) will equate to 253 tonnes per annum which is 0.37% of the National Emission Ceiling limit for Ireland from 2020 onwards. Similarly, SO₂ emissions associated this electricity over the course of one year (1,925 GWh) will equate to 142 tonnes per annum which is 0.56% of the National Emission Ceiling limit for Ireland from 2020. Additionally, NMVOC emissions associated this electricity over the course of one year (1,925 GWh) will equate to 14 tonnes per annum which is 0.03% of the National Emission Ceiling limit for Ireland from 2020. The indirect NO_x, SO₂ and NMVOC emissions are all below 1% of the relevant National Emission Ceiling limits when considering the cumulative impact of the Proposed Development.

As discussed in Chapter 2 and Section 9.7.2.3 of this EIA Report, the Operator has a commitment to reach net zero carbon emissions by 2040, 10 years ahead of the Paris Agreement. As part of that commitment, the company is on a path to powering its operations by 100% renewable energy by 2025, five years ahead of its original 2030 target. Amazon is continuing to scale its renewable energy investments with a current total of 379 renewable energy projects around the world, marking significant progress on its path to powering 100% of its operations with renewable energy by 2025 - before the proposed Data Centre F & G are due to come into operation. Once fully operational, Amazon's current global renewable energy portfolio will generate 50,000 gigawatt hours (GWh) of clean energy, which is the equivalent amount of electricity needed to power 13.4 million European homes each year.

Amazon has committed to offtake 100% of the power from renewable wind projects in Cork, Donegal, and Galway. In total, these three wind projects are projected to add 229 megawatts of renewable energy to the Irish grid, reducing carbon emissions by 366,000 tonnes of CO₂ each year, and producing enough renewable energy to power 185,000 Irish homes, per annum. These three wind projects will make Amazon the largest single corporate buyer of renewable energy in the country.

Thus, the cumulative NO_x, SO₂ and NMVOC indirect emissions associated with the operation of the Proposed Development, Permitted Developments and indicative

future development are **indirect, long-term, negative** and **slight** with regards to regional air quality.

The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be **indirect, long-term, negative** and **slight**.

3.6 Noise and Vibration

Construction/Commissioning Impacts

The residual impact of construction noise was considered to be **negative, not significant to moderate and temporary**.

Chapter 16 of the EIAR for the Proposed Development concluded that during the construction phase of the Proposed Development and Permitted Developments, there will be some impact on nearby noise sensitive properties due to noise emissions from site traffic and other activities. During permitting of all developments the planning authority will apply noise and vibration limits and hours of operation to limit noise and vibration to the levels proposed in Section 10.2.4 of the EIAR. Management of noise and vibration in accordance with planning conditions will ensure that the cumulative impact is **slight, negative** and **short term** in nature.

The above conclusion of cumulative effects (including consideration of the BMS permitted development) is unchanged and is considered to be **slight, negative** and **short term**.

Operational Phase

Consideration was given to operational noise impact accumulation with the Proposed Data Centre in Chapter 10 of the EIAR submitted for BMS. The chapter outlines that both sites share the same closest noise sensitive receptor and classifies the predicted cumulative noise impact as **negative, slight** and **long-term** for the operational phase.

Considered the slight nature of the impact, it is considered that the BMS Development will not give rise to significant noise impacts during operations in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development has considered the BMS facility (pre the current extension of development) within its baseline noise model. With planning conditions related to noise management and requirement to operate within the limits of the EPA licence, it is considered that the cumulative effects will be unchanged from that which was previously considered, i.e a not significant effect.

The above conclusion of cumulative effect (including consideration of the BMS permitted development) is unchanged and is considered to be **not significant, negative** and **long term**.

3.7 Landscape and Visual

Construction Phase

Chapter 16 of the EIAR for the Proposed Development states that during construction, cumulative landscape and visual effects will vary depending on whether projects are constructed at the same time or not. In the case of the permitted BMS development, cumulative effects during construction if implemented at the same time as the Proposed Development will give rise to an intensification of construction activity along

the Cruiserath Road in particular with the additional construction site being secured and enclosed by separate hoarding. Cumulative landscape and visual effects during construction will be **temporary, moderate** and **negative**.

Operation Phase

According to Chapter 11 – Landscape and Visual Impact of the EIAR submitted for BMS, the majority of applications within the vicinity of the BMS site are of a similar industrial nature with the permitted developments of similar scale, or larger. Therefore, it is not considered that the BMS development will have any substantive landscape or visual impacts in-combination with other permitted developments in the vicinity of the site. The likely cumulative effects are deemed to be **Low-negligible**.

Considered the low-negligible nature of the impact, it is considered that the BMS Development will not give rise to significant Landscape and Visual impacts during construction or operation in accumulation with the Proposed Data Centre. The developments are in fitting with the current zoning for the site and ongoing development of the area. The likely cumulative effects are deemed to be **imperceptible, neutral** and **long term**.

3.8 Cultural Heritage, Architecture and Archaeology

Construction Phase

According to Chapter 12 – Archaeological, Architectural, and Cultural Heritage Impact of the EIAR submitted for BMS, previous development in the wider area has uncovered previously unrecorded archaeology. The academic knowledge gained from the excavation of these features has resulted in a net cumulative **permanent, significant, positive** impact.

Considered the nature of the impact, it is considered that the BMS Development give rise to significant positive Archaeological impact during construction in accumulation with the Proposed Data Centre.

Chapter 16 of the EIAR for the Proposed Development stated that no known features of archaeological interest have been identified within the overall landholding as part of this assessment. Considering the academic knowledge gained from the excavation of archaeological features in the wider area, it is concluded that there would be a cumulative **permanent, significant, positive** impact.

Operational Impacts

According to Chapter 12 – Archaeological, Architectural, and Cultural Heritage Impact of the EIAR submitted for BMS, during operation there is no potential for cumulative impact as there will be no disturbance to ground.

As concluded in Chapter 16 for the proposed development (and considering the permitted BMS development), the operational phase is not predicted to have any cumulative impact on archaeological, architectural and cultural heritage as there will be no effects on these receptors during operation.

3.9 Material Assets - Traffic

Construction Phase

According to Chapter 13 – Traffic and Transportation of the EIAR submitted for BMS, for a cumulative traffic impact assessment, consideration was given to the trips to and from permitted developments which are granted planning around the BMS development, including the Proposed Data Centre.

The implementation of a Construction Environmental Management Plan (CEMP) and other mitigation measures will ensure there will be no significant residual effects during construction of the BMS development.

As outlined in Chapter 16 of the Proposed Development EIAR, given the temporary nature of the peak construction phase, the overall impact of the construction phase is considered **short-term, negative and not significant**.

Operational Impacts

According to Chapter 13 – Traffic and Transportation of the EIAR submitted for BMS, for a cumulative traffic impact assessment, consideration was given to the trips to and from permitted developments which are granted planning around the BMS development, including the Proposed Data Centre.

As no residual impacts are expected followed the implementation of mitigation measures and Workplace Travel Plan as a result of the BMS extension works, and taking account of the modelling undertaken in Chapter 16 of the Proposed Development EIAR, the cumulative impact is concluded to have a long term negative and imperceptible impact on traffic and transportation quantity in the environment.

3.10 Material Assets - Waste

Construction & Operational Phase

Consideration was given to the accumulation of construction impact with the Proposed Data Centre in Chapter 14 – Waste Management of the EIAR submitted for BMS. The chapter outlines that other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will mitigate against any potential cumulative effects associated with waste generation and waste management. As such the effects will be **imperceptible** and **neutral** for both construction and operational phases.

Considered the neutral, imperceptible nature of the impacts, it is considered that the BMS Development will not give rise to significant waste impacts in accumulation with the Proposed Data Centre.

As concluded in Chapter 16 of the EIAR for the Proposed Development, all 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 impact will be **long-term** and **imperceptible**.

3.11 Material Assets - Utilities

Construction & Operational Phase

According to Chapter 15 – Material Assets Utilities of the EIAR submitted for BMS, the construction will require site clearance, excavations and levelling which will generate localised requirement for soil removal and/or import, power and water supply and wastewater discharge. Provided standard mitigation measures and that planning conditions are implemented, the cumulative impact will be **neutral, imperceptible, and short term**.

During operation there will be an increase in requirement for water supply, surface water and foul drainage and electricity capacity. All permitted developments are required to engage with FCC, Uisce Éireann and ESB to ensure that there is sufficient capacity to cater for the increase supply. Based on known current and known future developments there is adequate capacity of supply available within the local environs, the cumulative impacts associated with other material assets will be neutral, not significant, and long term.

Considered the neutral, imperceptible nature of the impacts, it was considered that the BMS Development will not give rise to significant material assets impacts in accumulation with the Proposed Data Centre.

The conclusion given in Chapter 16 of the EIAR for the Proposed Development is unchanged. The location of the Proposed Development within the well-developed area of Cruiserath means that it is well placed to access existing utilities and, therefore, will not have any significant impact and will not impact on capacity for off site development.

The water supply and drainage strategy for the overall landholding was discussed with Fingal County Council (FCC) Water Services and with Irish Water as part of the planning application for Buildings A, B and C as well as during the pre-application consultation (August 11th 2022) for the Proposed Development. Irish Water (IW) have agreed in principal that the water and drainage requirements for the development is feasible (COF dated Oct 19 2022).

The Proposed Development will have an overall maximum operational demand for all three buildings of 73.1MW, with an overall maximum operational demand for permitted, proposed and future indicative masterplan of c. 219.7MW. As described in Chapter 2 and 14, the power requirements for the existing, permitted and Proposed Development will be provided from the existing 220kV GIS substation on site (Building D) located south of proposed Buildings F and G, and to the east of proposed Building E. A connection agreement to supply the existing, permitted and Proposed Developments is in place with EirGrid. EirGrid has accounted for the Proposed Development and the indicative masterplan in the All-Island Generation Capacity Statement 2017-2026 (published April 2017). The existing, permitted, proposed and future indicative development within the overall landholding were included in the ‘material enquiry’ cohort noted in the Capacity Statement.

The fibre optic cable distribution network installed for the Permitted Developments will be extended for Buildings E, F, G and the future data centre building. Consultation has confirmed that there is sufficient capacity available for these developments.

The cumulative effects associated with material assets will be **long-term and not significant**.

4.0 CONCLUSION

Building upon the evidence presented in the Environmental Impact Assessment conducted for the BMS development (now permitted) and adhering to the recommended mitigation strategies and best practices, it can be concluded that, for both construction and operational phases, there will be no significant adverse effects arising in cumulation with the proposed Data Centre at Cruiserath.

5.0 CUMULATIVE ASSESSMENT WITH RENEWABLE ENERGY PROJECT(S)

In the Response to the Appeal dated 6 November 2023, AWN assessed the cumulative effect of the renewable energy (RE) project(s) and the proposed development as follows: *“Based on the nature of the RE project(s), the climate impact of the proposed RE project is likely to be beneficial and contribute to the cumulative impact in a beneficial manner.”* In accordance with the Supreme Court decision in *Fitzpatrick v An Bord Pleanála* [2019] IESC 23, the test is to *“take into account, as far as practically possible”* in the EIA, future related developments. In that project, the aspects that were cumulatively assessed with such potential future developments were energy uses and climate change.

Based on that test, we included further detail on this cumulative assessment of climate in so far as practically possible. This assessment was also provided in accordance with the following:

“44. [...] it is nevertheless indicative of an approach that requires assessment of the cumulative effects of a proposed development which is either not yet permitted or where an application for permission has not yet been made, where it forms an integral part of the development for which permission has been applied. Another way of putting it is that an assessment of the cumulative effects of the proposed development and a future development is required where there is a functional or legal interdependence between the development for which permission has been applied and the envisaged future development.

45. The approach in each of *O Grianna* and *Brown* is dependent upon a finding of fact made that the specific project for which planning permission was granted was functionally or legally interdependent on a further development not included in the application for planning permission which might have environmental effects and in respect of which no EIA had been carried out. *Brown* has been distinguished in a number of subsequent English cases where no such interdependence existed, including by the Court of Appeal in *Bowen-West v. Secretary of State for Communities and Local Government* [2012] EWCA Civ 321, [2012] Env. L.R. 22.

[...]

56. [...] As already determined, the EIA is to be conducted of the specific project which is the subject of the planning application and there is no obligation to carry out an EIA of the masterplan. However, to give effect to the purposes of the EIA Directive so that potential effects on the environment be assessed at the earliest possible stage, account must also be taken, when carrying out the EIA of the proposed development, of the future potential phases of the masterplan, as far as practically possible. The purpose of this is inter alia to enable the proposed development and potentially future phases of the masterplan to be designed so as to have least possible impact on the environment. The precise manner in which that is required to be done will

depend upon the individual facts and circumstances of the specific project and the overall masterplan.[...]"

The EPA Guidelines, under the heading "3.5.7 Description of other related projects" also state that the effects of off-site and secondary projects can often be as significant as those of the main project and must not be overlooked, and define secondary projects as "projects that may arise largely because of the existence of the principal project, though they are usually not carried out by the developer of the principal project. These can be very difficult to describe with precision – but can be usefully examined as a series of 'what if' scenarios that can be used as a context for decision-making by the CA."

6.0 CONCLUSION

A cumulative assessment between the proposed development and any renewable energy projects has been carried out by the Applicant within the Response to the Appeal dated 6 November 2023, as far as practically possible.

It is noted that a full cumulative assessment for each individual environmental discipline is not currently possible. The delivery of each of these RE projects is dependent on completion of planning applications and obtaining planning approval. For this reason, is not possible to confirm which RE projects will be available for CPPA purposes, at the time of operation.

Based on the nature of the RE project (s), they will provide energy from a renewable resource and help to achieve national energy and climate change targets. This is a **direct positive long-term** residual effect.