

By email 2 July 2025

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Office of Environmental Sustainability Environmental Protection Agency PO Box 3000 Johnstown Castle Estate Co. Wexford

Your ref IE Licence Application P1222-01

Our ref 305131

# **IE Licence RFI Response**

RE: Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions) (Licensing) Regulations 2013, in respect of a licence application from Amazon Data Services Ireland Limited for an installation located at Data Centre Building B1, Kildare Innovation Campus (KIC), Barnhall Road, Leixlip, Kildare.

As requested by the Agency under Regulation 10(2)(b)(ii) Notice dated 9 April 2025 Amazon Data Services Ireland Limited (ADSIL) is required to supply additional information relating to licence application no. P1222-01.

#### **Emissions to Water**

<u>Requested item 1:</u> Submit the surface and storm water drainage layout drawings provided to the planning authority.

## **Applicant Response:**

The stormwater drainage layout drawings as provided to the planning authority (Kildare County Council (KCC)) are included with this RFI Response (refer to the Appendix A of this document).

It should be noted that the stormwater drainage layout design has been developed further since the submission of the planning application. Thus, the stormwater drainage system submitted as part of this IE Licence application includes minor differences from drawings submitted to KCC as part of the planning application. There is no change to the inbound point of connection and / or discharge points to the KIC Masterplan site.

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In comparison to the stormwater drainage layout drawings submitted as part of the planning application to KCC for the KIC Masterplan site, in the current stormwater drainage design for the Installation site outlined in the drawings provided with this IEL application:

- 1. The cooling water discharge drainage network is now connected to the foul water drainage network;
- 2. The layout of the pipeline network varies slightly in terms of its routing;
- 3. An additional monitoring station (SW1-1) is installed towards discharge point SW1;
- 4. An additional monitoring station is installed at the inbound point of connection ISW1; and
- 5. The location of Class 1 hydrocarbon interceptors varies slightly.

**Requested item 2:** The storm water monitoring regime proposed in the application for visual monitoring only (weekly) is insufficient (Attachment 7-7). Submit revised stormwater monitoring proposals, which include the following additions/changes as a minimum: visual (daily), pH (weekly), TOC (weekly), temperature (weekly), conductivity (weekly) and "any other parameter as may be required by the Agency".

## **Applicant Response:**

The stormwater monitoring regime proposed in the application has been revised to include visual (daily inspection), pH (weekly inspection), TOC (weekly inspection), temperature (weekly inspection), conductivity (weekly inspection) and any other parameter as may be required by the Agency.

Refer to the revised versions of the relevant attachments (Attachment 7-7 Storm Water Discharges RFI Revision and Attachment 7-7-1 Storm Water Monitoring RFI Revision) that have been included with this RFI Response submission.

<u>Requested item 3:</u> Submit confirmation that the installation has permission to discharge stormwater to the KIC drainage system.

#### **Applicant Response:**

The letter from the KIC Masterplan site landowner, confirming permission for the Installation to discharge stormwater to the KIC Masterplan site storm water drainage system is included with this RFI Response submission, refer to Appendix B of this document.

#### **Emissions to Sewer**

<u>Requested item 4:</u> Submit the foul and process wastewater drainage drawings provided to the planning authority.

#### **Applicant Response:**



The foul drainage layout drawing as provided to the planning authority (KCC) has been included with this RFI Response, refer to Appendix C of this document.

It should be noted that the foul water drainage layout design has been developed further since the submission of the planning application. Thus, the foul drainage system submitted as part of this IE Licence application includes minor differences from the drawings submitted to KCC as part of the planning application. There is no change to the inbound point of connection and / or emission point to the KIC Masterplan site.

In comparison to the foul water drainage layout drawings submitted as part of the planning application to KCC for the KIC Masterplan site, in the current foul water drainage design for the Installation site outlined in the drawings provided with this IEL application:

- 1. The cooling water discharge drainage network is not connected to the foul network;
- 2. The layout of the pipeline network varies slightly in terms of its routing;
- 3. ACO drainage channels beneath the top up tank and fuel unloading bay are connected to the foul network;
- 4. No monitoring station is installed at emission point SE1, however, two (2 No.) cooling water discharge monitoring kiosks are situated along the northern and southern discharge streams;
- 5. An additional monitoring station is installed at inbound point of connection IF1; and
- 6. The location of Class 1 hydrocarbon interceptors varies slightly.

<u>Requested item 5:</u> Submit confirmation that the installation has permission to discharge emissions to sewer to the KIC foul water drainage system.

## **Applicant Response:**

The letter from the KIC Masterplan site landowner, confirming permission for the Installation to discharge foul water to the KIC Masterplan site foul water drainage system is included with this RFI Response submission, refer to Appendix B of this document

<u>Requested item 6:</u> Submit confirmation of communication and agreement with the relevant sanitary authority in respect of the proposed emissions to sewer from the installation and associated emission limit values.

# **Applicant Response:**

It should be noted that the proposed emissions to sewer from the Installation will be discharged to the KIC Masterplan foul sewer. The KIC Masterplan site's foul water network will ultimately discharge to the existing KCC public foul network in accordance with KIC Masterplan site planning application (KCC Planning Ref. 23/60047). The KIC Masterplan site's foul water network will connect to the KCC foul sewer outside of the IE



Licence site boundary on Celbridge Road and foul water will ultimately be disposed of at Leixlip Wastewater Treatment Plant (WWTP).

ADSIL intends on commencing communication with Uisce Eireann with respect to Section 99E of the Environmental Protection Agency Act 1992 in due course.

#### **Emissions to Air**

<u>Requested item 7:</u> Carbon monoxide has not been included in the air dispersion model (ADM) detailed in the air emissions impact assessment (Attachment 7-1-3-2). Update and resubmit the air emissions impact assessment with results for carbon monoxide included.

# **Applicant Response:**

The Air Emissions Impact Assessment has been updated to include the results for carbon monoxide. An updated version of Attachment 7-1-3-2 has been included with this RFI Response submission, refer to Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision. No significant impacts arise on carbon monoxide due to the operation of the Installation.

<u>Requested item 8:</u> The air emissions impact assessment does not provide a confirmation statement verifying the source, accuracy and variability of the emission data used in the ADM. In addition, exit velocity emission data is not provided and a stack height of 18 m above ground level is stated to have been used in the ADM (versus a stack height of 18.6 m in planning). Revise, update and resubmit the air emissions impact assessment accordingly.

## **Applicant Response:**

The Air Emissions Impact Assessment has been updated to include a confirmation statement verifying the source, accuracy and variability of the emissions data used in the ADM as well as exit velocity emission data. It should be noted that a stack height of 18m above ground level was used in accordance with Air Quality Chapter 9 of the EIAR submitted as part of the planning application for the KIC Masterplan site to the KCC (Planning Ref. 23/60047). An updated version of ADM which considered a stack height of 18.6m has been included with this RFI Response submission, refer to Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision. No changes to the conclusions of the air quality assessment arise from the amended stack height.

<u>Requested item 9:</u> The cumulative air dispersion modelling detailed in the air emissions impact assessment does not take account of other nearby EPA installations such as IE registration number P0207-05. Revise the ADM and submit an updated air emissions impact assessment.

## **Applicant Response:**

An updated version of the air assessment which considers the cumulative impact of nearby EPA installations (including P0207-05) has been included with this RFI Response submission, refer to Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision. As no EPA installations are located within the impact area of the Installation, no further



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assessment is required, in accordance with the cumulative assessment guidance in Appendix E of 'Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)' published by the EPA.

Requested item 10: The air dispersion modelling of ecological impacts has only been carried out for one year (2017) and for only one (the nearest) sensitive ecological site. Revise the ADM to assess the ecological impact for a minimum of five years MET data, across all sensitive ecological sites (i.e. SPAs and SACs Natura 2000 sites) within the zone of influence and submit an updated air emissions impact assessment accordingly. Note: if it is the case that the most impacted site is not the nearest site, then the updated air emissions impact assessment should include the results for both (i.e. most impacted and nearest).

# **Applicant Response:**

The Air Emissions Impact Assessment has been updated to include the results for the ADM assessing the ecological impact for five years of MET data across all sensitive ecological sites within the zone of influence of the Installation. An updated version of Attachment 7-1-3-2 has been included with this RFI Response submission, refer to Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision. No changes to the conclusions arise from the inclusion of all sites within the zone of influence.

<u>Requested item 11:</u> Submit the total nitrogen deposition process contribution for the installation alone as a percentage of the lowest end of the nitrogen deposition critical load range for the worst-case location in each Natura 2000 site within the zone of influence, using worst-case 5 year met data. Provide the NPWS Natura 2000 site identification code for each result.

# **Applicant Response:**

The ADM has been updated to include the total nitrogen deposition process contribution for the Installation alone. An updated version of Attachment 7-1-3-2 has been included with this RFI Response submission, refer to Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision.

<u>Requested item 12:</u> The emergency generator fuel types referred to between the various planning and IE licence application documents include "fuel oil", "HVO", "other fuel oil" and "diesel". Please confirm the precise fuel/s used for the emissions data input to the ADM.

#### **Applicant Response:**

As outlined in the Section 1 of the Air Emissions Impact Assessment submitted as part of this IE Licence application, the modelling assessment has been conducted considering a worst case scenario where no HVO is available to supply emergency generators at the Installation. As such, the results of the Air Emissions Impact Assessment are associated with the operation of the emergency generators onsite when supplied with diesel only.



**Planning** 

<u>Requested item 13:</u> Further to question 12, please confirm the precise fuel/s which planning was received for and clarify the precise fuel/s subject to the IE licence application.

# **Applicant Response:**

As outlined in the IE licence application, ADSIL is committed to using HVO. HVO, where supply is available, will be the preferred source of fuel for the operation of the emergency generators at the Installation. Where insufficient quantities of HVO are available, a blend of diesel and HVO will be supplied to the generators, and in the absence of HVO, diesel will be supplied to the generators. Where a blend of HVO and diesel is supplied to the generators, the ratio of HVO: diesel supplied will vary with the availability of HVO.

This approach is consistent with the information provided in Section 2.5.2 of the EIAR submitted as part of the planning application for the KIC Masterplan site (KCC Pl. ref: 23/60047):

"The data centre operator, similar to the energy centre, is committed to using Hydrotreated Vegetable Oil (HVO) (where available) as the back -up fuel supply for the generators."

For the purposes of clarity, any document revised and submitted as part of this RFI Response submission with reference to "fuel oil" have been updated to state "fuel". As mentioned above, "fuel" refers to HVO, Diesel and / or a blend of HVO and Diesel.

Please note that any outstanding reference to "fuel oil" found in the original IE Licence application documentation refers to HVO, Diesel and / or a blend of HVO and Diesel.

<u>Requested item 14:</u> With regard to the KIC masterplan, planning documents indicate that the installation which is the subject of this IE licence application (Data Centre Building B1 and associated standby generators) will be completed during Phase 1 however will only utilise 16MW of power from the grid. Following completion of Phase 3, this will increase to a c. max of 32MW of power. At which phase of the KIC masterplan has the installation's activities, emissions and operations been based off in the IE licence application?

## **Applicant Response:**

The data storage room at the Installation will consist of six rooms and the full operation of all six rooms will require a total of 32MW to operate. Three of these rooms will be constructed and operated during Phase 1 of the KIC Masterplan site development, requiring 16MW of power. The final three rooms, requiring an additional 16MW to operate, will be constructed as part of Phases 3 of the KIC Masterplan site development.

The activities, emissions and operations of the Installation, as described in this IE licence application, have been based off of Phase 3 of the KIC Masterplan site development and consider the total operational power requirements of 32 MW.

<u>Requested item 15:</u> Further to the KIC masterplan, planning documents indicate that Phase 1 includes the development of combustion turbine generator/s (CTG/s) available to dispatch 16MW to



the national grid, to match the Phase 1 power demands of Data Centre Building B1. Please confirm the following aspects relating to this:

- a. the total rated thermal input of the CTG/s to be developed during Phase 1,
- b. the relationship between Data Centre Building B1 and the KIC Phase 1 CTG/s operationally, infrastructurally and ownership, and
- c. clarification why the Phase 1 CTG/s, insofar as how they may relate to the installation (Data Centre Building B1), have not been included as part of the IE licensable activities applied for.

# **Applicant Response:**

## Response to Item 15a

The CTGs indicated in the planning documents are a part of the energy centre situated on the proposed KIC Masterplan site and are owned and operated by a separate entity. There is no operational or infrastructural relationship between these CTGs and the Installation. Thus, ADSIL is not party to any data regarding the CTGs beyond what is presented in the EIAR submitted to KCC as part of the planning application for the KIC Masterplan site (KCC Pl. ref: 23/60047).

The only information available regarding the operation of the CTGs during Phase 1 of the KIC Masterplan site development is their availability to dispatch 16MW to the national grid, as outlined in the EIAR submitted to the KCC as part of the planning application for the KIC Masterplan site. The total rated thermal input of the CTGs that will operate on the KIC Masterplan site during Phase 1 of the KIC Masterplan development is unknown to the applicant.

The operation of the CTGs have been assessed through the Environmental Impact Assessment (EIA) process for the KIC Masterplan site planning application to KCC and is considered as part of the cumulative air emissions impact assessment submitted as part of this IE Licence application.

## Response to Item 15b

There is no relationship between Data Centre Building B1 and the CTG/s that will operate during Phase 1 of the KIC Masterplan site development, operationally, infrastructurally or from an ownership perspective. The Data Centre Building B1 will operate independently of the CTG/s situated on the KIC Masterplan site. It should be noted that the cumulative impact assessment of air emissions from the Installation considers the CTGs and other data centres proposed on the KIC Masterplan site.

## Response to Item 15c

The CTGs form a part of the energy centre situated on the KIC Masterplan site. These CTGs are owned and operated by a separate entity. As previously stated, the CTGs provide



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power directly to the national grid. The CTGs are not owned or operated by ADSIL and are not integral to the operation of the Installation.

#### **BAT/BREF**

<u>Requested item 16:</u> The Large Combustion Plants (LCP) BAT/BREF is applicable to this installation due to the class of activity being applied for - while the LCP BATs relating to individual combustion units may not be applicable (due to their individual rated thermal input), the LCP BATs relating to the overall installation, however, still apply in general. Accordingly, carry out and submit an LCP BAT/BREF assessment.

## **Applicant Response:**

The LCP BAT/BREF assessment has been carried out and is included with this RFI Response submission, refer to Attachment 4-7-4 BREF Large Combustion Plants.

#### **AA Screening**

<u>Requested item 17:</u> The AA screening has not considered EPA Instruction note: "Licence Application Instruction Note 2 (IN2) (DRAFT) Assessing the Impact of Ammonia Emissions to Air and Nitrogen Deposition from EPA licensable activities on European Sites, 2024", as may be amended or replaced by the Agency. Further to question 11, submit a revised AA screening assessment in accordance with the above EPA Instruction note.

## **Applicant Response:**

The AA screening submitted as part of the IE Licence was prepared in advance of the publication of the EPA Instruction note: "Licence Application Instruction Note 2 (IN2) (DRAFT) Assessing the Impact of Ammonia Emissions to Air and Nitrogen Deposition from EPA licensable activities on European Sites, 2024." The revised AA screening has been updated to consider the EPA IN2 (DRAFT) document.

The revised version of the AA Screening is included with this RFI Response submission, refer to Attachment 6-2-1 AA Screening Kildare Innovation Campus\_Rev2.

The revised AA Screening states that "it can be objectively concluded, based on the best scientific knowledge available, that no significant effects whether arising from the project itself or in combination with any other plan or project, are likely to occur to the Natura 2000 sites: South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Dublin Bay SAC and North Bull Island SPA or any other European site in the wider hinterland. This conclusion is reached in light of the special conservation and qualifying interests of the sites in question and in view of the site's conservation objectives."

It should be noted that the conclusions of the revised AA Screening align with those included in the original AA Screening. Thus, any conclusions based on the findings of the original AA Screening mentioned throughout the original IE Licence application documentation remain. It should be noted that mentions to the findings of the original AA



Screening included in any of the revised documents submitted as part of this RFI Response have been updated to the reflect the views of the updated AA Screening.

#### **HVO**

**Requested item 18:** Further to question 13, if it is the case that HVO fuel applies, outline how you will determine and ensure the following aspects of HVO supplied to the installation:

- d. appropriate source and nature of feedstock/s,
- e. compliance with Waste Framework Directive requirements (applicable where used cooking oil or other waste materials are employed as feedstock), and
- f. compliance with REDIII Directive requirements.

# **Applicant Response:**

# Response to item 18(a):

HVO for the Installation site will be sourced from suppliers that can provide Proof of Sustainability (PoS) under the Renewable Energy Directive (RED) Voluntary Scheme system. Presently, the Installation utilises Certa as a supplier of HVO Fuel. Certa's current supplies of HVO is derived from used cooking oil (UCO). Other waste-based feedstocks such as palm oil mill effluent (POME) and tallow are also utilised in the production of HVO.

## Response to item 18(b):

The HVO used at the Installation site will be imported. The imported HVO fuel is a product, and not a waste, and its use as fuel does not fall within the scope of the Waste Framework Directive.

There is currently no significant commercial HVO fuel production in Ireland. A substantial proportion of imported HVO fuel is produced in the Netherlands, with additional sources including the USA, Sweden, Belgium, China, and Italy. The fuel is produced outside Ireland and imported into Ireland as a finished product.

HVO at the site will be sourced from reputable suppliers to ensure it meets the high-quality standards. HVO is a manufactured product designed specifically for fuel use and is not a waste material. HVO fuel complies with EN 15940 standards (paraffinic diesel fuel).

# Response to item 18(c):

The Installation will use suppliers that can provide Proof of Sustainability (PoS) under the Renewable Energy Directive (RED) Voluntary Scheme system. Ireland does not have its own national RED certification scheme so compliance must be demonstrated through a European Commission approved scheme or the national scheme of another Member State.

Under the PoS the HVO Feedstock is certified to ensures that it meets the definition of waste or residue under the REDIII Directive. As mentioned in Response to item 18(a), the



Installation utilises Certa as a supplier of HVO Fuel. Certa's current supplies of HVO is derived from UCO. Other waste-based feedstocks such as POME and tallow are also utilised in the production of HVO provided that they meet the definition of waste or residue under the REDIII Directive.

While the Installation aims to use HVO whenever possible, it cannot commit to using it exclusively due to potential supply challenges. It is likely that during the operational lifetime of the Installation HVO and diesel fuel will both be used as they will be blended in the fuel storage tanks.

## **Additional Updates to the IE Licence Application**

Please note that since the submission of the IE Licence application (P1222-01), the design of the Installation has been developed further with some minor amendments. Subsequently, the generator capacity and technical specifics of plant items have been revised and differ slightly from those initially presented as part of the original IE Licence application.

#### **Generator Capacity**

The 14 no. critical emergency generators on site will each have a capacity of  $7.73~\text{MW}_{\text{th}}$ . To accommodate this change, any reference to 14 no.  $7.65~\text{MW}_{\text{th}}$  critical emergency generators in the documentation submitted with the original IE Licence application has been superseded by 14 no.  $7.73~\text{MW}_{\text{th}}$ . In line with this, the combined thermal input from the generators at the Installation once fully operational of  $110.75~\text{MW}_{\text{th}}$  has been superseded by  $111.9~\text{MW}_{\text{th}}$ .

Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision has been updated accordingly to reflect this minor change in the generator specification. There are no changes to the outcome of the assessment.

#### Plant Item Technical Specifics

The noise levels of the AHU and extract fans associated with the data storage room cooling systems slightly differ from those in the noise modelling submitted as part of the original IE Licence application.

Noise emission modelling and the respective impact assessment report for the Installation has been updated accordingly to reflect this minor change. There is no change to the outcome of the assessment.

Revisions to the noise impact assessment are submitted as part of this RFI Response, refer to Attachment 7-1-3-2 Noise Emissions Impact Assessment RFI Revision.

## **Revised Attachments**

To reflect changes arising in response to this RFI, the following revised attachments are included with this submission:

- Attachment 1-1 Non-Technical Summary RFI Revision;
- Attachment 4-4-1 Capacity Calculations RFI Revision;



• Attachment 4-6-1 Water Energy Use RFI Revision;

- Attachment 4-7-4 BREF Large Combustion Plants;
- Attachment 4-8-1 Operational Report RFI Revision;
- Attachment 7-1-3-1 Emissions Compliance Report RFI Revision;
- Attachment 7-1-3-2 Air Emissions Impact Assessment RFI Revision;
- Attachment 7-1-3-2 Noise Emissions Impact Assessment RFI Revision;
- Attachment 7-4-2 Emissions to Air Minor and Potential RFI Revision;
- Attachment 7-7-1 Storm Water Monitoring RFI Revision;
- Attachment 7-7 Storm Water Discharges RFI Revision;
- Attachment 6-2-1 AA Screening Kildare Innovation Campus Rev2;
- RFI Response Appendix A Planning Application Stormwater Layout Drawing;
- RFI Response Appendix B Confirmation of Stormwater and Foul Water Connection Agreement; and
- RFI Response Appendix C Planning Application Foul Water Layout Drawing.

Any reference to the original copies of the above attachments in the documentation submitted both in the original IE Licence application and with this RFI Response refers to these updated versions.

Yours faithfully,

Sinead Whyte

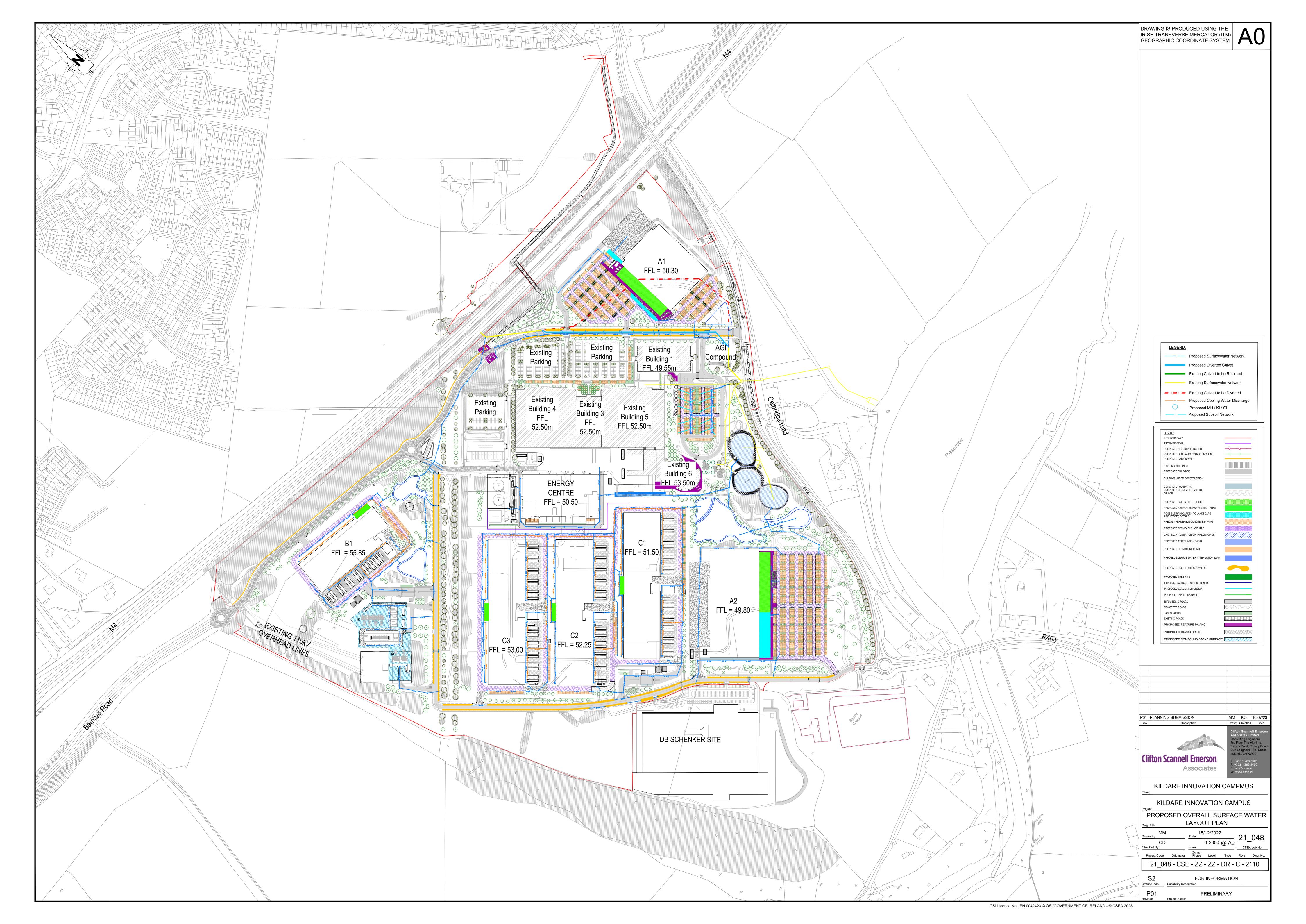
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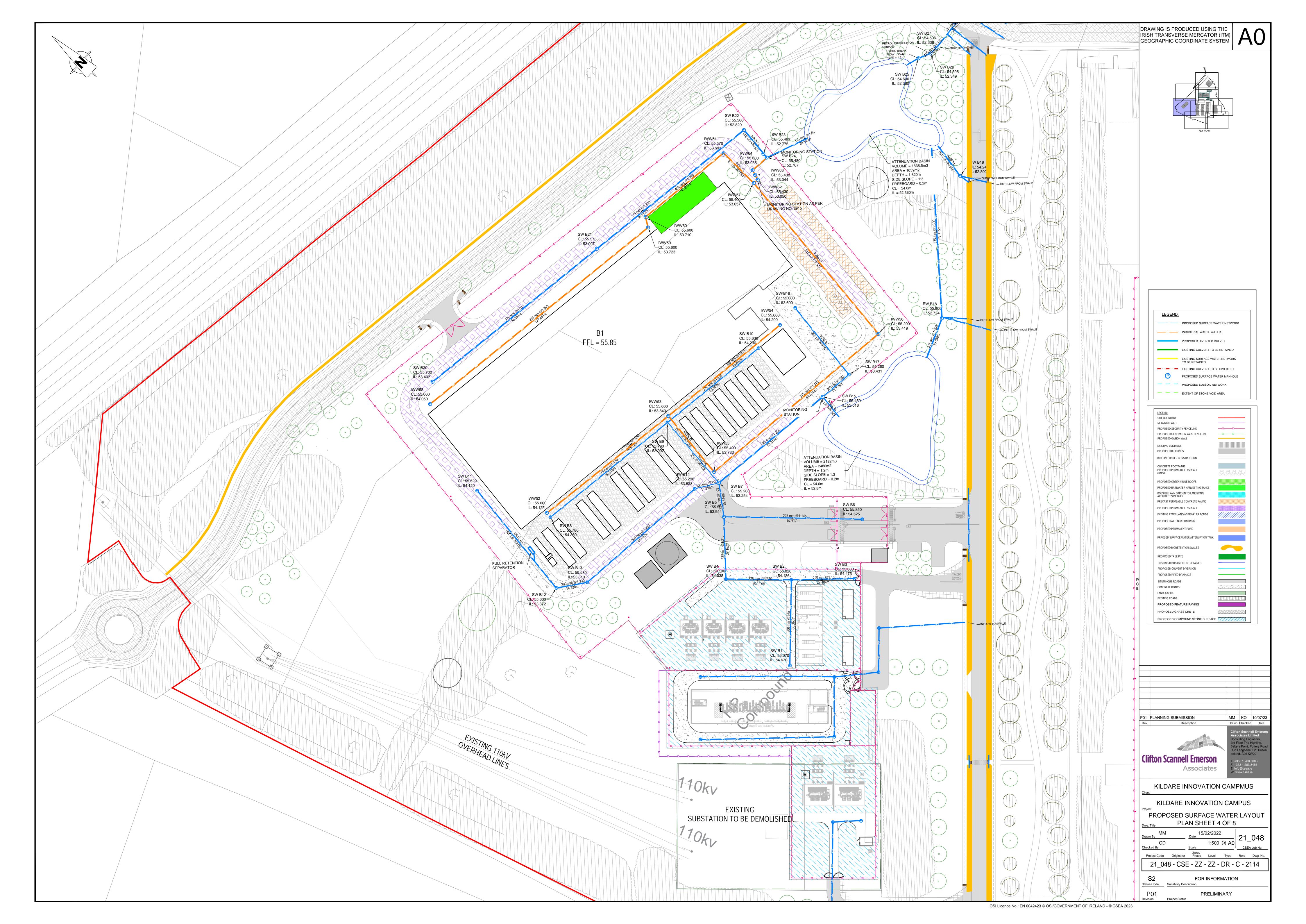
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**Appendix A - Planning Application Stormwater Layout Drawing** 







Appendix B - Confirmation of Stormwater and Foul Water Connection Agreement

TO: Amazon Data Centres Ireland Limited

Date: 10 June 2025

RE: DUB159 - Premises located at Kildare Innovation Campus, Barnhall Meadows, Leixlip, County Kildare (the Site)

To whom It may concern

Pursuant to your request, we The Platform ICAV acting solely for and on behalf of its sub-fund Liffey Sub-Fund, in respect of the Site at Kildare Innovation Campus confirm that we have provided permission to Amazon Data Centres Ireland Limited for the following activities within the Kildare Innovation Campus:

- 1. to discharge stormwater from the Data Centre Building B1 to the KIC drainage system,
- 2. to discharge emissions to sewer from the Data Centre Building B1 to the KIC foul water drainage system

For the avoidance of doubt, the information above is provided in writing solely for information purposes to address the EPA's Request for Information (RFI) dated 9<sup>th</sup> April 2025, in relation to the Reg. No.: P1222-01 IEL application. Amazon Data Centres Ireland Limited shall be solely responsible for obtaining all necessary consents, licences, permits, and approvals (whether statutory or otherwise) required in connection with the above-referenced discharges. Furthermore, Amazon Data Centres Ireland Limited shall bear full responsibility for any and all monitoring obligations, liability, loss, claim, damage, or expense arising directly or indirectly in connection with the exercise of the permissions, including (without limitation) any failure to obtain such consents or approvals or any non-compliance with applicable law or regulation.

Yours faithfully signed by:

Director

The Platform ICAV acting solely for and on behalf of its sub-fund Liffey Sub-Fund

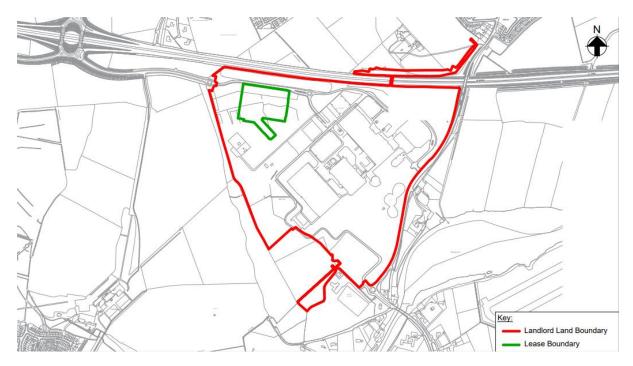


Figure 1: Data Centre Building B1 (outlined in green) location within wider KIC Masterplan (outlined in red)



**Appendix C - Planning Application Foul Water Layout Drawing** 

