Our ref: Q230369
Your ref: P/10076/013
Email: Philip.Murphy@quod.com
Date: 25 February 2025

Mr Alex Harrison
Principal Planning Officer
Slough Borough Council
Observatory House
25 Windsor Rd
Slough
SL1 2EL

Dear Mr Harrison,

LAND AT MANOR FARM, POYLE ROAD, SLOUGH (LPA REF. P/10076/013) Clarifications Submission

Quod write on behalf of our client, Manor Farm Propco Limited (referred as 'the Applicant'), with regard to full planning application ref. P/10076/013 in respect of a data centre and battery energy storage system development at Manor Farm, Poyle Road, Slough ("the Site").

This letter provides responses to queries raised in your email dated 10 February 2025, in addition to public comments received.

Alex Harrison Email dated 10 February 2025

Your email dated 10 February 2025 raised the following topics:

- Details of the heating and cooling strategy
- Clarification of the elevations and finish of the infrastructure relating to the Battery Energy Storage System ("BESS")
- Extension of Time

A response is provided to each below.

Proposed Heating and Cooling Strategy

In designing the application proposals, the Applicant has rigorously analysed the likely plant requirements of the heating and cooling system for the data centre. As a result, the Applicant is confident that the design and scale of the development as proposed can accommodate all plant and machinery requirements of the energy strategy.

The technical analysis was led by the Applicant's appointed specialist, Hoare Lea, who advised on the space allowances that should be made for heating and cooling infrastructure based on their

significant experience of working on comparable sized data centres. A summary of the assumptions made is set out below.

The key mechanical components within the data centre development will likely be Computer Room Air Handling ("CRAH") units in the form of Fan Wall Units ("FWU"); Chillers to remove heat from the CRAHs via a cooled water system; Condensers for space heating and cooling via Variable Refrigerant Flow ("VRF") system; and Air Handling Units ("AHU") for the fresh air intake and exhaust system.

Hoare Lea calculated the cooling load of the data halls to determine the space requirements for the cooling equipment. The strategy assumed the data halls were served by FWU (air solution) located in a technical corridor, fed by a central chilled water system with air-cooled chillers as the cooling equipment of choice. This follows an industry standard approach.

Hoare Lea advised that 10 Chillers were required to serve each of the 9no. 8 MW data halls in normal mode - which equates to a total of 90 Chillers requiring an area of 9,000sqm (assuming N+2 resilience). A mezzanine above the roof has been allocated as a platform large enough to accommodate these Chillers. A Vertiv Liebert AFC chiller profile was indicatively selected (inclusive of acoustic attenuation packs) to assist space-planning during scheme design, as well as standard allowances for access and maintenance.

Within the data hall, a FWU based on Schneider Electric Uniflair FWCV Series (with a rating of 384kW) was selected to give indicative fan wall count and size feasibility. The total fan wall load for a 4MWIT data hall (ie 8MWIT data halls are made up of 2 x 4MWIT corridors) was calculated, with an 8% margin to account for lighting gains, fabric gains, unit fan load, and pump and pipework gains. These inputs resulted in the total number of FWU per 4MWIT data hall (in a single technical corridor) of 15. The corridors therefore contain 30 FWU collectively. Overall, for all 9no. 8MWIT data halls, the total number of FWU required would be 270. This has been allowed within the space planning of the proposed development.

The ancillary equipment associated with the chillers includes the cooling water headers, pump sets, thermal stores and packaged plantrooms containing expansion and buffer vessels. This has been designed to be located on the roof, directly underneath the mezzanine.

A feasibility exercise for the cooling water distribution ring formations was carried out to determine the suitability of the chiller locations and associated equipment on the three floors. Equipment zones were established and utilised for configuring arrangements, rather than specifying individual equipment and dimensions which ensured maximum widths and heights could be accounted for in the development. Clear zones, allowing for pipes and utilities, were also taken into consideration and included in height requirements to ensure functional, comprehensive concept designs.

Dedicated AHUs (sized by Flaktgroup) were selected to provide ventilation for the data halls. Two AHUs are to serve the northern half of the halls and two to serve the south across all three levels - a total of 12no. data hall AHUs for the building.

The space planning for each AHU has allowed for motorised shut off dampers, fresh and extract air attenuators, supply and exhaust air attenuators, frost coil, panel filters, refrigeration equipment containing compressors, control valves, rotary thermal wheel heat exchanger, DX evaporator and condenser coils, EC plug fans and an ultrasonic humidifier.

Approximately 6,500sqft of office space has been allocated within the development. This includes working spaces, WCs, Point of Entry rooms and storage. Plant was assumed to be on the roof of the accommodation itself, which offered space to house the plant and any additional equipment if necessary. A calculation was carried out to identify the comfort heating, cooling and ventilation loads. A VRF system with dedicated external condensers was assumed for the heating/cooling of office spaces. Electric panel heaters are assumed to be provided for plant areas, corridors and storage rooms. Dedicated accommodation AHUs are to provide the ventilation, one to serve the WCs and shower rooms and the other to serve all other areas.

Overall, in preparing the application proposals, the Applicant has given very careful consideration to how plant equipment could be accommodated based upon a series of robust, industry-driven, assumptions. It is anticipated that any planning permission granted will include a standard condition requiring details of all plant to be provided. This will allow the selected tenant to confirm the specific requirements for their operation, but the technical analysis undertaken to date provides reassurance that sufficient allowance has been made in the scheme design such that the design and scale of the development would not need to change.

BESS Drawings

You have requested clarification of the elevational details of the BESS equipment proposed. As such, please see attached the following plans which provide details of the elevations and finish of the BESS infrastructure:

- CON-COR-ZZ-ZZ-D-A-00119 – Proposed Parcel B Layout Plan
- CON-EDFR-ZZ-B4ZZ-D-E-01200 – MVS5000
- CON-EDFR-ZZ-B4ZZ-D-E-01201 – Storage Container
- CON-EDFR-ZZ-B4ZZ-D-E-01202 – BESS Unit
- CON-EDFR-ZZ-B4ZZ-D-E-01203 – DNO Substation
- CON-EDFR-ZZ-B4ZZ-D-E-01204 – Intermediate Substation
- CON-EDFR-ZZ-B4ZZ-D-E-01205 – Auxiliary Transformer & Earthing Transformer
- CON-EDFR-ZZ-B4ZZ-D-E-01206 – LV Auxiliary Switch Room & Welfare Unit

- CON-EDFR-ZZ-B4ZZ-D-E-01207 – Water Tank Arrangement
- CON-EDFR-ZZ-B4ZZ-D-E-01208 – Fencing and Gate Elevations
- CON-EDFR-ZZ-B4ZZ-D-E-01210 – Harmonic Filter Arrangement
- CON-EDFR-ZZ-B4ZZ-D-E-01211 – BESS Substation
- CON-EDFR-ZZ-B4ZZ-D-E-01213 – Control Room

Extension of Time

You have suggested an extension of time to the application's determination period to 30 April 2025 to allow the application to be reported at planning committee on 23 April 2025. I can confirm my client agrees this extension of time.

Neighbour Consultation Responses

The Council's online portal identifies that, to date, there have been 9 'neighbour' consultation responses. These responses cover the following topics/matters:

- Noise - concern that the data centre will result in excessive noise pollution
- Power - concern that the development will impact local grid supply
- Fire - concern about fire risk associated with the proposed uses
- Transport - concern that the proposals will result in additional traffic on Poyle Road, and reservations about the access into the BESS
- Biodiversity - impact on local wildlife
- Flood/Drainage - concern that the development will lead to increased flood risk
- Green Belt - loss of Green Belt land
- Design - unsightly building appearance
- Air quality - concern that the development will result in harms to the local air quality
- Lighting - concern with flood lighting proposed around the BESS

To aid your consideration of the application, we thought it might be useful to provide a response to each - which we address in turn below.

Noise

A Nosie Assessment has been submitted which comprehensively assessed both normal and emergency operations at the data centre and BESS. The Assessment conclusions can be summarised as follows:

- During both daytime and nighttime periods predicted noise levels from normal operation of the data centre will be no greater than existing background noise levels;

- Predicted noise levels during routine testing of the data centre emergency generators will be within the recommended noise criteria and significantly below the existing ambient noise levels, and therefore will not cause significant adverse impact;
- In the event of a power failure, all generators will operate simultaneously, and as a worst case the assessment considered noise impacts from emergency operations against nighttime background noise levels. The assessment demonstrates that internal noise levels at all receptors will be no greater than 30 dB LAeqT and within the internal guideline in BS 8233, and therefore will not cause significant adverse impact;
- Noise from the operation of BESS will be within the recommended daytime and nighttime criteria;
- Taking into account the cumulative impact from both data centre and BESS, the assessment demonstrates that the noise levels will be within the recommended nighttime criteria.

Overall, the Noise Assessment demonstrates that the proposed development is in line with policy aims of the NPPF and Slough Local Plan, and noise from proposed development will not cause a significant or unacceptable impact of noise sensitive properties in the area.

Power Supply

The development will be served by two new connections to the National Grid transmission substations at Iver and Laleham which will supply dedicated and additional power to the site. The development will**,** therefore**,** not impact on local power supply capacity. Conversely, the intent of the BESS is to store electricity generated from renewable sources and release it back to the grid it times of high demand. As a result, the proposed development assists in providing resilience to the power network.

Fire

A Fire Strategy has been submitted in support of the planning application. The strategy addresses matters relating to means of escape, internal fire spread (linings and structures), external fire spread and Fire Service access. The data centre building has been designed with 90 minutes structural fire protection and is fitted with an automatic fire suppression system throughout. The design also includes:

- Protected corridors which will act as a place of relative safety while occupants make their onward escape to the stair cores
- Firefighting shafts with the addition of fire mains outlets in the corridors to ensure all parts of the building are within 60m from a fire main outlet
- Ground mounted fire main inlets will be provided where it is not possible to provide access to the façade within 18m of the fire appliance parking position.

The applicant anticipates that a planning condition will be imposed on any planning permission granted requiring a detailed fire statement to be submitted and approved based on the requirements of the

Fire Strategy, and of course it will develop further as part of the formal Building Regulation requirements.

Transport

A Transport Assessment has been undertaken to support the application submission, which has identified that there will be an overall reduction in vehicle trips to the Site compared to the existing uses. This equates to a reduction in up to 503 two-way movements across the day.

The access into the BESS off the roundabout between Poyle Road and Blackthorne Road is via an existing vehicle cross over and is proposed for emergency vehicles only. This was discussed with highways officers during the pre-application process. The Transport Assessment has fully assessed the acceptability of this emergency access, including via swept path analysis.

Ecology

An Ecological Impact Assessment has been undertaken and submitted with the application confirming that the development will primarily impact habitats of negligible ecological importance. Loss of trees and mixed scrub of local ecological importance will be compensated for by proposed replacement tree and scrub planting. With the enhancement and habitat creation proposed across the Site, including native species planting, habitats of ecological importance on Site will be enhanced, providing additional opportunities for biodiversity in the area, particularly compared to the existing ecological state of the previously developed land.

Biodiversity net gain ('BNG') is a way of creating and improving natural habitats. BNG makes sure development has a measurably positive impact on biodiversity, compared to what was there before development. BNG is a mandatory national requirement, where a minimum of 10% is required for the majority of developments. The proposals would result in a net gain of 11.76 habitat units (115.53%) and 0.23 hedgerow units (10.07%), offering an overall net gain in excess of 10% and thus in compliance with national policy.

Regarding the bat surveys, following an internal visit of the buildings on site, it was identified that out of all the buildings surveyed only Building 1, 2 and 11 were deemed to have Potential Roost Features (PRF). The Preliminary Bat Roost Assessment demonstrates all buildings, including buildings 1, 2 and 11 further surveyed, have negligible suitability to support roosting bats. As per best practice guidelines, no further surveys are required and have been scoped out of the assessment. As per Paragraphs 2.13-2.27 and 3.17-3.27 of the Ecological Impact Assessment report, roosting bats are considered absent from the Site with no further surveys required.

Flood Risk Assessment

A Flood Risk Assessment has been undertaken and submitted with the planning application. Elevated groundwater levels have been recorded on Site; however, the implementation of a new surface drainage system will intercept and store surface water run-off on Site, which will reduce the ground saturation which can lead to groundwater flooding. Proposed SuDS within Parcel A will be

appropriately lined to ensure capacity is not reduced by groundwater ingress and site levels will generally be retained or raised. Therefore, the risk of groundwater flooding is considered low.

The Environment Agency's flood map for planning shows that the site is located in Flood Zone 1 and is not at risk of flooding. Developments in this flood zone do not have any restrictions, provided they do not increase the risk of flooding elsewhere. The EA's indicative Surface Water Flooding map shows that the site is generally at low risk of surface water flooding. The proposed SuDS will reduce peak run-off rates from Site to receiving sewers. As a result, the assessment demonstrates the risk of surface water flooding to be low.

Green Belt

The planning application is supported by a wealth of documentation that justifies the development proposed, including in relation to the Green Belt status of the Site. In particular, the Green Belt Assessment confirms the limited role and function of the Site in Green Belt terms, and as a result the very limited level of Green Belt harm that arises.

Furthermore, in the context of this assessment, the Planning Statement explains how the low level of Green Belt harm (and other harms), are clearly and demonstrably outweighed by a series of factors in support of the development. This position has been reinforced by the now published changes to the NPPF which confirms that development on Grey Belt land – i.e. previously development land or land that does not strongly contribute to NPPF Green Belt purposes a, b and d – does not represent 'inappropriate development' and hence very special circumstances do not need to be justified.

Design

The application is supported by a Design & Access Statement ("DAS") and a Landscape & Visual Impact Assessment. The DAS explains the high-quality approach adopted to the design of the data centre, which is a considerable step change from other existing data centre designs across Slough and beyond. The assessments demonstrate the accessibility of the proposed design and show that they will not result in significant adverse harm to landscape character or key views.

Air Quality

The application is supported by an Air Quality Assessment. The assessment of emissions from routine testing of the generators has demonstrated that the off-site human health impacts of these emissions will be negligible. The impacts of the emergency generator emissions on nearby designated ecological sites have also been assessed and it has been confirmed that the impacts can be screened out as not significant under Environment Agency criteria. The assessment also demonstrates that the traffic associated with the proposed development will not result in significant impacts.

During the construction works, a range of best practice mitigation measures will be implemented to reduce dust emissions, and the overall effect will not be significant. Appropriate measures have been set out in the assessment, which the applicant anticipates will be captured in Dust Management Plan to be submitted and approved under condition.

Overall, the operational air quality effects of the proposed development are judged to be 'not significant' for existing human health receptors.

Lighting

The BESS does not require any high-level flood lighting. As shown on the application drawings, specifically the BESS infrastructure elevational plans, some elements have building specific lighting features, which will be low level and contained around the confines of that building. As a result, there will be no significant light spill from the BESS operation.

Red Line Application Site Boundary

It has come to the Applicant's attention that there is a slight drafting error in the alignment of the red line application site boundary immediately north of the BESS/east of the internal estate road. Please see attached a revised red line application site plan Ref No. CON-COR-ZZ-ZZ-D-SK-00101 P02. The now corrected discrepancy is minor, resulting in a small reduction to the size of the redline. I have also attached updated application drawings where the red line is shown.

Please refer to the schedule at Appendix A confirming the status of each application drawing.

I trust that the above and attached is clear and provides helpful clarifications, however, should you have any questions please do not hesitate to contact me.

Yours sincerely,

Philip Murphy
Senior Director

Appendix A – Drawing Schedule

Drawing Title	Original Submission Drawing Reference Number	Clarification Submission February 2025 Drawing Reference Number
Site Location Plan	CON-COR-ZZ-ZZ-D-A-00101 P01	CON-COR-ZZ-ZZ-D-A-00101 P02
Existing Site Plan	CON-COR-ZZ-ZZ-D-A-00102 P01	CON-COR-ZZ-ZZ-D-A-00102 P02
Demolition Site Plan	CON-COR-ZZ-ZZ-D-A-00103 P01	CON-COR-ZZ-ZZ-D-A-00103 P02
Proposed Site Plan	CON-COR-ZZ-ZZ-D-A-00104 P01	CON-COR-ZZ-ZZ-D-A-00104 P02
Existing Site Section – North & South	CON-COR-ZZ-ZZ-D-A-00106 P01	-
Existing Site Section - East & West	CON-COR-ZZ-ZZ-D-A-00107 P01	-
Proposed Site Section - North & South	CON-COR-ZZ-ZZ-D-A-00108 P01	-
Proposed Site Section - East & West	CON-COR-ZZ-ZZ-D-A-00109 P01	-
Proposed Parcel A Plan	CON-COR-ZZ-ZZ-D-A-00116 P01	-
Proposed Data Centre – Ground Floor Plan	CON-COR-ZZ-B100-D-A-00203 P01	-
Proposed Data Centre – First Floor Plan	CON-COR-ZZ-B101-D-A-00220 P01	-
Proposed Data Centre - Second Floor Plan	CON-COR-ZZ-B102-D-A-00229 P01	-
Proposed Data Centre - Roof Floor Plan	CON-COR-ZZ-B103-D-A-00238 P01	-
Proposed Data Centre - Roof Platform Plan	CON-COR-ZZ-B104-D-A-00239 P01	-
Proposed Data Centre – Elevations - East & West	CON-COR-ZZ-B1ZZ-D-A-00501 P01	-

Proposed Data Centre – Elevations - North & South	CON-COR-ZZ-B1ZZ-D-A-00502 P01	-
Proposed Data Centre – Sections	CON-COR-ZZ-B1ZZ-D-A-00601 P01	-
Proposed Guard House – Plans, Sections & Elevations	CON-COR-ZZ-B2ZZ-D-A-00250 P01	-
Proposed Substation – Plans	CON-COR-ZZ-B300-D-A-00260 P01	-
Proposed Substation – Section	CON-COR-ZZ-B3ZZ-D-A-00602 P01	-
Parcel A – Strategic Landscape Masterplan	P25-1155-EN-001E	P25-1155-EN-001F
Detailed Landscape Proposals – Parcel A	P24-1155-EN-003C	P24-1155-EN-003D
Parcel B – Strategic Landscape Masterplan	P24-1155-EN-002D	P24-1155-EN-002E
Detailed Landscape Proposals – Parcel B	P24-1155-EN-004B	P24-1155-EN-004C
Proposed Parcel B Layout Plan	-	CON-COR-ZZ-ZZ-D-A-00119 P02
MVS5000	-	CON-EDFR-ZZ-B4ZZ-D-01200
Storage Container	-	CON-EDFR-ZZ-B4ZZ-D-01201
BESS Unit	-	CON-EDFR-ZZ-B4ZZ-D-01202
DNO Substation	-	CON-EDFR-ZZ-B4ZZ-D-01203
Intermediate Substation	-	CON-EDFR-ZZ-B4ZZ-D-01204
Auxiliary Transformer / Earthing Transformer	-	CON-EDFR-ZZ-B4ZZ-D-01205
LV Auxiliary Switch Room, Control Room & Welfare Unit Arrangement	-	CON-EDFR-ZZ-B4ZZ-D-01206
Water Tank Arrangement	-	CON-EDFR-ZZ-B4ZZ-D-01207
Fencing and Gate Elevations	-	CON-EDFR-ZZ-B4ZZ-D-01208
Harmonic Filter Arrangement	-	CON-EDFR-ZZ-B4ZZ-D-01210
BESS Substation Arrangement	-	CON-EDFR-ZZ-B4ZZ-D-01211

Control Room	-	CON-EDFR-ZZ-B4ZZ-D-E-01213