

PLANNING REF : 262274
PROPERTY ADDRESS : 17 Moss Close
: Reading, Berks
: RG4 5HH
SUBMITTED BY : HO CHAN
DATE SUBMITTED : 08/10/2026

COMMENTS:

the applicant has undertaken a range of environmental assessments and proposed measures intended to mitigate the impacts.

I am not opposed in principle to the redevelopment of the site or the provision of additional digital infrastructure. However, having reviewed several of the supporting documents, I have reservations regarding the scale and concentration of energy infrastructure, its proximity to an existing high-pressure gas pipeline, the environmental implications of long-term natural gas dependence, and the potential effects on the surrounding environment.

I also believe that the scale of the development and its associated environmental burden should be considered alongside the relatively limited permanent employment and direct economic benefits expected within the borough.

1. Proximity to the high-pressure gas pipeline and cumulative safety risks

The Utilities Statement (section 2.2) identifies an existing 600mm steel high-pressure gas pipeline running through the southern part of the development site, with a 12-metre easement extending 6 metres on either side. I acknowledge that the proposed layout avoids this easement and that SGN has indicated no fundamental objection to the proposed gas connection, subject to certain requirements.

However, the absence of an easement infringement should not necessarily be regarded as sufficient evidence that the overall arrangement presents an acceptable level of risk.

The proposed development would introduce substantial natural-gas-powered fuel-cell installations, gas pressure-reducing equipment, 36 backup diesel generators and associated fuel storage within a relatively concentrated area. Although these individual installations may comply with their respective technical and safety requirements, I am particularly concerned about their proximity to one another and to the existing high-pressure gas pipeline. For example, a major incident involving the pipeline or one of the on-site energy installations could potentially affect neighbouring equipment. The possibility of a cascading incident, involving multiple installations rather than a single isolated component, deserves consideration. I recognise that solid-oxide fuel cells differ fundamentally from conventional combustion generators and that the presence of these installations does not necessarily imply an unacceptable safety risk. Nevertheless, given the potential consequences of a major gas release or fire, the applicant may find it beneficial to publish a

consolidated, site-specific assessment demonstrating how the different elements of the development have been considered together. This could include the relevant Health and Safety Assessment, the actual

separation distances from the pipeline, the proposed gas pressure-reducing installations, and the measures designed to prevent an incident escalating between neighbouring facilities. Such information would provide greater reassurance to residents that the assessment extends beyond simple compliance with the pipeline easement and considers the overall concentration of energy infrastructure. The Environmental Statement (Volume 2, section

4.2.3) addresses major accident scenarios, including fire, explosion and loss of containment. However, it is not immediately apparent from the material reviewed how comprehensively the interaction between the existing high-pressure pipeline and the proposed energy installations has been assessed. Given the nature and scale of the development, greater transparency on this matter would be welcome.

2. Backup generation and on-site fuel storage

The Energy & Sustainability Statement proposes 36 diesel-fired backup generators, supported by sufficient on-site fuel storage for up to 72 hours. I appreciate that backup power is an essential requirement for data centres and that the applicant has undertaken air-quality modelling, including scenarios involving extended generator operation. However, this proposed quantity of backup equipment and associated fuel storage adds another consideration to the overall concentration of energy infrastructure on the site. The combined presence of high-pressure natural gas infrastructure, fuel-cell installations and diesel-powered backup generation raises questions about how the different facilities would interact during an emergency. It may therefore be helpful for the applicant to disclose the total proposed fuel storage capacity, the general arrangement of storage and generating equipment, and the principal safeguards designed to prevent fire or other incidents affecting neighbouring installations.

The supporting documents also indicate that the generators are designed to accommodate selective catalytic reduction (SCR) equipment. Clarification of whether these emissions-control systems form part of the committed design would help establish whether the environmental performance assumed in the assessments will be achieved in practice.

I am not suggesting that backup generators or on-site fuel storage are unsuitable for the development. Rather, their scale and proximity to other infrastructure justify examination of the combined risks. 3. Long-term dependence on natural gas and greenhouse-gas emissions

The proposed energy strategy is another significant concern. According to the Energy & Sustainability Statement, the initial development would rely heavily on natural-gas-powered solid-oxide fuel cells, with an effective electrical output of approximately 42.5MW. The applicant envisages transitioning towards greater use of grid

electricity from approximately 2037, subject to sufficient grid capacity becoming available. I appreciate that electricity-network constraints can make large developments difficult to deliver and that the applicant has examined different energy-supply scenarios. Nevertheless, there is a considerable difference between the environmental consequences of the proposed development if natural-gas generation continues over the long term and those associated with a successful transition to grid electricity.

The applicant's lifecycle analysis estimates approximately: - 8.38 million tonnes of CO₂e under the scenario in which natural-gas fuel cells are retained over the assessed lifecycle.

- 2.10 million tonnes of CO₂e under the scenario involving a transition away from the fuel cells towards grid electricity. These illustrate how significantly the development's long-term environmental performance depends on the availability of future grid

infrastructure.

The Environmental Statement also identifies major adverse, significant greenhouse-gas effects at the local level. While the proposed

transition away from natural gas is welcome, it appears to remain dependent on future network capacity rather than being an outcome that can presently be guaranteed. I would love to see the applicant explain more clearly how the development's environmental commitments would be maintained if the required grid reinforcement were delayed beyond 2037, or if the anticipated capacity were not delivered. This is particularly relevant given the lifespan of the proposed development. A delay of several years in the transition away from natural gas could result in a substantial increase in cumulative greenhouse-gas emissions.

In my view, the environmental assessment should give appropriate weight to these uncertainties rather than placing excessive reliance on the preferred decarbonisation scenario.

4. Waste heat generation and opportunities for heat recovery

The proposed data centre would produce substantial quantities of waste heat, both from its electrical equipment and from the operation of the natural-gas fuel cells. I acknowledge that the applicant has considered opportunities for heat recovery and potential connections to district-heating infrastructure. However, these arrangements appear to depend on future infrastructure and agreements with third parties, while the current design anticipates rejecting substantial quantities of heat into the atmosphere. The Energy & Sustainability Statement also indicates that recovery of high-grade waste heat from the fuel cells has been considered but discounted. Given the scale of the proposed installation, the applicant may find it beneficial to disclose a more comprehensive thermal balance, including the quantity of waste heat expected under normal and peak operating conditions and the locations and characteristics of the principal heat-discharge points, and how those might affect the local areas. Such information could help residents understand the extent and profile of heat rejection and whether there are any meaningful implications for the surrounding local environment.

I recognise that substantial heat generation does not necessarily translate into a significant local temperature increase. That would depend on the discharge arrangements, atmospheric dispersion and surrounding conditions. Nevertheless, the development's proximity to woodland, wildlife habitats and the wider River Thames environment makes it reasonable to consider whether continuous heat rejection has any material localised effects.

There is also a broader sustainability question as to whether the potential for beneficial heat recovery has been sufficiently explored, particularly given the considerable quantities of heat that would otherwise be released to the atmosphere.

5. Biodiversity, mature trees and surrounding natural habitats I acknowledge the biodiversity improvements proposed by the applicant and recognise that both electrical substation options achieve the statutory minimum 10% Biodiversity Net Gain requirement under the submitted assessment. However, the Biodiversity Net Gain Assessment identifies a substantial difference between the two options.

The 33kV layout is estimated to achieve a biodiversity gain of 22.69%, compared with 11.53% for the 132kV layout. The assessment also

indicates that 30 existing individual trees would be retained under the 33kV option, compared with 16 under the 132kV option.

The 132kV arrangement therefore provides a relatively narrow margin above the statutory minimum biodiversity requirement. Furthermore, the proposed gain relies partly on the successful creation and long-term management of replacement and enhanced habitats, including open mosaic habitat on previously developed land. I also note that the Environmental Statement recognises the ecological importance of the surrounding woodland, the River Thames corridor, Thames Valley Park Nature Reserve and nearby Local Wildlife Site.

It would be beneficial to provide a clearer explanation of how the proposed development will protect these surrounding areas from indirect effects, even where they fall outside the development boundary or the statutory BNG calculation. In particular, potential effects arising from continuous operational noise, artificial lighting and changes to the surrounding environment warrant consideration. The difference in biodiversity outcomes between the two electricity-supply options also highlights a potential trade-off between the development's decarbonisation objectives and the retention of existing habitats.

It would be encouraging to see a design approach that seeks to minimise this trade-off rather than accepting greater habitat loss as an unavoidable consequence of future grid reinforcement.

6. Continuous operational noise and its effect on neighbouring areas
A further consideration is the potential for continuous operational noise from the proposed facility. Unlike conventional office developments, data centres require substantial mechanical and electrical equipment to operate throughout the day and night. The proposed development includes extensive cooling, ventilation, fuel-cell and associated equipment, alongside backup generators that would operate during testing or interruptions to the primary electricity supply.

I acknowledge that the Environmental Statement includes a noise assessment and proposes operational noise limits and mitigation measures. However, the assessment also recognises that detailed equipment specifications, sound-power levels and operating arrangements have not yet been finalised. The continuous nature of the proposed operations makes the final acoustic design particularly important. Even where predicted noise levels fall within applicable assessment criteria, attention should be given to tonal characteristics, low-frequency noise and the difference between daytime and night-time background conditions.

It would be beneficial to explain how the cumulative noise from all major installations has been considered, including the potential for continuous operation during quieter night-time periods. This is particularly relevant to nearby woodland and wildlife habitats as the nearby nature reserve and ecological corridors may support species sensitive to changes in noise and artificial lighting.

I appreciate that the relationship between industrial noise and ecological effects is complex, and that the presence of additional noise does not automatically imply significant ecological harm. Nevertheless, given the sensitivity of the surrounding natural environment, the final operational noise and lighting characteristics should be understood and appropriately controlled. It would be

reassuring to know that the environmental conclusions will remain valid once the precise equipment and its final arrangement have been

determined.

Finally, I acknowledge that this is an outline planning application and that certain detailed matters will be addressed through subsequent design and approval processes. It is therefore understandable that some equipment specifications, installation arrangements and mitigation measures have yet to be finalised. However, I believe there is an important distinction between technical details that can reasonably be resolved at a later stage and matters that determine whether the proposed development is acceptable in principle. The safety implications of locating substantial energy infrastructure near a high-pressure gas pipeline, the long-term greenhouse-gas consequences of the proposed energy strategy, and the ability to protect surrounding habitats are central considerations rather than minor design details. Where the environmental acceptability of the proposal depends on future mitigation measures, it would be beneficial for the applicant to demonstrate that those measures are technically achievable and can be secured through appropriate planning conditions or obligations. In particular, the proposed transition away from natural-gas generation, the final arrangements for energy infrastructure, biodiversity enhancement and operational noise mitigation should not depend solely on non-binding intentions. I recognise that planning conditions can provide an effective means of controlling the detailed implementation of a development.

Nevertheless, I suggest the Council should scrutinise the above points and make sure the essential mitigation measures are realistically deliverable within the parameters of the outline permission before reaching a decision. At present, I have reservations about supporting the application in its current form. I believe the Council should ensure that the key safety, environmental and infrastructure considerations have been adequately demonstrated before determining whether the benefits of the development outweigh its potential adverse effects. I recognise the increasing importance of data centres to the UK's digital infrastructure and the potential economic benefits of redeveloping an existing commercial site. I also acknowledge that