

Key:

Black font – original comments by Yaxley Parish Council.

Green font – response by Conrad Energy

Red font – response and comments by Yaxley Parish Council.

### Clarification is sought on the following:

Yaxley Parish Council was extremely disappointed with the timing of the delivery of the response from Conrad Energy and the delay in it being sent. The responses are very general and descriptive rather than giving good scientific quantitative data from which the Parish Council can make judgements.

1. At what stage of the planning application process for the synchronous condenser (SC) was Conrad Energy aware there was a bay available at the substation?  
As part of Pathfinder 3 procurement and requirements for the East of England, National Grid identified Yaxley as a substation to connect into.
  - This is not a response to the question.
  - This application is not legitimate in that the fact that Conrad Energy revealed in a public meeting on 12<sup>th</sup> January 2023 that a connection portal for a synchronous condenser had been built into the Yaxley substation at its construction stage. This was not made public when the planning application for that substation was made; nor was it revealed in the subsequent submissions of Progress Power to the Planning Inspectorate and to the Secretary of State. The fact that it was always the intention to build a synchronous condenser close to the substation should have been a material part of the planning application for and planning enquiries into the Yaxley Substation. Given that fact how can the Parish Council be sure when considering the current application that connection facilities and plans do not exist for further electrical installations adjacent to this site?
2. A graph to show the proportionality of effect of increased distance (c. 500 metres) of the SC from Yaxley sub-station against efficiency of function.  
The awarded contract is based on the delivery of the specific requirements made by National Grid. Any changes to the distance impact this.
  - This is not a response to the request for clarification.
  - Why is a more distant site is not feasible? Information on the effect of increased distance of this condenser from the substation on efficiency has been completely absent despite repeated requests.
3. What would be the cost and impact on an application for siting the SC on Eye Airfield?  
Please refer to our answer to Question 1 “Site Location” in the response to comments raised by Yaxley Parish Council regarding siting of the project.  
Again this not a response to the question asked.
  - Reasons other than proximity to the substation as to why this green field site in an area of natural beauty and historic significance has been chosen over suitable brown field locations.
  - The size of the proposed condenser site and of its equipment housing is out of all proportion to its surroundings.
  - It would be incongruous with the nearby listed Goswold Hall and even with the landscaped, gas cooled substation on the adjacent site designed and specified in the light of extensive planning enquiries.
  - It is being proposed for a green field site in an area of natural beauty near Iron Age hedge boundaries, yet other local feasible brown field sites in existing industrial locations have not been considered.
4. Quantitative data is required on the electromagnetic field from the SC.  
Please see our answer in response to Question 16
  - See under Question 16.
5. A landscaping plan as there is not one in the documents the Clerk printed from the Planning Website.  
A draft landscape plan has been submitted with the planning application and included in the landscape assessment.

- This response is not acceptable. Details of landscaping arrangements have not been given to the Parish Council despite frequent requests.
  - The plan: Proposed Planting with Yaxley Substation Planting shows that the area of the condenser extends beyond Leys Lane and will impact on access to the properties at the far end of the road. How will access to the properties be guaranteed?
6. Details of other SCs in rural areas – where/name?  
Please find planning references to Synchronous Condensers projects awarded in the Pathfinder 2 tender:
1. Blackhillock – Ref: 21/01777/APP, Moray Council
  2. Gretna - 20/2071/FUL, Dumfries & Galloway Council
  3. Rothiernorman - APP/2019/0982, Aberdeenshire Council
- The Parish Council accepts that Conrad Energy can only give actual examples, but the locations are all in Scotland. However, plans of two of the sites are attached and they are not comparable to the proposed site at Yaxley.
7. How will the impact of the additional impervious surfaces on water runoff be mitigated?  
This has been addressed within the Flood Risk & Drainage Assessment submitted with the planning application providing information on how surface water will be managed. Mitigation measures have been incorporated into the site design.
- What are the mitigation measures?
8. What is the size of the water tank that will be used to collect runoff from the site?  
As detailed in our Flood Risk & Drainage Assessment, the attenuation tank will have a maximum volume of 1457.2 m3.
- The effect of water run off on an already existing severe flooding problem in the proximity of the proposed site. The capacity of the holding tank has been given but the adequacy of this is highly questionable given recent rainfall data and overflow arrangements have not been supplied.
9. How often will the water used for the colling process have to be changed and how will any pollution from it be prevented?  
The water used for cooling is held within a sealed system and is monitored as part of a preventative maintenance system. Only small volumes of water will be required.
- Does this mean that the system is never emptied or flushed through?
10. How will the safety of horse riders and walkers be guaranteed during the construction process?  
We consider health and safety, and the way we manage this within the local environment very important. In this regard, we implement measures that take account of various aspects to address concerns around this and requirements would be captured within a site-specific health and safety document.
- This does not answer the question as the safety implications of the construction and operation of this site for horse riders using an adjacent ancient bridle path have not been considered.
11. How will the stability of the equipment be guaranteed when it will be running continuously with no one on site? Remote monitoring is not an adequate answer.  
Routine and preventative maintenance is undertaken to monitor and upkeep the equipment.
- Again this does not answer the question.
12. If there is a major equipment failure once the site is operating, and the access roads have been reinstated as farmland, how will a replacement be delivered to the site?  
The principle equipment is designed to a lifetime exceeding our proposals. Other components can be replaced with van deliveries as needed.
- Conrad Energy is asking the Parish Council to accept that unexpected equipment failures never happen. The Parish Council wants to know how this will be managed. The designers of Apollo 13 did not expect equipment to fail!
  - The information on ongoing vehicle movements is paltry it does not give the Parish Council any idea what impact this would have on Leys Lane
13. There is concern from local landowners about the impact of additional impervious services on the runoff of water following rainfall and where the water will go. There is already additional

runoff from the substation and the hard surfaces on Eye Airfield which will be worsened by the plan for a filling station, lorry park and other buildings. Flooding is already taking place:

- For every 1 mm of rainfall on 1 square metre of surface 1 litre of water will result.
- On Eye Airfield, it is claimed, there are 7 hectares of hardstanding and roof therefore for every 1 mm of rainfall on 70,000 square metres of surface 70,000 litres of water results. The substation and the SC will create more impervious surfaces.
- It is not unusual for there to be 20 mm of rainfall in one day and this would result in 1,400,000 litres of water from 70,000 square metres of surface.
- This needs to be factored into any discussion on the development on the land in the Yaxley/Thrandeston area.

How will the water runoff be managed? The drainage system locally is already inadequate as can be shown by flooding on adjacent land.

Our submitted Flood Risk and Drainage Assessment addresses flood risk and the management of water runoff. This has been reviewed by the Flood and Water Engineer for Suffolk County Council and determined to be acceptable (dated 14.12.22).

- This does not respond to the points made above. The problem of additional water runoff is not acceptable to local landowners and people living in the area.
- As in 8 above: The effect of water run off on an already existing severe flooding problem in the proximity of the proposed site. The capacity of the holding tank has been given but the adequacy of this is highly questionable given recent rainfall data and overflow arrangements have not been supplied.

14. Is the SC necessary as the Parish Council understands that this technology is to maintain a constant current, but surely this is exactly what the Drax/Progress Power station is designed to do. Their FAQ's say: "**Gas peaking plants such as Progress Power are designed specifically to provide essential back-up power generation to intermittent renewable technologies such as wind turbines and solar farms.**" "We plan to use Progress Power to plug the gaps that intermittency creates – essentially flicking the switch on and off at very short notice ". So why is additional technology required?

The technologies operate in different ways. Gas peaking plants provide flexibility to the grid network which switch-on at times when renewables cannot provide power to the grid (e.g., situations of low light-levels or wind speed.) A synchronous generator provides stability to the transmission network, managing faults and maintaining frequency whilst renewables are operating.

- In an earlier document it was stated that the synchronous condenser does not generate electricity, but it appear in the answer above that it does.

15. There will be an ongoing requirement for vehicle movements for running and maintenance. What is the proposal for access in the long term? "*The proposed synchronous condenser development would be situated immediately east of the new substation and **would share the same access from Leys Lane, thus minimising further land take. (The temporary construction route connecting the Site to the A140 will be removed at the end of the construction period)***" What happens if large equipment is needed at the Site once the temporary construction route is removed?

Our Transport Statement submitted within our planning application details vehicle movements during operation under section 5.2. The Highways Consultee for Suffolk County Council has lodged no objection but requested a Construction Management Strategy to be provided post-consent.

- As in 12 above: Conrad Energy is asking the Parish Council to accept that unexpected equipment failures never happen. The Parish Council wants to know how this will be managed. The designers of Apollo 13 did not expect equipment to fail!
- As in 12 above: The information on ongoing vehicle movements is paltry it does not give the Parish Council any idea what impact this would have on Leys Lane

16. No information is available on the electromagnetic impact on the area and how widespread this would be.

The amount of EMF (electrical magnetic field) produced by a synchronous condenser would be negligible. An EMF is produced whenever a piece of electrical or electronic equipment (i.e. TV, food mixer, computer mobile phone etc.) is used. EMFs are static electric, static magnetic

and time-varying electric, magnetic and electromagnetic (radio wave) fields with frequencies up to 300 GHz. EMFs are present in virtually all workplaces.

The Original Equipment Manufacturer ('OEM'), has confirmed that their design for the complete Synchronous Condenser System including ancillaries is compliant, in terms of electromagnetic compatibility ('EMC'), with all the required legal regulations and standards inside and outside the EU. Any specific equipment which can generate EMF is located within the buildings and is assessed in accordance with health and safety requirements, which may involve zoning. As part of this, shielding can be incorporated into the design of the building to ensure compliance with relevant standards if required.

The Control of Electronic Fields at Work Regulations 2016 transpose the requirements of European Commission Directive 2013/35/EU. This Directive lays down the minimum requirements for the protection of persons from risks to their health and safety arising, or likely to arise, from exposure to electromagnetic fields.

These Regulations, place a duty on employers to assess potential exposure EMFs and to ensure that they are acceptable. Employers as part of managing the health and safety of their business already need to control the risks in the workplace. This is a requirement under the Management of Health and Safety at Work Regulations 1999 (MHSW).

- It would have been helpful for there to be figures to show the levels and set against them the levels which are considered to be safe and this should include the quantity, area of spread and effects of the inevitable EMF.
- Data on noise from the equipment is also required.