Walpole Substation Connection Projects Meeting

21 October 2024

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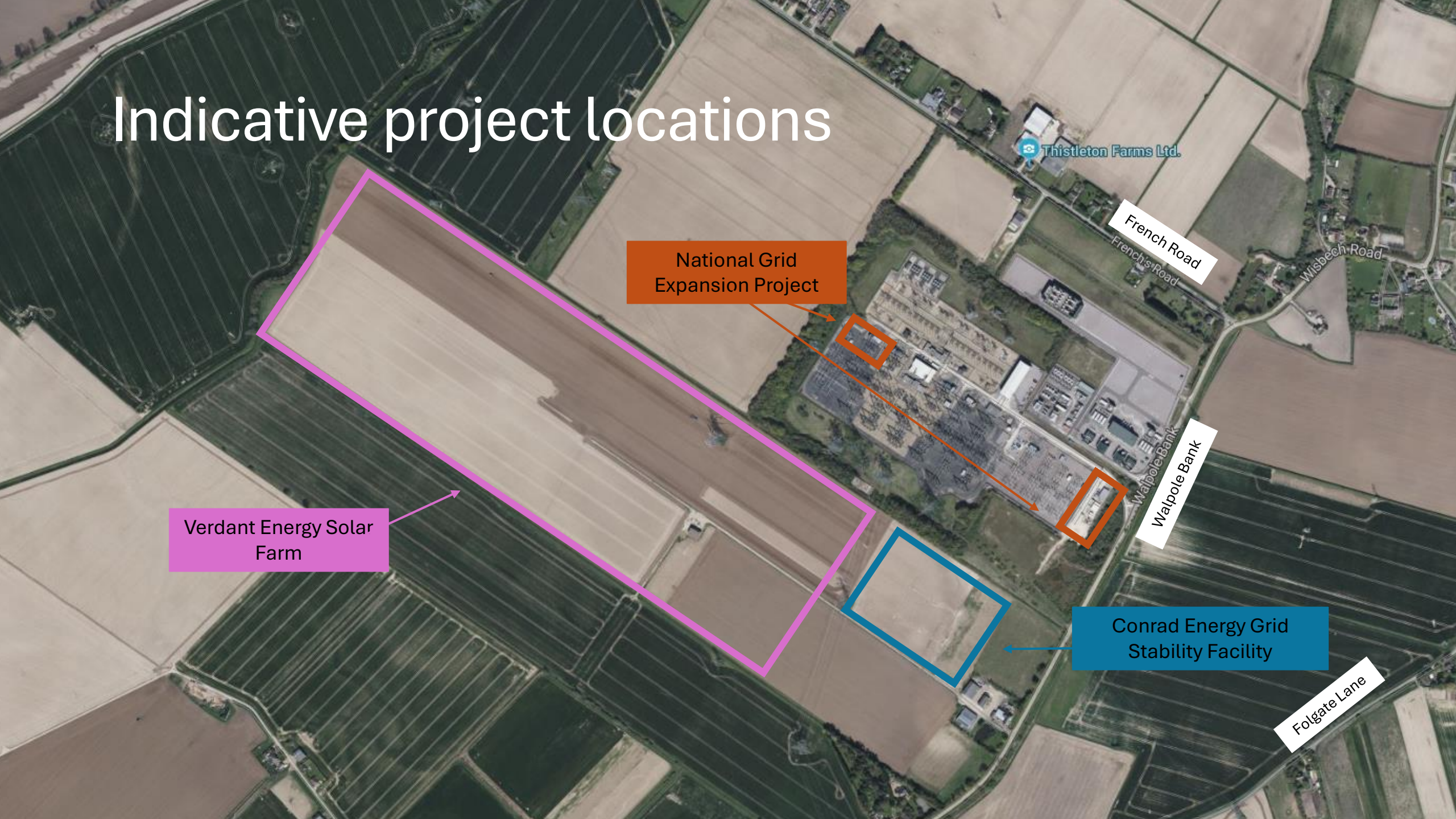
Agenda

- Introductions
- Site overview
- Developer coordination
- Conrad Energy update
- Verdant Energy update
- National Grid update
- Ongoing engagement
- AOB

Introductions

Indicative project locations



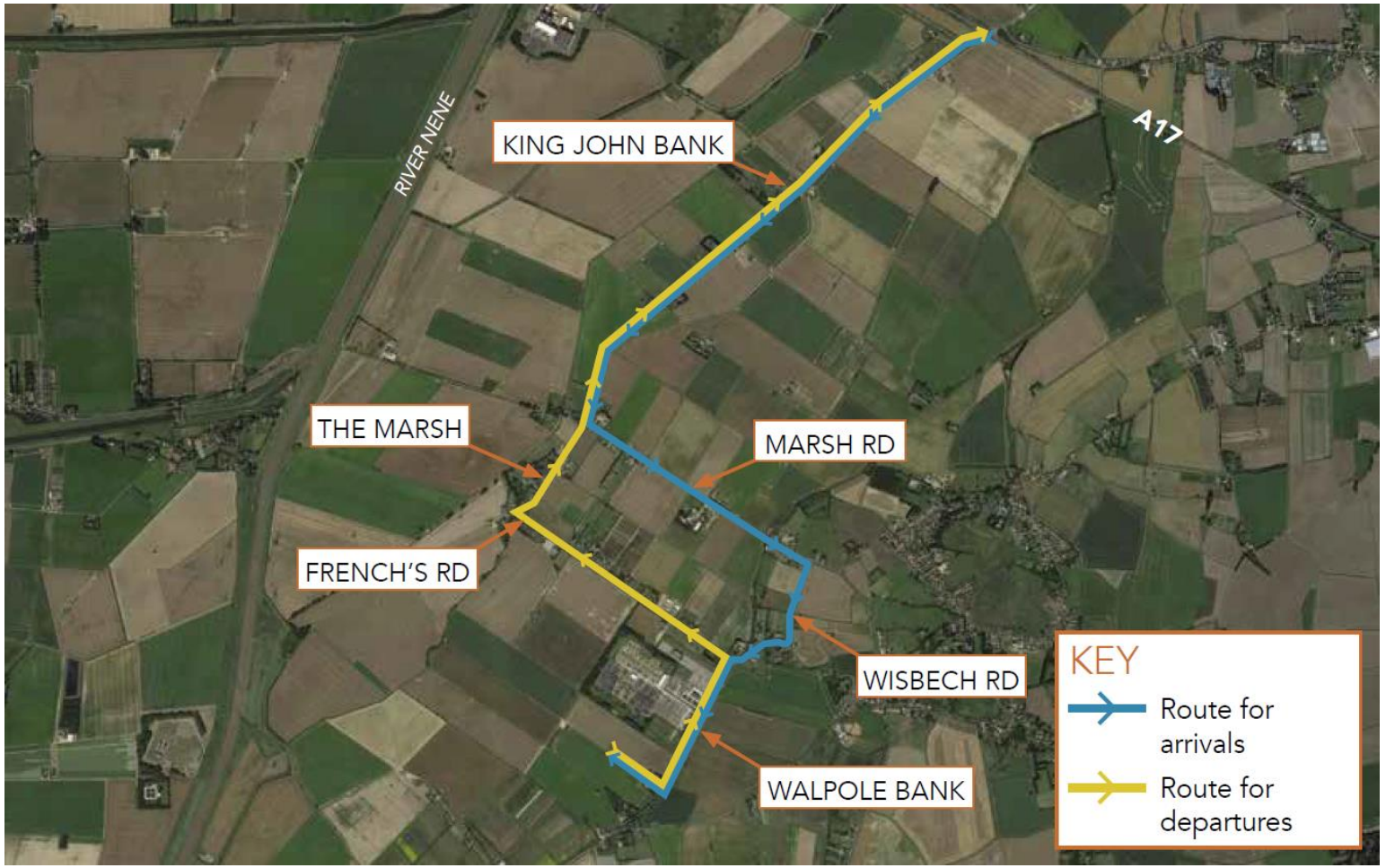
Developer coordination

Working together to streamline design and minimise local impacts as far as possible is important to National Grid, Conrad Energy and Verdant Energy.

The primary goal of this is to minimise the impacts of construction for the local community. Our coordination efforts include:

- Regular developer coordination meetings
- Shared enquiry tracker
- Overlapping Traffic Management Plans

Construction traffic routes



Walpole Grid Stability Facility

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Agenda

1. Need for the project
2. Project overview
3. Programme
4. Activity on site and look ahead
5. Community fund
6. Keeping updated
7. AOB

Project need

Energy supply within the UK

The challenge

The UK is moving from traditional fossil fuelled generation to new clean, green sources of renewable energy such a wind and solar power.

These new sources of energy are less stable and can cause the national transmission network to become less reliable.

To manage and stabilise power flows costs National Grid around **£20 million** each month, by paying renewable energy generators to disconnect from the grid. A cost that impacts consumers.

The solution

New specialist equipment, such as grid stability facilities, are needed to stabilise the network. This Walpole development supports this initiative and the grid network in East Anglia.

It will help further facilitate renewable energy development and support energy security and stability within the region. This is increasingly important during the UK's transition to increased renewables within the energy mix.

Grid stability technology

Synchronous condensers do not generate power but provides stability and voltage support to the electricity network, particularly when system faults occur within the power grid.

Traditional coal/gas/nuclear plants have rotating generators providing synchronous generation. Wind and solar generation is non-synchronous, as the power electronics do not have a rotating mass.

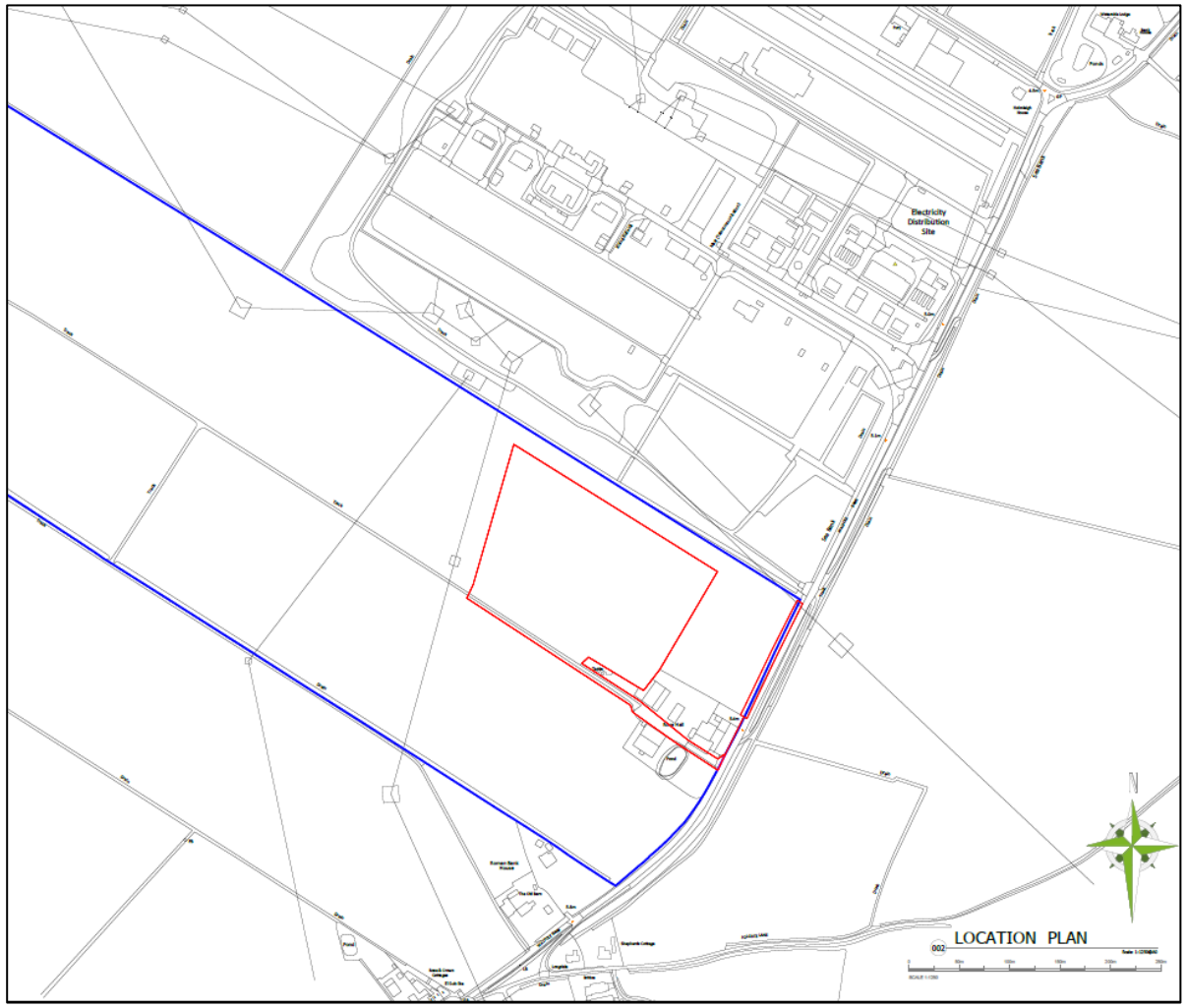
Synchronous condensers provide the same synchronous inertia as coal or gas plants, without the associated CO2 emissions and high running costs.

Its primary purpose is to adjust conditions on the transmission grid, to either dynamically absorb or supply reactive power as needed to adjust the grid's voltage, or to improve power factor.

Location

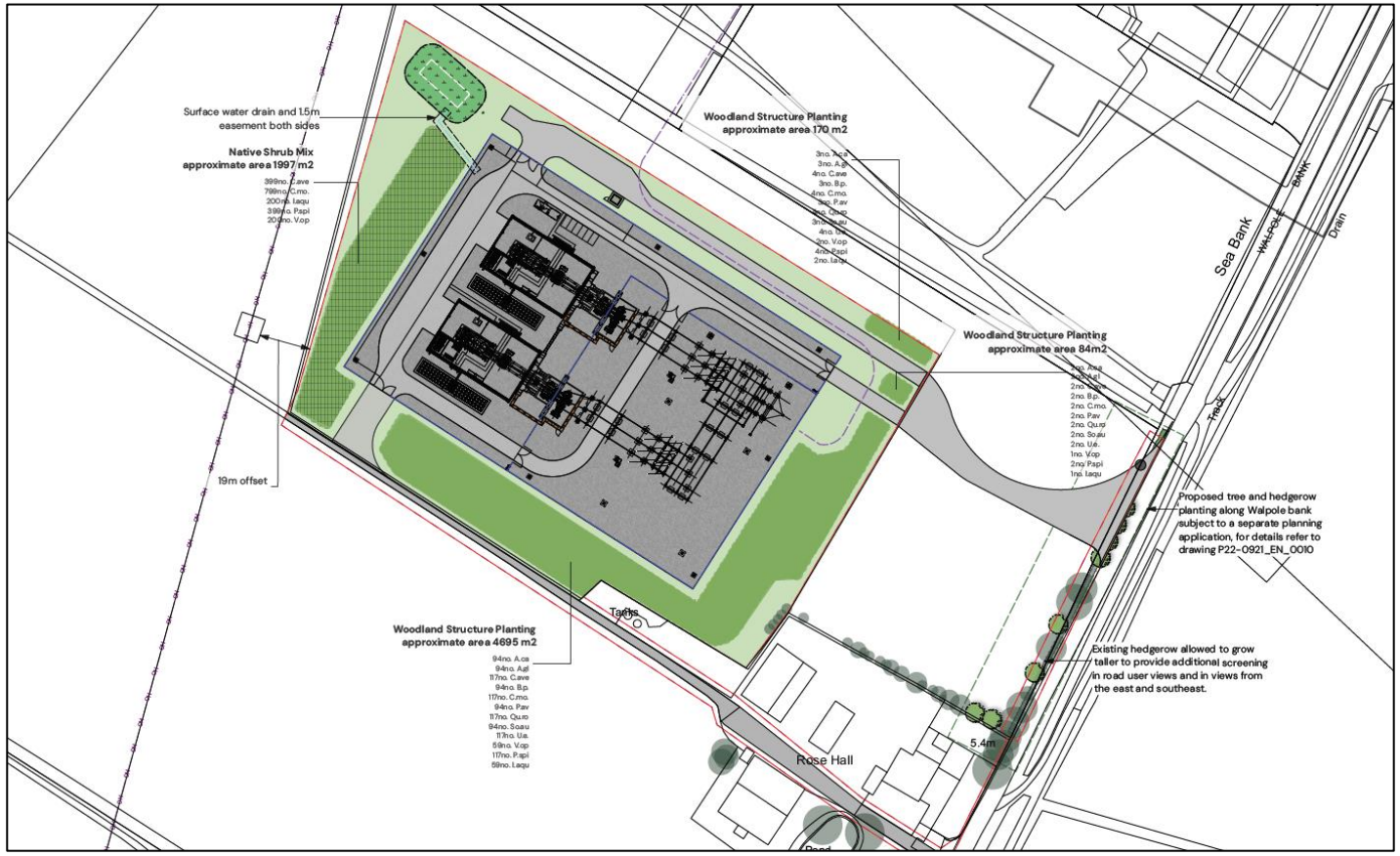
Just west of Walpole St Peter, our project neighbours the Walpole 400kV Substation to the south, which is a site of great strategic value for England's energy grid.

This is one of the key reasons why Conrad Energy has been contracted by the Electricity System Operator, to improve safety and stability to the grid for the region.



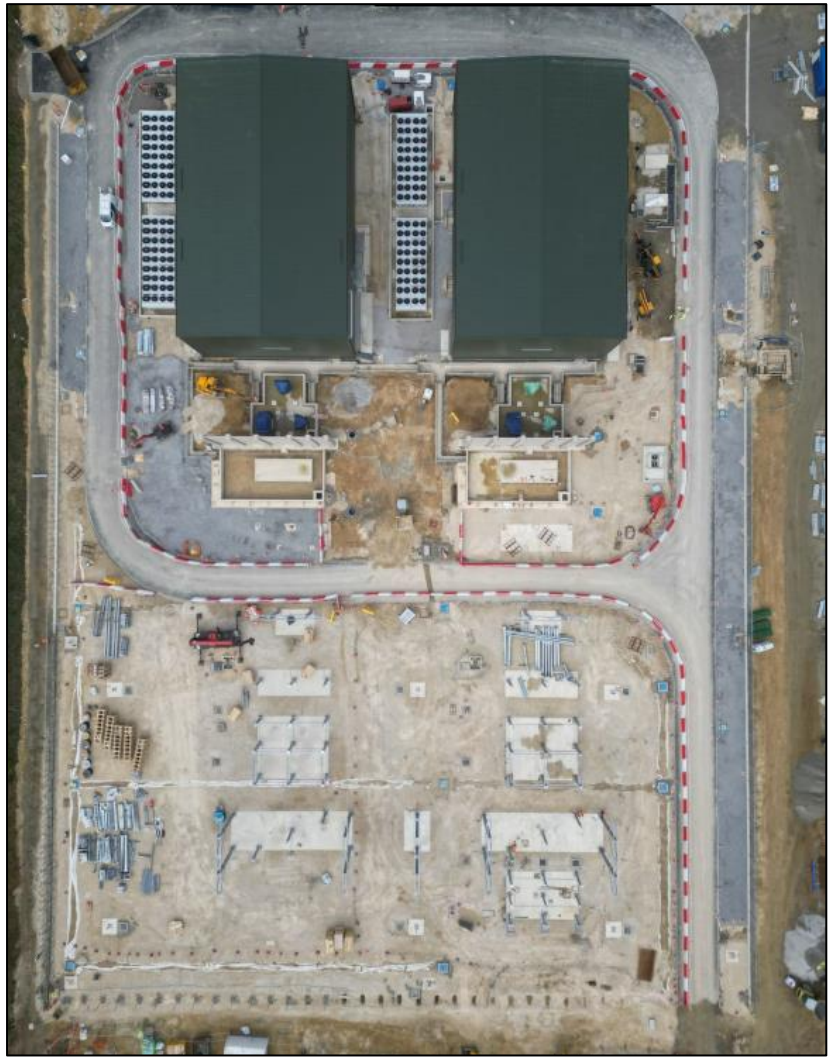
Project timeline

Q4 2022	National Grid ESO contract awarded
Q4 2022	Planning submitted Read the planning submission here
Q1 2023	Planning decision expected
Q3 2023	Construction work
2025	Operational



Activity on site

- Sync Con halls erected, cladding installed, and several pieces of electrical equipment placed on foundations.
- AIS foundations completed, including cooler bunds.
- Transformer fire walls erected.
- Erection of electrical support structures and Insulators further progressed, just the cable sealing end left.
- Sync Con building internal fit out works and M&E building services containment.
- Drainage pond and system constructed and seeded.
- Security perimeter fencing – commenced and installed 80m of foundations / cill beam and posts.



Activity on site

Project look ahead

Date	Type	Activity
October	Civils Work Mechanical Electrical	• Continued civils work on the substation yard. • Outfitting of the Sync Con halls with containment, cable troughs and pipework. • Backup UKPN supply foundations, installation and ducting.
November	Civils Snagging Transport Mechanical Electrical	• Mobilisation of high voltage underground cable works into the National Grid Substation. • Two major equipment deliveries are planned for site for the 3rd and 17th of November 2024.
December	Civils Demob Mechanical Electrical	• Civils snagging and demobilisation. • Mechanical and electrical installation of major equipment.

Equipment Deliveries

- Deliveries of key electrical equipment are provisionally planned for the 3rd of November and the 17th of November 2024. These dates are currently not fixed.
- The Synchronous Condensers and Transformers will be delivered from Wisbech Port to site on two separate weekends.
- Expect rolling road closures along the route over these weekends, and further information will be shared by Conrad Energy once confirmed.
- Please plan travel accordingly.

Picture alongside of the recent delivery completed for the Eye Grid Stability Facility, another Synchronous Condenser project Conrad Energy is delivering. https://www.linkedin.com/posts/conrad-energy-limited_energy-pathfinder-construction-ugcPost-7234194450820796416-ADu3?utm_source=share&utm_medium=member_desktop

Equipment Deliveries

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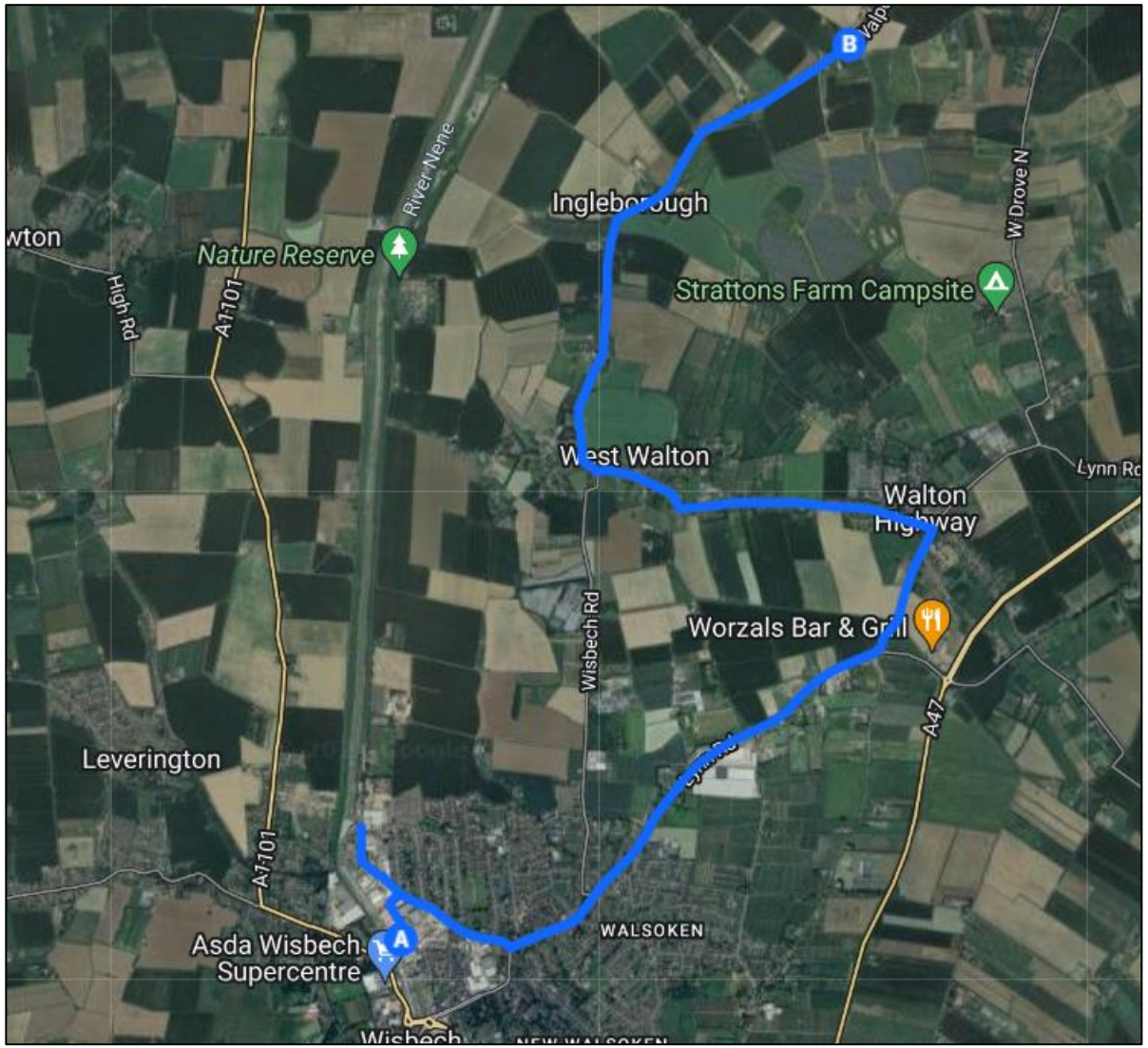
Walpole Route Summary

Continue NENE PARADE for 200 m
Turn right onto OSBORNE ROAD
Continue OSBORNE ROAD for 100 m
Turn right onto MOUNT PLEASANT ROAD
Continue MOUNT PLEASANT ROAD for 800 m
Turn Left onto B198
Continue B198 for 2.9 km
At the roundabout, take the 1st exit onto LYNN ROAD
Continue LYNN ROAD for 800 m
Turn Left onto SCHOOL ROAD
Continue SCHOOL ROAD for 2.1 km
Turn right onto MILL ROAD
Continue MILL ROAD for 1.6 km
Turn right onto MILL ROAD
Continue MILL ROAD for 1.7 km
Continue WALPOLE BANK for 1 km



Supporting the community

We want to make a positive difference through our work for local communities, the environment and the wider world. The Conrad Energy Community Fund provides support for events, charities, schools, and group activities that are local to our sites across the UK.

Some examples of what our fund has supported:

- Child brain tumor research charity sponsorship and donations.
- Football shirts and sports coaching for a local youth team.
- Community woodland planting and a sensory garden.
- Refurbished a community dance studio.
- Funded creative workshops for female refugees, asylum seekers, vulnerable migrants and their children.
- Sponsored a theatre scholarship.

We are pleased to announce a community fund up to £10,000 which is now open for applications. We want to hear suggestions and proposals from local people that support community interests.

Keeping updated

There are various ways that the community can keep updated throughout construction.

- Visit our website page for project information **conradenergy.co.uk/energy-generation/grid-stability/walpole-synchronous-condenser**

Contact us

For any comments or questions throughout construction you can reach us directly at walpole-pm@conradenergy.co.uk

In emergencies only, you can contact the Site Manager:

Giovanni Grant
+44 7921 727 359
giovanni.grant@siemens-energy.com

Questions

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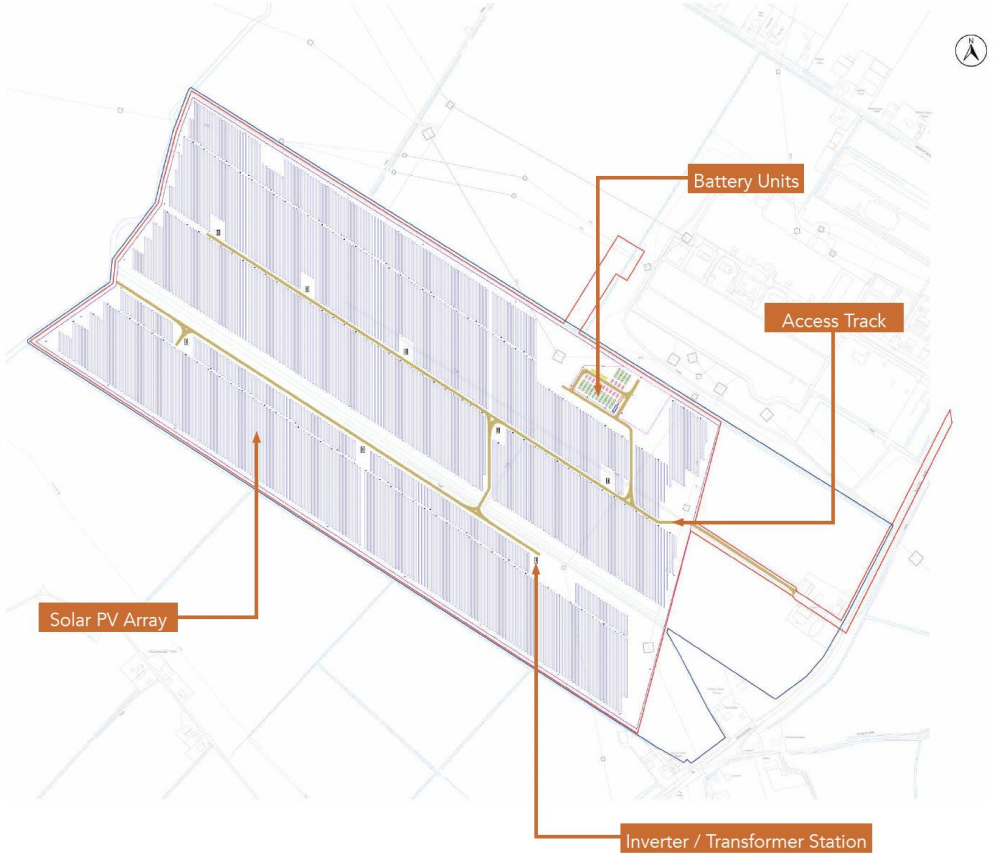
Walpole Bank Solar Farm

Walpole Bank Solar Farm will provide renewable electricity for distribution to the National Grid.

This project will generate energy each year its 40 years of operational life, while also providing a substantial carbon dioxide savings when compared to generation of electricity by non-renewable sources.

The project includes battery storage which will allow energy to be stored on site at times when grid-demand is lower and exported at times of higher demand to ensure no energy is ‘lost’ and help balance the National Grid.



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Construction on Walpole Bank Solar Farm is ongoing.

Enabling works and access track construction has started and will be ongoing until the end of the year. Full site mobilisation will commence in the early months in 2025.

Alongside this, works on the BESS and export cable will be starting in Q4 this year.

September - December 2024 | Site Preparing, Groundworks & export cable works **|**

February - May 2025 | Array Framework Installation

March – May 2025 | Solar Panel Array Assembly

November 2024 - March 2025 | Cabling & Trenching & Export Cable

February - June 2025 | Inverter Installation

April - July 2025 | Battery Energy Storage System (BESS) & Connection Equipment

July - October 2025 | Testing and Commissioning

Late 2024 - Early 2025 | Landscaping (According to Planting Season)

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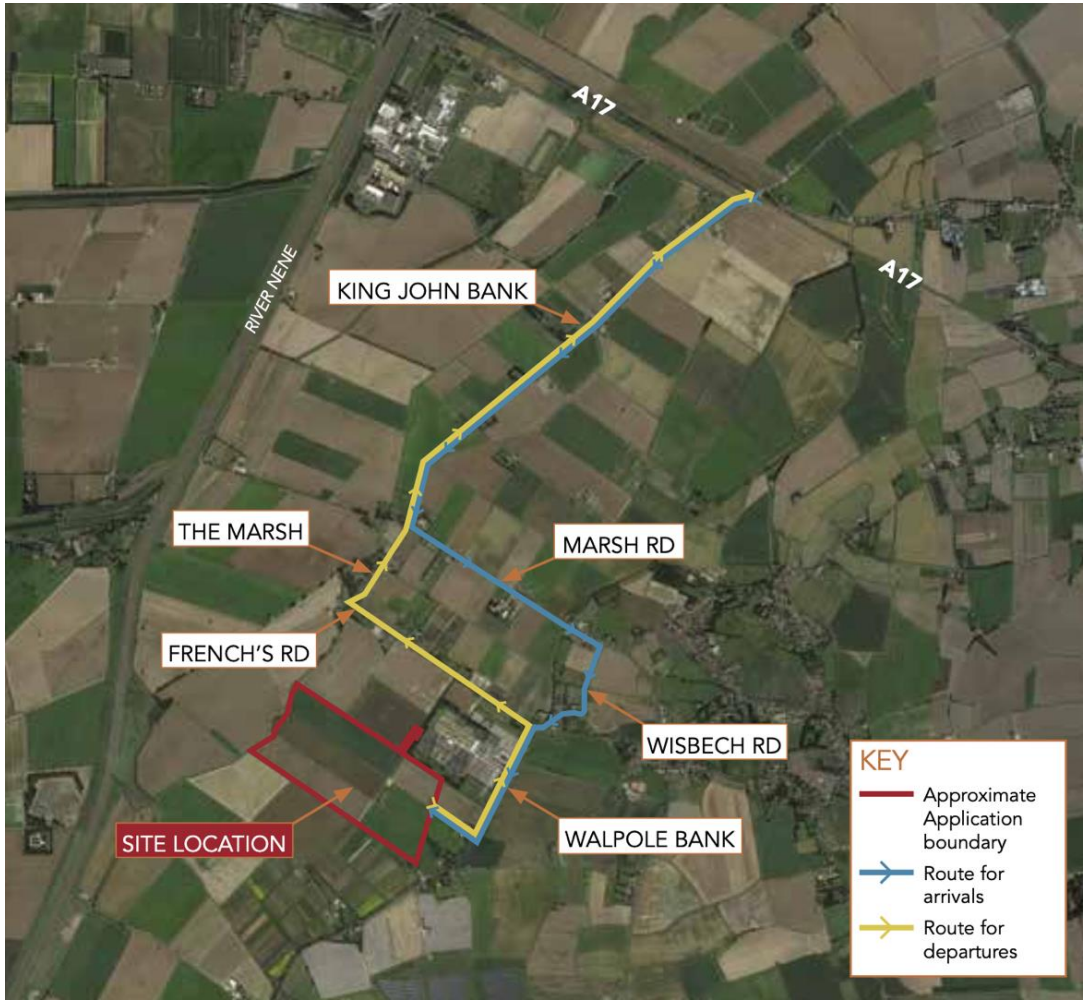
Construction Management Plan

All construction vehicles will enter and exit the Site via the existing farm access junction on Walpole Bank.

Approximately 60 to 70 construction workers are anticipated to be required on Site on an average day. This may increase slightly during peak construction.

Wheel washing facilities will be provided at the end of the access road, ahead of the egress onto Walpole Bank.

An average of 6 deliveries per day (or 12 two-way movements per day).



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Questions

Walpole Substation Expansion Project

The Great Grid Upgrade

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Overview of Walpole Substation Expansion

National Grid held a public consultation for the Walpole Substation expansion, which is required to:

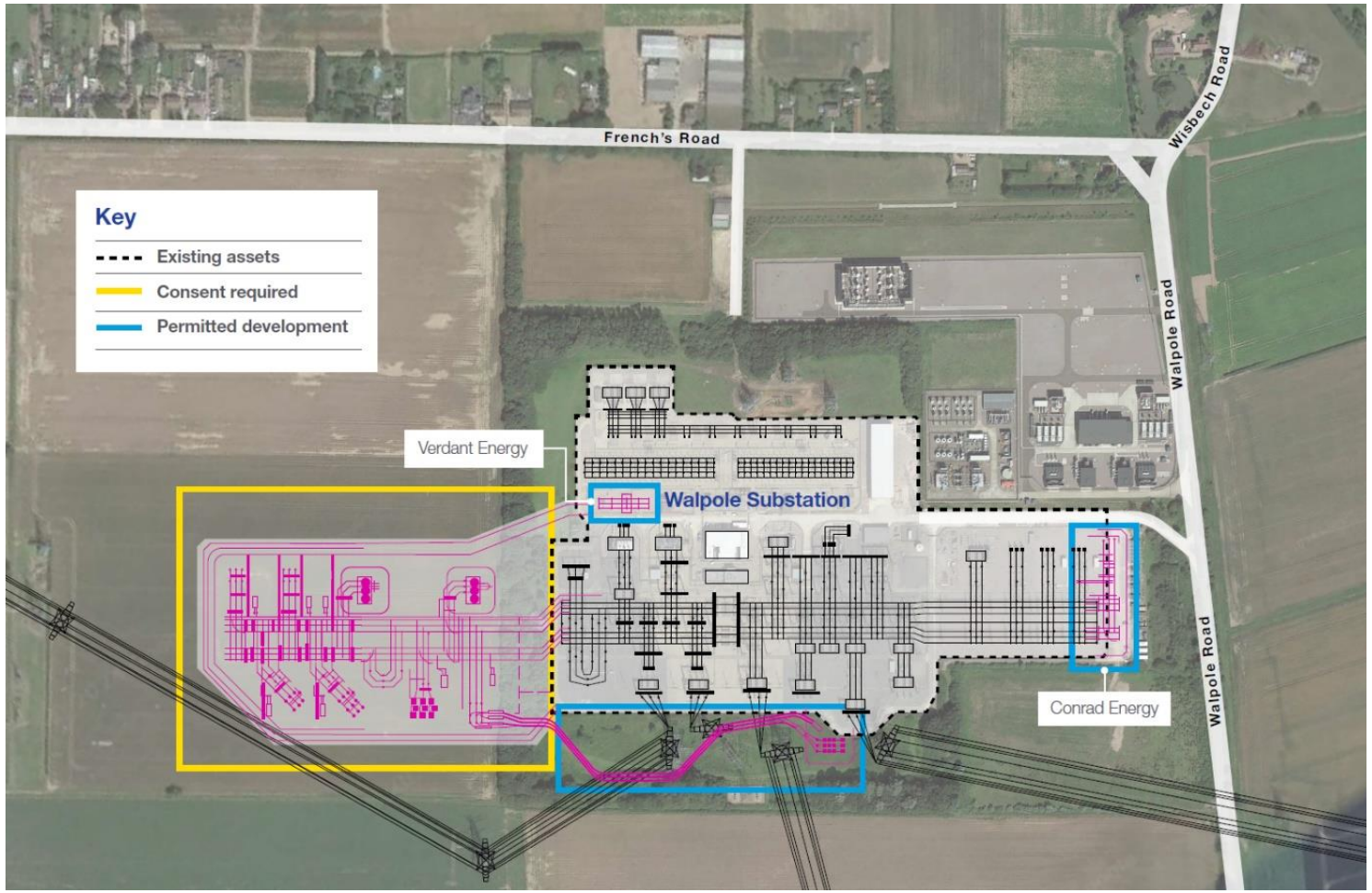
- accommodate new infrastructure at existing substation
- connect new sources of renewable energy
- manage power flows on the network and support future demand
- upgrade existing technology originally installed in 1960s
- part of The Great Grid Upgrade

Some of this work will require planning permission, and some will be carried out via our permitted development rights.

Permitted development

National Grid has permitted development rights for some of the work (blue boxes).

- Under our license to operate, we have a legal obligation to connect companies to our network when a connection is requested.
- Part of the project will require planning permission (yellow box)
- NGET have a minimum of 10% biodiversity net gain commitment



Permitted development: Verdant Energy

Works commenced on 19 September 2024 at Walpole Substation, to prepare for the delivery of a 60MVA transformer.

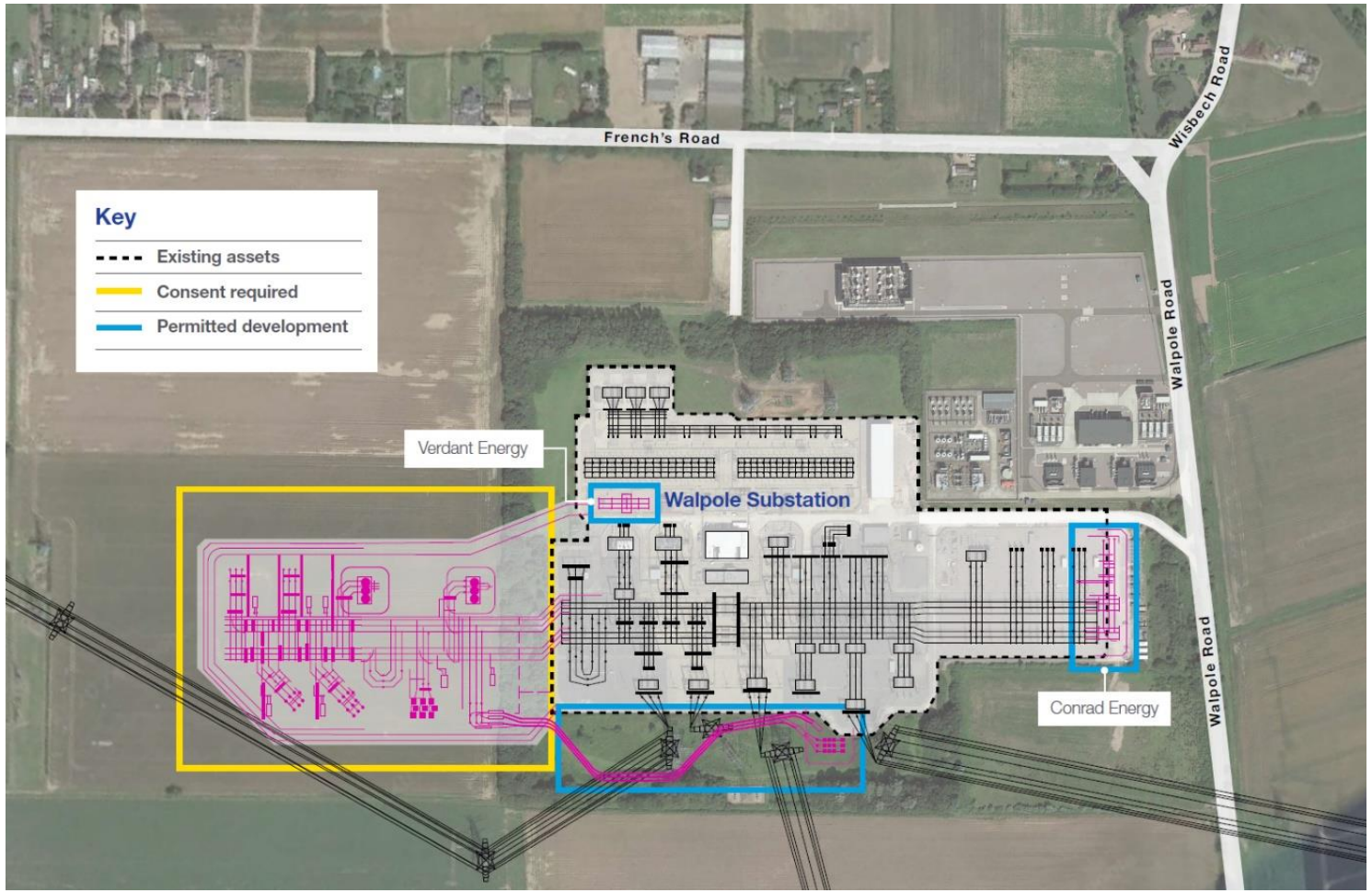
Works will involve:

- transformer survey works, demolition of some existing concrete and steel gantries and removing cabling on site (September-November 2024)
- piling and foundation works (December 2024 – March 2025
- transformer delivery and installation (April – May 2025)

Construction will complete in July 2025, and the Solar Farm and BESS will connect into the substation.

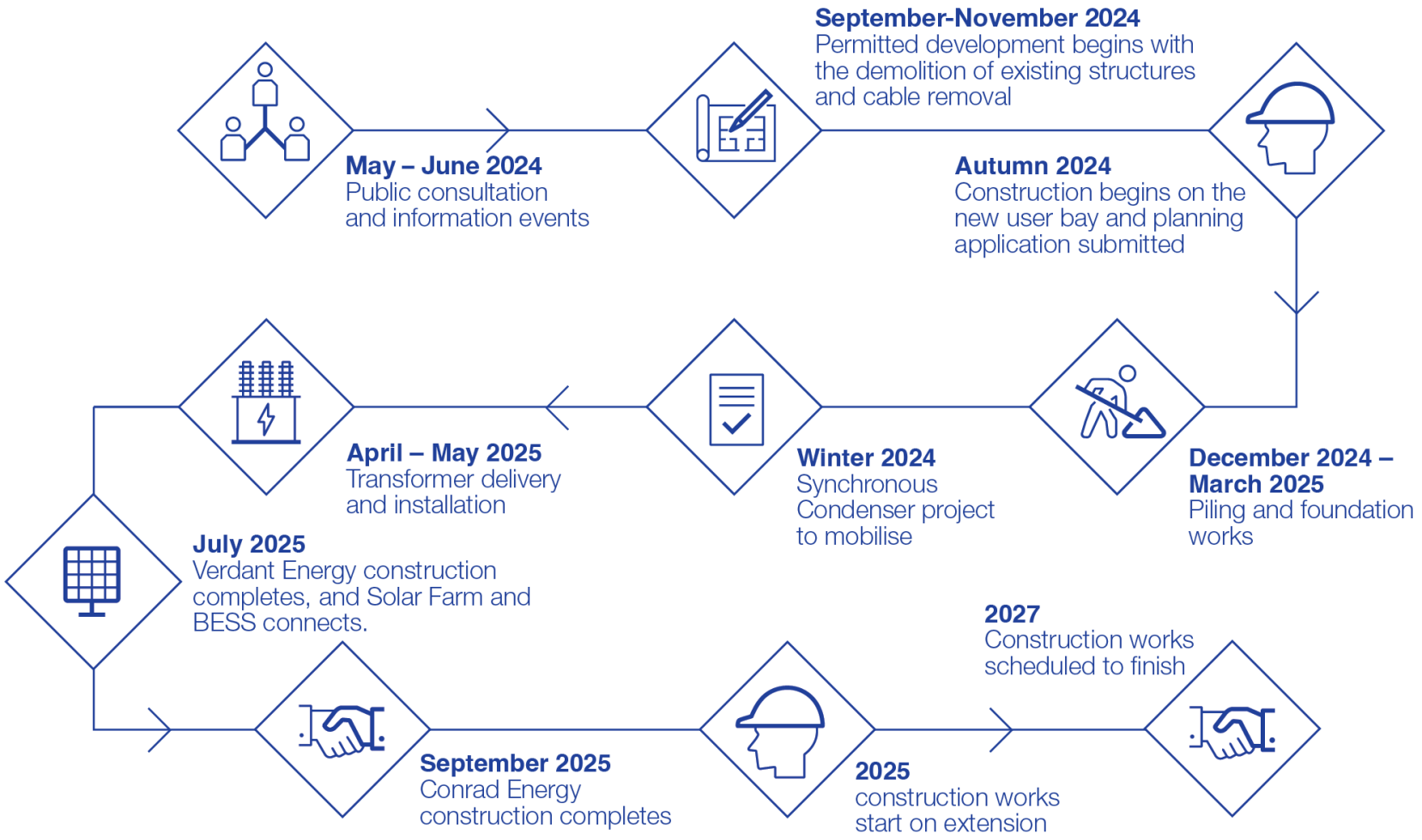
Permitted development: Conrad Energy

- Works are set to commence in Autumn 2024 on a new user bay inside the substation compound.
- Initial works up until December 2024 include cable ducting into the compound and extending the fence boundary.
- Allow Conrad Energy to connect Synchronous Condensers into the Walpole Substation.
- Project will complete in September 2025.



Indicative image of the proposed expansion

Indicative timeline



You can contact us by…

Calling our Freephone information line:
0800 083 3149

Emailing us at:
walpole@nationalgrid.com

For more information about the project please visit:
nationalgrid.com/WalpoleSubstationExpansion

Questions

The Great Grid Upgrade

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Ongoing engagement

- Connection Projects meeting – proposed quarterly, or as needed.
- Joint project newsletter distributed to the local community with high level updates, future timelines and contact details.
- Additional updates as required from individual developers.
- Public information event for the local community – November.

Questions and AOB?

Thank you

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