

Why do we need battery storage?

The UK has set a target to end its contribution to climate change and bring all greenhouse gas emissions to net zero by 2050. To achieve this, we must end our reliance on coal and gas-fired power stations and replace these with new low carbon power sources.

Battery storage is essential to make this transition because it is:

- **Flexible** – To keep power supplies flowing electricity supply and demand must always be equal, or ‘balanced.’ Battery storage provides the flexibility required by National Grid to manage the intermittent nature of supply from renewables and maintain this vital balance.
- **Secure** – Batteries can respond extremely rapidly to faults on the network or changes in electricity supply and demand, introducing energy resilience to the local grid which is important to help prevent blackouts.
- **Adaptable** – As more of our lives are powered by electricity – from heating to cars – our energy system is changing. Batteries help to future-proof the grid and cost-effectively integrate more renewable power.

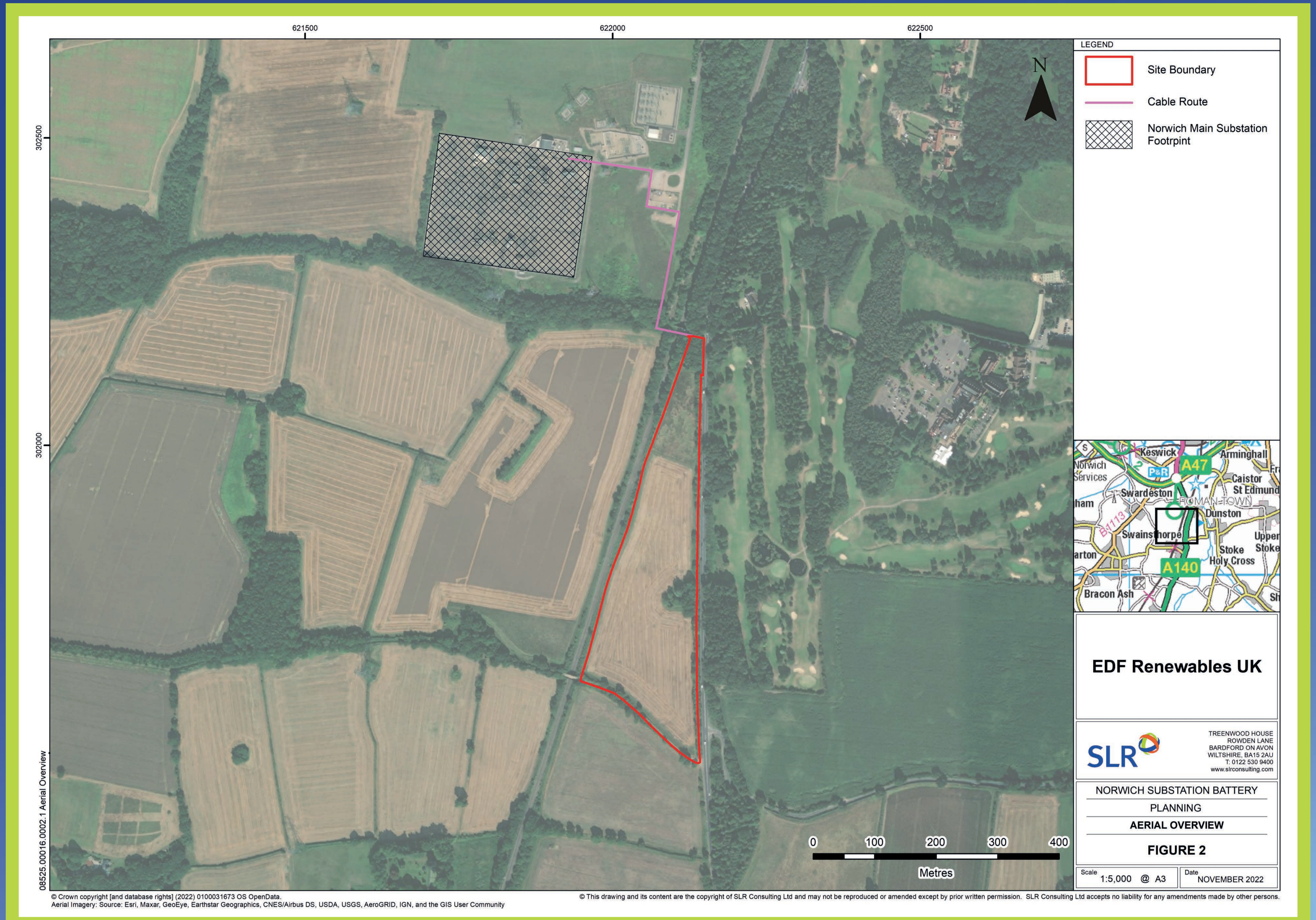
The National Grid estimates that Britain will need 20 GW of battery storage by 2030. Today, battery storage accounts for just 1.6 GW.

EDF Renewables UK’s Storage and Private Wire team had approval (Ref: 2018/2017) for a battery storage facility on National Grid land next to the substation. Due to a proposed substation development by Equinor and National Grid’s decision to retain land for its own future purposes, EDF Renewables UK has had to identify this alternative site.



Norwich
Battery Storage

The proposal



Proposed site: south east of the National Grid Norwich Substation, east of the railway line, west of the A140 Ipswich Road and north of Hickling Lane.

EDF Renewables UK is proposing to develop a battery energy storage scheme to the south of Norwich substation between Dunston and Swainsthorpe.

- Capacity of up to 114 MW
- Site is well screened – and more planting is proposed
- Plan for improved biodiversity on site
- Plans to install an Electric Vehicle Charging Superhub nearby

The proposed scheme will be constructed within a 7 hectare (ha) triangular area. Only approximately 1.2 ha will be taken up by the battery compound, containing approximately 200 battery cubes, including inverters. The maximum height of the equipment is 3m. Other electrical infrastructure on site will include transformers. Underground cables will link the battery compound to the National Grid Norwich 400kV substation complex.

The battery storage facility will be constructed, owned, operated, and maintained by EDF Renewables UK.



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Access, construction, security and safety

The proposed site access would be via the A140 Ipswich Road and Hickling Lane. There is an existing gated access from Hickling Lane into the field.

The compound will be enclosed within a security fence and CCTV cameras will be installed.

A detailed review of traffic and access is being done and we will outline our proposals in more detail when we submit the planning application. If the battery facility gets consent, we will liaise with the Highway Authority to agree a Traffic Management Plan.

Construction will take approximately 3-4 months.



Existing access to the site from Hickling Lane



Proposed access from A140 and Hickling Lane (looking south)

Safety

Careful attention is paid to battery selection, module design and site layout, to ensure multiple levels of fire risk mitigation. On site, fire safety measures include round the clock monitoring, increased spacing between battery cubes, and regular engagement with the local fire authorities during project development and during operation. We will adhere to industry best practice and the US Fire Standard NFPA855.

An Emergency Response Plan will be developed in consultation with the local Fire and Rescue Service.



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Next steps

Thank you for taking the time to read about our proposed battery energy storage system.

We welcome feedback on our proposals and will consider making changes to address any specific concerns.

This part of the consultation closes on 12th December but you can still provide feedback until we submit our planning application.

Likely timescale

- 21st November to 12th December – consultation online, in person, and virtual
- February 2023 – we hope to submit our planning application to South Norfolk Council
- May/June 2023 – the Council will give us their decision
- End 2023 – if the application is consented, we will start to prepare the site
- 2024 – we hope that the site will be fully operational

About EDF Renewables UK

EDF Renewables UK and Ireland (www.edf-re.uk) is a subsidiary of EDF Group, one of the world's largest low carbon electricity companies, and our investment and innovation is reducing costs for consumers and bringing significant benefits for communities.

With our operating portfolio of 38 renewable energy sites including battery, onshore and offshore wind (together totalling 1 GW) we are providing much needed affordable, low carbon electricity. We have an expanding portfolio with almost 5 GW of projects in planning and development, including wind, hydrogen, battery and solar PV.

Please visit our website for further information
edf-re.uk/norwichbattery

Or contact us norwichbattery@edf-re.uk
01508 500346



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Landscape concept plan

In consultation with South Norfolk Council, EDF Renewables UK is carrying out a range of detailed environmental and technical studies.



In the north of the site there is neutral grassland and woodland. This area will be left undeveloped.



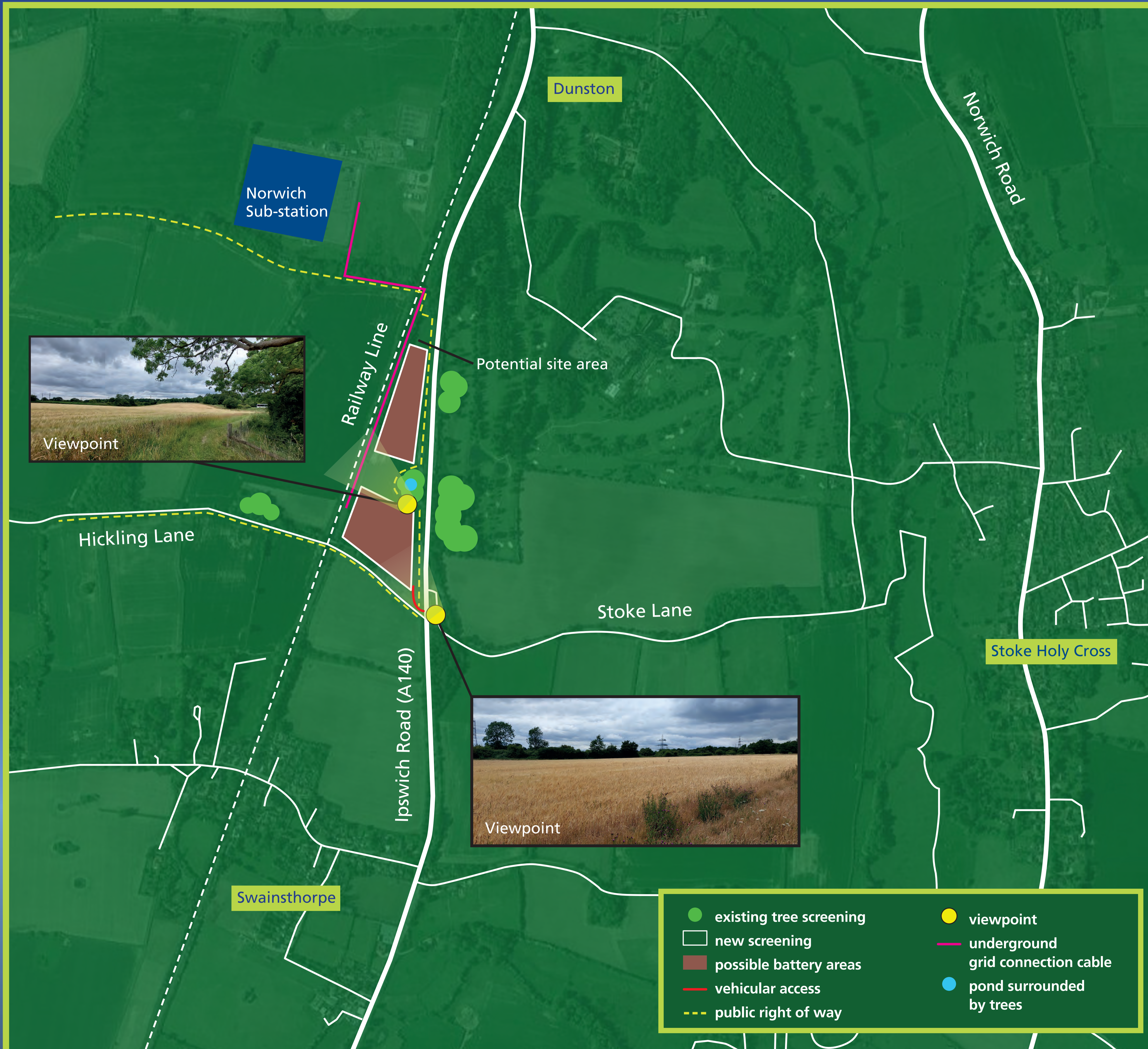
The fields are currently used for arable farming and there are no footpaths or bridleways crossing the site itself. The battery storage facility will be screened as much as possible from view.



The low levels of noise from the storage facility are not considered to be of significant impact because there are no properties nearby and it is located between the railway line on the west side and the A140 Ipswich Road to the east.



The trees surrounding the site and the pond features will be protected.



By carefully designing the layout, using the natural contours of the land and existing trees and hedges, we will try to minimise the impact on views of the site from surrounding areas. We are using landscape specialists to help us to do this.



We want to improve biodiversity on site, and that means leaving as much of the land as undeveloped as possible and putting in place additional measures to improve local habitats.



We will commit to deliver a biodiversity net gain (BNG) of 10% using the government's own metric to monitor achievement*

*Defra metric 3.1



A Flood Risk Assessment Surface Water Drainage Strategy will be implemented. This work is being done in full consultation with Norfolk County Council which is the Lead Local Flood Authority.



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