“I want to rule out inaccessible options earlier to focus time on viable options”

National Grid’s Connections teams leverage Sensat’s visualisation platform to support virtual siting studies and option selection for substation upgrades.

Challenge

National Grid Energy Transmission need to conduct a siting study for a new UK-based substation in Navenby, Lincolnshire. The initial phases of planning for transmission projects involve a thorough and time-consuming process to narrow down potential locations and options. The Connections team want to expedite the elimination of undesirable options and allocate more time and resources towards developing and proposing the preferred options.

nationalgrid

sensat

Solution

Evaluating plans in real-world context

National Grid is assessing the expansive Navenby site directly from their desktops. Using Sensat's height, volume, and measurement tools, the team can quickly evaluate option constraints to streamline the identification of suitable options.

By identifying viable options early, teams can allocate more time to iterate on their remaining options to be the best that they can be.

Use cases

Measuring how topology affects the site

During meetings, teams use Sensat's measurement tools to assess different site's topologies. In one instance teams noticed a 7.5-meter slope would involve four times the necessary earthworks, resulting in an £18 million cost difference between other options. Because this was spotted from their desktop using Sensat, teams could discount this site early.

Spot constraints to speed up siting studies

Using the project visualisation, it instantly became clear that a design's tolerance encroached on a railway line. The visual prompt for decision-making meant teams quickly eliminated the area that may have not been discovered until later.

Speeding-up optioneering

During an options selection meeting the team eliminated 3 options in 25 minutes by visualising their important 2D and 3D data sets in one platform. This could easily have taken 2.5 hours of discussion using traditional methods.

Download the full case study here: