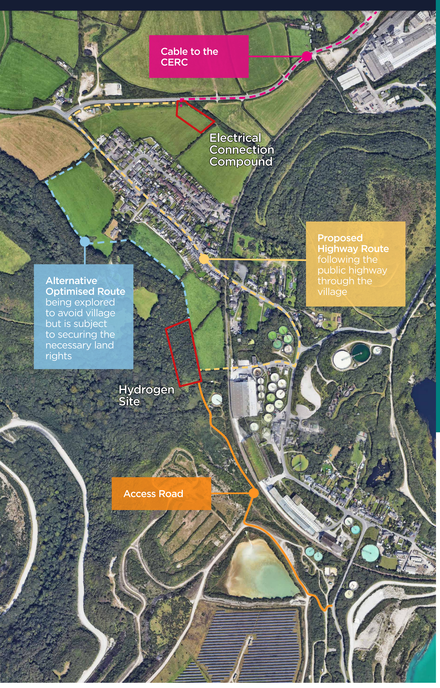

# INTRODUCING ST AUSTELL GREEN HYDROGEN (SAGH)

The proposed St Austell Green Hydrogen project will produce green hydrogen for Imerys and other local industrial companies. The green hydrogen will be produced by electrolysis, using renewable electricity and water - displacing carbon intensive natural gas currently used in some industrial processes.

The green hydrogen facility is sited on land adjacent to the Imerys site, between Central Treviscoe and Little Treviscoe, north of St Austell.




## At a glance:

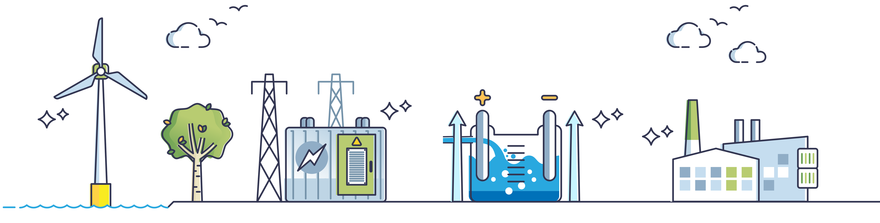
- 20 MW production capacity
- Around 2,000 tonnes of green hydrogen produced per year
- Hydrogen delivered by low-pressure pipeline
- Utilising 6m$^3$ of water/ hour equivalent to the daily consumption of 12 households
- Potential to reduce $CO_2$ by up to 15,000 tonnes annually
- Located within the Imerys operational China Clay area
- Subject to planning and finance, SAGH to start operations in 2028

St Austell Green Hydrogen will support local industry, future proof local jobs and reduce emissions.

The project is being developed by Four Zeros Energy, an independent UK company that specialises in clean energy projects.

Our team has experience delivering energy infrastructure projects across the UK. We focus on practical solutions that help industry reduce emissions while supporting local economies.

SAGH will reduce emissions from Imerys and other industrial operators and will support the long-term future of the mining industry in the Clay Country.



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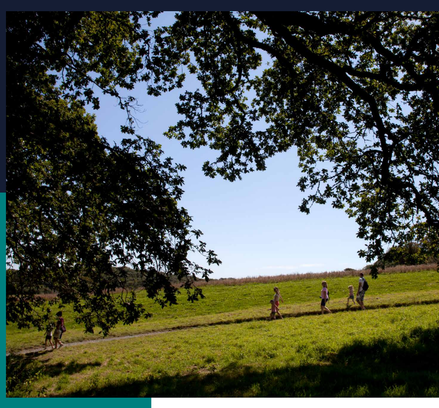
# THE RIGHT PLACE FOR GREEN HYDROGEN



The region around St Austell has a long industrial heritage and remains a key centre for mining and processing industries.

The proposed site has been selected because:

- Adjacent to industrial infrastructure
- It is **close to Imerys** and other hydrogen users
- It has **access to electrical infrastructure**
- It **aligns** with **Cornwall's decarbonisation ambitions**

Green hydrogen works best when produced close to where it will be used. This location allows local industry to reduce emissions without major new transport infrastructure.

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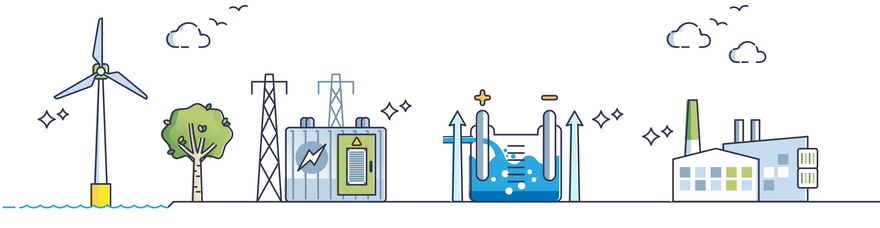



# WHAT WILL BE BUILT?

The development can be described as follows:

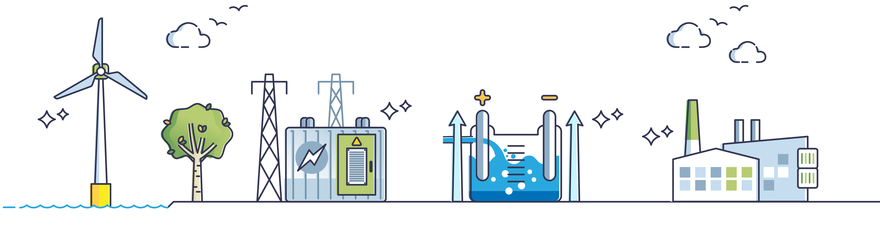
- A 20 MW electrolytic green hydrogen production facility located west of Treviscoe Dryers (Hydrogen Site); and
- An associated 132 kV / 33 kV electrical connection compound and underground cable infrastructure located north of Central Treviscoe (Electrical Connection Compound).

It will produce green hydrogen using electricity supplied from the grid, typically operating off-peak and when there is excess renewable generation available. The hydrogen will be supplied via dedicated low-pressure pipelines to adjacent industrial users, principally Imerys, to displace natural gas in mineral drying and processing operations.

The Electrical Connection Compound is essential enabling infrastructure required to connect the facility to the distribution network via the substation within the Cornwall Energy Recovery Centre (CERC).

The **Hydrogen site** will be developed on a 2-acre plot on and, screened and landscaped to minimise visibility. The site will consist of:

- Containerised electrolyser units
- Electrical transformer and connection equipment
- Water treatment system
- Cooling equipment
- Hydrogen storage vessels
- Associated pipework and control systems
- Landscaping and security fencing

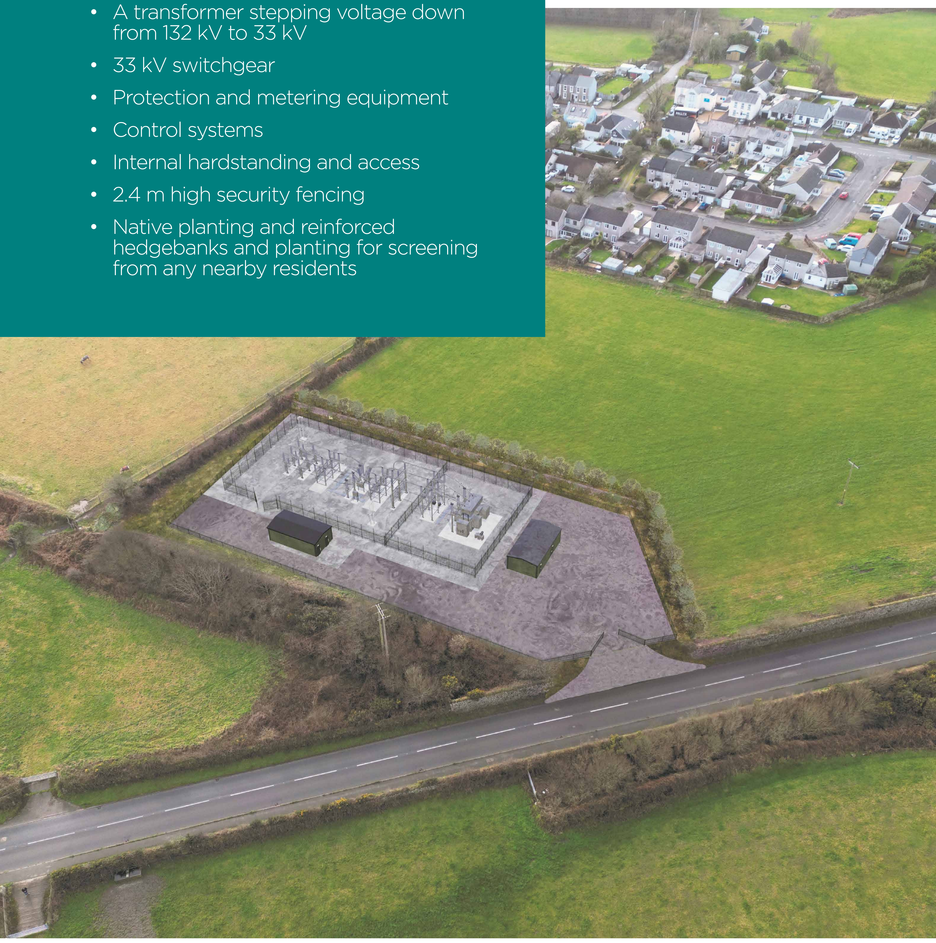


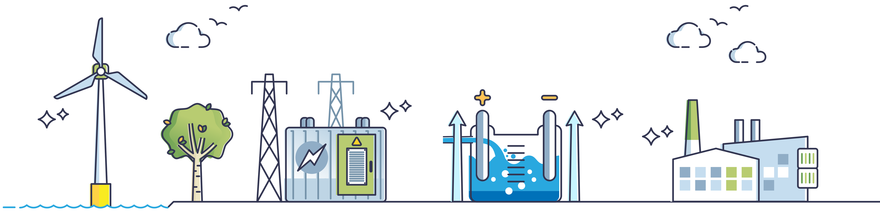

# WHAT WILL BE BUILT?

The electrolyser units are enclosed within purpose-built containers, similar in size to shipping containers.

The **Electrical Connection Compound** will comprise:

- 132 kV incoming switchgear
- A transformer stepping voltage down from 132 kV to 33 kV
- 33 kV switchgear
- Protection and metering equipment
- Control systems
- Internal hardstanding and access
- 2.4 m high security fencing
- Native planting and reinforced hedgebanks and planting for screening from any nearby residents





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# ENVIRONMENTAL CONSIDERATIONS

## Designing Responsibly

Pre-planning application advice has been sought from Cornwall Council, and an Environmental Impact Assessment screening request has been submitted as part of the planning process.

Technical impact assessments have considered:

### Traffic and Transport

- During operation, daily vehicle movements will be very low.
- Construction traffic will be temporary and managed through a Construction Traffic Management Plan.

The Electrical Connection Compound will take ~ 12 months to construct with the Hydrogen site taking ~ 18 months

**Hydrogen Site**

Peak Construction Day

20

14

**Electrical Connection Compound**

Peak Construction Day

10

4

## Proposed vehicular routing to/from site

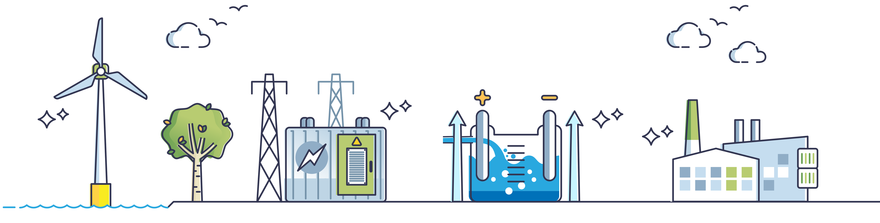

**Route A** – the main Imerys signed HGV route
**Route B** – to be used by staff and for small deliveries

**Construction Phase**

During construction there will be a temporary increase in deliveries, including some heavy goods vehicles bringing equipment and materials to site. This is short-term and will be carefully managed.

**Operational Phase**

Once operational, the facility will generate very low levels of traffic, mainly staff vehicles and occasional maintenance visits. Overall, the project will have minimal long-term impact on local roads and traffic levels



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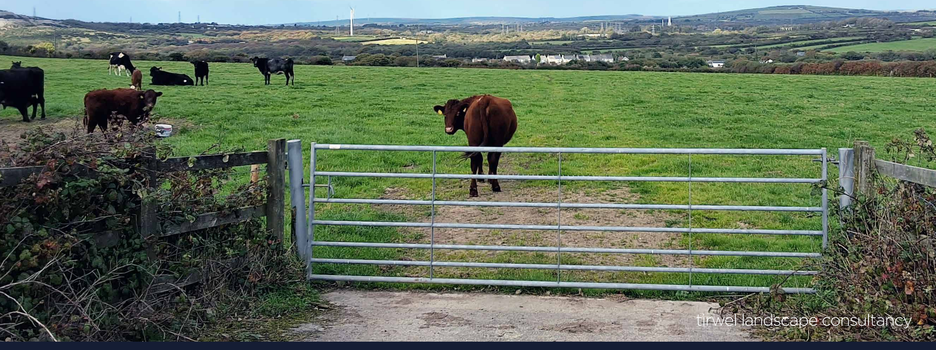



# ENVIRONMENTAL CONSIDERATIONS

## Noise

### Noise and the local area

Independent acoustic specialists have carried out a noise assessment for the proposed hydrogen facility and the electrical compound area.

The study looked at the existing sound levels in the area and predicted how much sound the new facility might produce.

Background sound levels were measured at several nearby locations during both daytime and night-time periods. These measurements help establish the normal sound environment in the area.

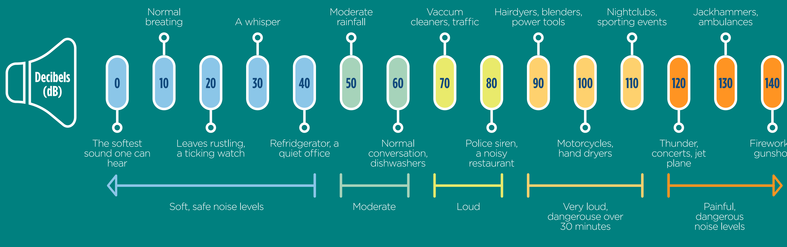
### What level of sound is expected?

The study predicts that sound levels from the facility at nearby homes would typically be around:

- 38 dB during the day
- 34 dB at night

This is roughly the same as a quiet living room

For comparison:




### Where does the sound come from?

The main sources of sound from the facility would be:

- Cooling equipment
- Ventilation fans
- Electrical equipment such as transformers
- Process cooling systems

These are typical pieces of equipment used in many modern industrial facilities.

### Reducing noise

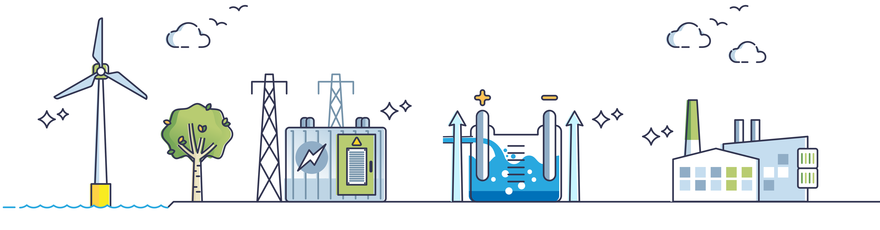
The design of the project already includes measures to help reduce sound levels.

For example:

- Cooling equipment can be fitted with acoustic jackets to reduce noise
- Equipment is located within enclosed containers
- The layout of the site helps reduce sound travelling towards nearby homes

Further design refinements will continue as the project progresses.

Predicted noise levels at nearby homes are expected to be around 34–38 dB, which is comparable to **normal indoor background sound levels**.



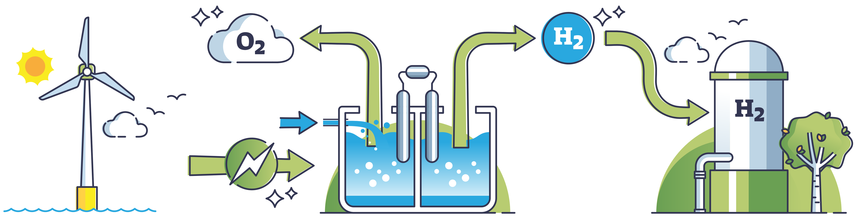

# HOW IT WORKS

## It’s simpler than it sounds.

- Renewable electricity powers the system
- Water is purified
- The water is split into hydrogen and oxygen
- The hydrogen is supplied to local industry
- Oxygen is safely released into the air

The facility will operate quietly and will not involve combustion or routine venting.

No fossil fuels are used in the process.



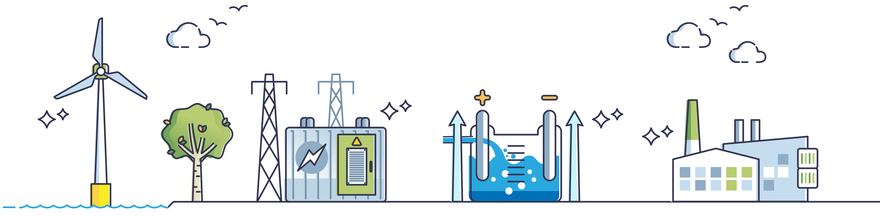

## Operations and safety

Hydrogen is safely used in chemical plants and refineries across the UK and Europe.

The proposed SAGH facility will include:

- Gas detection systems
- Automatic shutdown systems
- Pressure control and safety valves
- Continuous monitoring
- If a fault is detected, the system shuts down safely
- Before the facility is built, the detailed design will be subject to review by the relevant safety authorities, including the Health and Safety Executive (HSE) and the local fire and rescue service.

The project will comply with all UK safety regulations.



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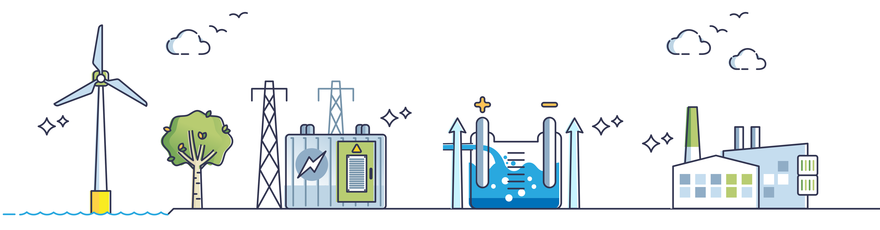
# BENEFITS TO CORNWALL

- Help local industry **reduce carbon emissions**
- Support Cornwall's **climate goals**
- Create **skilled construction jobs**
- Create 6 to 10 **permanent operational roles**
- Support the **local supply chain**
- Bring new **clean energy** and long-term **investment** to the area
- Help **safeguard existing local jobs** and support the long-term future of industry in the area
- **Strengthen energy security** by reducing reliance on imported fuels and supporting a cleaner, more resilient energy system

**Green hydrogen is a growing industry in the UK.**

**St Austell has an opportunity to be part of it.**



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# ENVIRONMENTAL CONSIDERATION

Protecting local wildlife and habitats has been a key part of designing the St Austell Green Hydrogen project.

Independent ecological specialists carried out a detailed Ecological Impact Assessment to understand the wildlife present on and around the site and ensure the project is designed responsibly.

## Ecological Surveys

A range of ecological surveys were undertaken between May and October 2025, including:

- Habitat surveys
- Bat activity surveys
- Breeding bird surveys
- Reptile surveys
- Dormouse surveys

These surveys help identify protected species and ensure appropriate protection and mitigation measures are put in place.

## What We Found

The surveys confirmed that the site and surrounding area support a variety of local wildlife, typical of woodland and scrub habitats in the area.

Key findings include:

- Dormice present in nearby woodland habitat
- Small populations of reptiles, including slow worms and common lizards
- Habitat suitable for bats and birds
- No evidence of nightjar or significant wintering bird populations in the immediate site area

## Protecting Wildlife

A range of measures will be implemented to protect wildlife during construction and operation:

**Habitat protection**
Existing woodland, scrub and hedgerows will be retained wherever possible.

**Reptile protection**
Areas will be carefully managed and cleared under ecological supervision where required.

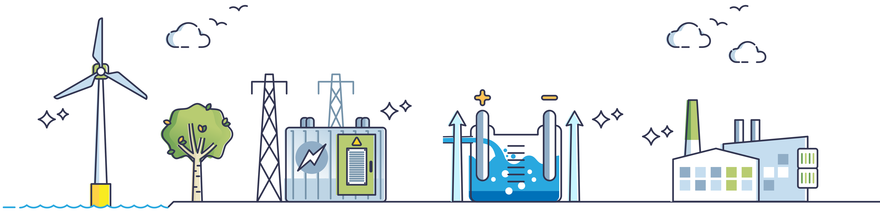
**Dormouse protection**
Construction activities will avoid sensitive habitats and follow approved ecological guidance.

**Timing of works**
Vegetation clearance will avoid bird nesting season where possible.

## Enhancing Biodiversity

Where opportunities exist, the project will aim to enhance biodiversity, including:

- Additional planting and habitat management
- Strengthening wildlife corridors
- Long-term habitat management around the site




# ENVIRONMENTAL CONSIDERATION

## Heritage

The proposed development has been supported by a detailed heritage and archaeological assessment.

The site sits within the historic landscape of Great Treviscoe, now known as Treviscoe Barton, and reflects both the area's medieval origins and its later shaping by Cornwall's china clay industry.

A full review of the surrounding heritage assets found that there are no Scheduled Monuments, World Heritage Sites, Registered Parks and Gardens or Registered Battlefields within the study area. The only designated heritage asset nearby is Parkandillick Engine House, a Grade II* listed building.

The assessment concluded that the proposed development would not harm the setting of Parkandillick Engine House. Existing landform, vegetation and the already industrial character of the wider area mean the development would not materially affect important views of the building.

Both development areas were also found to have low archaeological potential. This is because the land has been altered over time by historic field changes, nearby development and past industrial activity linked to the china clay industry.

**In summary:**

The heritage work found that the proposals can be brought forward without significant effects on heritage assets or their setting.

## Trees and Planting

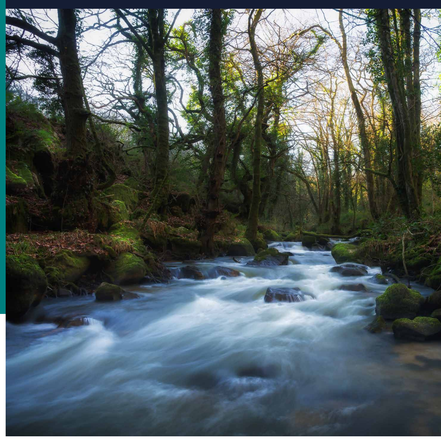
The site has been surveyed by specialist arboricultural consultants. The land is mainly made up of naturally regenerated scrub and secondary woodland, reflecting the area's former industrial use.

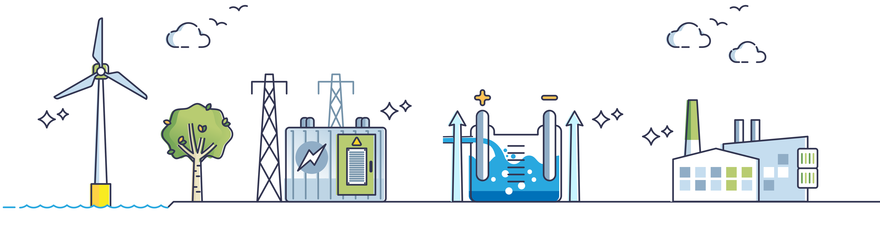
The assessment confirmed that the site is not covered by a Tree Preservation Order, is not in a Conservation Area, and is not ancient woodland.

Some trees and scrub would need to be removed to allow the project to be built. The report says these impacts should be managed through careful mitigation, including protecting retained trees, supporting natural regeneration, and tackling invasive species such as rhododendron.

**In summary:**

Tree impacts have been carefully assessed, and measures are proposed to protect existing trees where possible and manage and improve surrounding woodland over time.





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# ENVIRONMENTAL CONSIDERATION

## Landscape and Visual

A Landscape and Visual Impact Assessment is being prepared as part of the design process. Landscape proposals will also form part of the development to help the production plant and electrical compound sit well within the site, while providing visual screening and biodiversity enhancements that reflect local landscape character.

## Today's landscape

Treviscoe and its landscape setting have medieval origins, still visible in parts of the surrounding field pattern and older areas such as Barton Farm. More recently, the landscape has been strongly shaped by quarrying, mining and the china clay industry.

Neither the site nor its surroundings are covered by any landscape designations. The 2022 Cornwall and Isles of Scilly Landscape Character Assessment places the site within CCA27 St Austell or Hensbarrow China Clay Area and LCTF Enclosed Moorland.

CCA27 is defined by the clay industry and its distinctive skyline. Remnants of the old pastoral field pattern remain alongside terraced villages, smallholdings, regenerating woodland, heathland and industrial sites. Wind turbines and solar panels are also now a familiar part of the area's evolving character.

## Key views

There are no public views of the main plant site itself. Small sections of surrounding trees can be glimpsed from Treviscoe Play Area, informal woodland paths and Barton Lane. Private views from homes along Central Treviscoe are screened by recent plantation woodland.

The electrical connection compound field is more visible, including from the footpath along its southern edge and from some nearby homes at Barton Court and Barton Road. It is also glimpsed from the CERC road and adjoining path.

To help explain the proposals, CGI views have been prepared to show how the development could appear in its setting.

## The Proposals

The main plant site is set within the 2007 plantation part of Treviscoe Woods, the design keeps a belt of trees along the northern and eastern boundaries and includes works to replant and manage the area to improve its screening function as well as biodiversity value.

The electrical compound site is part of a field between the CERC haul road and spoil heap behind Parkandillick. The 1907 OS map shows this field divided in to 5 smaller parcels, Barton Close now covers the western two. A new length of tree and shrub topped Cornish hedge will be built along the western edge of the compound, roughly along the historic hedgeline, to screen it in views from the housing and footpath which overlook the site.