



# Soil Science

## Case Study

Hinkley 400kV OHL  
Transmission Scheme

## SUREGROUND™ Reversible Soil Enhancement System

**20%**

Approx. Cost  
Saving

**40%**

Maintenance  
Cost Saving

**67%**

Vehicle  
Movements  
Reduced from  
11,911 to 3,895

**71%**

Carbon Emissions  
Reduced From  
31,253.87tCO<sub>2</sub>e  
to 9,176.63tCO<sub>2</sub>e

**68%**

Imported  
Aggregate Reduced  
from Approx.  
202,500T to 64,226T

**74%**

Stone Layer Depth  
Reduced:  
Haul Routes:  
From 450mm to 200mm  
Piling Mats:  
From 750mm to 100mm

# Hinkley 400kV OHL Transmission Scheme

## SUREGROUND™ Reversible Soil Enhancement System

**Project:**

Hinkley 400kV OHL Transmission Scheme

**Location:**

From Bridgwater to Seabank

**Client:**

National Grid  
and on  
behalf of  
Balfour Beatty

**Duration:**

2 Years

**Area Covered:**

175,000m<sup>2</sup>

**SCOPE:** 75 Piling Mats at Approx. 75,000m<sup>2</sup> and 25,000 Linear Metres of 4m Haul Routes

**As part of the National Grid Hinkley Point nuclear power station scheme; on behalf of Balfour Beatty, 75 piling mats and over 25,000 linear metres of 4m width haul routes with passing bays were required in order to install the power transmission cabling.**

Soil Science were approached due to their SUREGROUND™ Reversible Soil enhancement System which offered a number of benefits to the scheme. One of the most prominent of benefits was the offer of a 350mm subbase using site won soils with 100mm Type 1 stone overlay for the piling mats which was a 650mm import saving, due to the traditional design requiring 750mm imported material to yield the same resultant strength. Coupled with utilising site won materials for the haul routes, the lesser reliance on material import, mitigated any programme time delays. The proposal to use SUREGROUND™ was further supported by improved environmental and commercial performance; as well as greatly reduced local community interface, due to reduced construction traffic.

The design consisted throughout of a 350mm subbase stabilisation with 200mm of treated Type 1 surfacing which formed the armoured surface on the haul routes and achieving in excess of 30% CBR. The piling mats were overlaid with 100mm of unbound type 1 stone in lieu of the armoured layer, which was not required for this element of the installation.

Soil Science took samples from various locations of the site, and sent these away to undertake pre-start laboratory testing, (which included leachate tests to ensure the SUREGROUND™ binder would not affect the underlying soils) to ensure the success of the product, as well as preparing for the decommissioning stage of the works, so that in due course these areas can be decommissioned back to DEFRA pH and Nutrient indices to ensure the yield of regrowth on previously enhanced soils.

Soil Science mobilised to site undertook topsoil strip and banded this for subsequent decommissioning.

A dust free system was used to rotovate subsoils with a proprietary binder specifically designed for site soil types encountered at Hinkley Point.



### LOW MAINTENANCE AND PLASTIC FREE DESIGN (Armoured Layer)

