

## Sandford Compound

As part of the 400kV Cable works on National Grid's Hinkley Connection Project, a temporary compound and haul road was required to enable the construction of Sandford Substation.

## SUREGROUND™

Reversible Soil Enhancement System

### COST SAVING



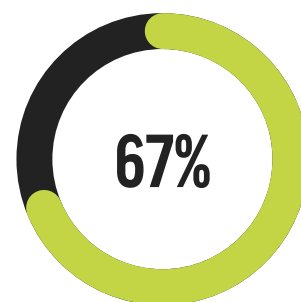
*\*Installation - Further reduction for Maintenance & Decom*

### PROGRAMME REDUCTION



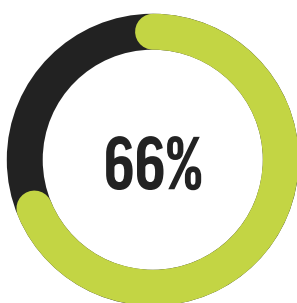
*\*Reduced from 6 days to 3 days*

### CARBON REDUCTION



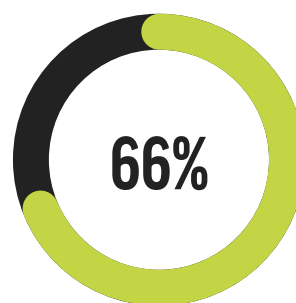
*\*Reduced from 93.1T to 37.9T*

### AGGREGATE REDUCTION



*\*Reduced from 3,600T to 810T*

### VEHICLE MOVEMENTS



*\*Reduced from 200 to 43*

# Sandford Compound

**Project:** Sandford Compound - Hinkley Point OHL Scheme

**Location:** Mendip Hills

**Client:** National Grid, on behalf of Balfour Beatty

**Area Covered:** 14,100 m<sup>2</sup>

## SUREGROUND™

### Reversible Soil Enhancement System

As part of the 400kV Cable works on National Grid's Hinkley Connection Project, a temporary compound and haul road was required to enable the construction of Sandford Substation. The initial design required stripping of topsoil and laying a stone hardstanding utilising a geosynthetic system. Poor ground conditions meant that stone thickness would be in excess of 500mm and a larger area for the storage of subsoil would be required.

Over the course of 18 months, the Balfour Beatty project team have worked in conjunction with Soil Science Limited to identify a sustainable alternative that would eliminate the need to import large quantities of aggregate to site and reduce the size of a soil storage area required.

This alternative came in the form of SUREGROUND™ Reversible Soil Enhancement System which mixes in-situ site soils with a proprietary binder. This stabilises the subsoil and increases the load bearing capacity of the ground.

Extensive testing of the subsoil confirmed the nutrient composition of the subsoil and determined the amount of binder required to stabilise the area.

Following topsoil strip, the top 300mm of the subsoil was rotavated with SUREGROUND™ binder and compacted.

Stabilised subsoil was then capped with a Surface Armouring layer of stone bound together with the SUREGROUND™ binder.

In comparison to traditional stone construction methods, SUREGROUND™ provides the following benefits:

- 11,000 tonnes of aggregate were designed out as no longer required;
- Overall 66% reduction in vehicle movements;
- Eliminates use of geosynthetics which would otherwise result in large volumes of plastic waste that cannot be recycled;
- Installation time was halved;
- Approximately 142 tonnes of CO<sub>2</sub> emissions have been prevented;
- Healthy community relationships were maintained by reducing vehicle movements on the local road network and associated noise, dust and vibration levels; and
- Area of works can be fully decommissioned with subsoils returned to their natural state in line with DEFRA pH and nutrient indices.



Soil Science Limited is part of the GRS Group



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