METHOD STATEMENT

MERSTON SOLAR PARK
LAYING OF CABLES FOR GRID CONNECTION

Introduction

This statement sets out the methods proposed for the laying of a pipe to accommodate a cable that provides the grid connection for the solar park to the national grid sub-station at Rose Green Road.

Two principle methods will be used to lay the pipe and cable:

- Digging of a trench
- Directional Drilling

Trench

The majority of the pipe route will be laid in a 0.5m wide trench at a depth of 1 – 1.5m, and dug by machinery and/or hand. Once laid, the trench will be backfilled with the excavated material and the ground restored appropriately.

The trench and construction works will be kept at least 3m from any existing hedgerows and trees and works will be undertaken in accordance with BS 5837:2012 Trees in relation to design, demolition and construction.

Directional Drilling

Directional drilling will be employed in more sensitive areas or where technical challenges are presented. At this stage directional drilling is envisaged to be used:

- Where the route crosses hedgerows, so that there is no disturbance to hedgerows
- To cross a ditch immediately adjacent to the solar park.

Directional drilling would typically be to a depth of 1.5 to 3m.

Directional drill crossings have the least environmental impact of any alternate method. The technology also offers maximum depth of cover under the obstacle thereby, affording maximum protection and minimizing maintenance costs.

Transportation of the Ditch Witch 4020 Jet-Trak

The Ditch Witch 4020JT directional drilling rig and mud mixing equipment are transported by a 32ton HGV lorry and drag. The drilling rig will be unloaded and trailer stored at a pre agreed locations. Setup drilling rig and mud mixing equipment at launch pit location.

Working Near utilities

Direction drill operatives carry out utility sweep of the works area, locate and trace using utility drawings provided by Solstice Renewables, CAT/Genny and Ground Probing Radar to scan the area and mark up its locations using marker paint, marker flags or wooden pegs.

They wear fire retardant coveralls when working near live cables and have 2 x co2 fire extinguisher on site at all times.

Launch pit – Reception pit

The drill head will typically be launched at 700mm and at a pitch of -24% and exit angle 21.58%.

Pilot Hole

A pilot hole is drilled through by connecting 4.5 metre drill rods together using the automatic rod connection system on the Ditch Witch 4020JT. The drill head is monitored and directionally steered by the tracking engineer who will check the direction, pitch and depth in accordance with bore plan. Two way radios will be used to communicate between tracking operator and machine operator. Drill fluids (bentonite clay slurry mix) are pumped down the drill rods to the cutting face of the Radius drill head, this process transports the cuttings away from drilling face out of the pilot bore hole to the launch pit. The clay water slurry is stored in the launch pit and transported to a registered site at Wessex water treatment plant, Avonmouth, Bristol. Registered waste carrier for this project is Bale Group, 90 Durham Way, Heathpark Industrial estate, Honiton, EX14 1SQ 1.5

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