



## Case

# STUDY

### STRATAGRID

Hollyford Wind Farm  
Platform Reinforcement



**MARKET SECTOR:**  
Commercial



**LOCATION:**  
Hollyford Wind Farm  
Tipperary



**CONTRACTOR:**  
Intergeo Services Limited

## The BACKGROUND

**Geosynthetics were approached by Intergeo Services to engineer a solution for three 3000kW wind turbines located above Hollyford in the Silieve Felim mountains of Tipperary.**

Geosynthetics were able to design a sustainable and cost effective solution to reinforce the platform holding these turbines. As the location was set on the side of a steep slope it was necessary to build a working platform on the edge of the mountain. To ensure that the amount of fill material was minimised, a reinforced earth solution was proposed to achieve a steep slope and assist in reducing the overall footprint of the structure.

## Our Client's REQUIREMENTS

A sustainable solution for a reinforced platform

**The platform needed to provide sufficient bearing capacity to accommodate construction traffic and heavy lifting equipment needed to construct the 75m tall turbines.**

The design surcharge used in the calculation was 45 kN/m<sup>2</sup> and a bearing capacity of 200 kPa on the finished surface of the hardstanding.



## Our Value Engineered SOLUTION

Geosynthetics determined that utilising on site granular material and a combination of 35kN & 55kN polyester geogrids with 600mm space that the 10m high, 70 degree walls would be a viable option to the contractor.

The calculation of the reinforced soil wall was performed following the SD8006:2010 for the internal stability and Eurocode EC7 to assess global stability.

By introducing the reinforced earth solution we were able to reduce the overall height of the structure significantly from approx 30m to a more realistic 10m. This allowed the contractor to deliver the scheme quickly and within budget.

Geosynthetics Limited specialise in designing sustainable solutions whilst utilising the natural resources. The links with reliable product suppliers allows the inhouse design team to create the best solution at the best price.

**"The service from Geosynthetics was first class from provision of preliminary calculations to determine outline design to delivery of materials on time and accurately. Geosynthetics have proved themselves to be a key supplier for our reinforced earth business."**

**PHIL MCGOLDRICK**  
Managing Director

