

# WALTERS

## From Coal Mine To Windfarm



Project:

Maesgwyn Wind Farm

Client:

Pennant Walters Limited

Value:

£5 million

At-a-glance:

- 13 Nr 2MW turbines
- 17m octagonal bases
- 290m<sup>3</sup> concrete pours
- 14km of access track
- Major public interfaces

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Walters is accredited to ISO 9001 for Quality Management, ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health & Safety.

## Challenges

The proposed Maesgwyn wind farm site was a former opencast coal mine that had been loosely backfilled 20 years prior to the proposed construction. The depth and extent of backfill presented the client with highly variable and potentially difficult ground conditions. The site was also extensively used for a number of outdoor pursuits including cycling, motocross and car rallying so safe and sensitive interaction with the users and the public was of great importance.

The wind farm was planned to consist of 13 Nr, 2MW wind turbines, an anemometer mast, a 133kV electricity substation and all associated infrastructure including crane platforms and access roads.

## Solution

Walters were appointed as Principal Contractor to discharge all planning conditions and undertake the design and construction of all civil engineering works including ground improvement, turbine foundations, crane platforms and access roads. Sub-consultants employed included geotechnical, geo-environmental, structural, landscaping, archaeological and ecological consultants, however all earthworks modelling and access track alignment was undertaken by the Walters in house design team.

Of particular concern were the highly variable ground conditions caused by the uncontrolled backfilling of the mine many years previously. A number of potential solutions were investigated by Walters before Dynamic Compaction was finally chosen as the most effective treatment.

Walters also constructed over 14km of access roads and 12km of cable trenching through the picturesque forested location with all construction activities coordinated to avoid conflict with the many organised leisure activities that continued throughout the construction period.