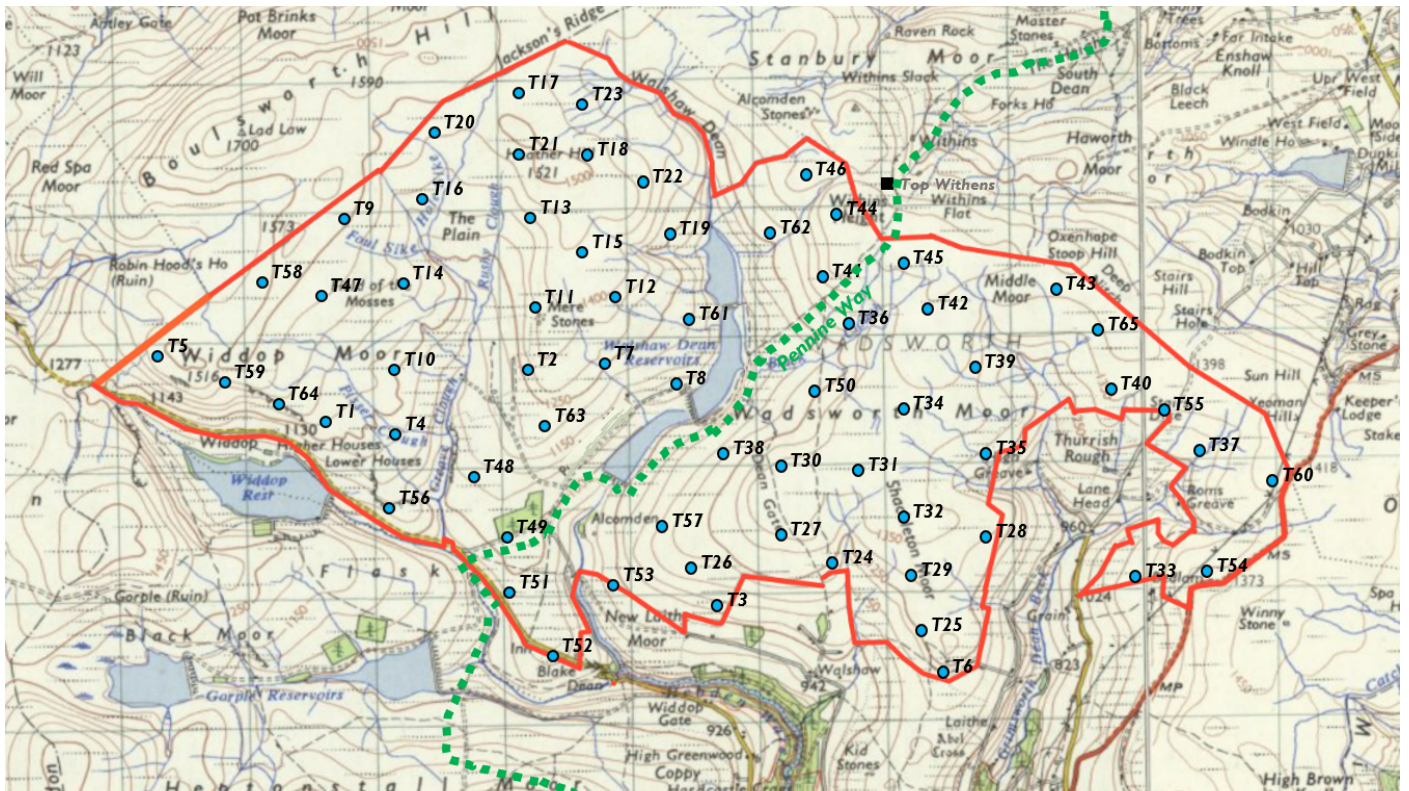


We're going to take 7 minutes of your time, and this presentation is aimed at Oxenhope in particular. We're going fast, and the slides and script are available online.



1. This is the site of Calderdale Wind Farm CWF. 65 turbines up to 200 metres high. A world expert, who happens to live in Oxenhope said when we rolled out the map, "But it's enormous, like an offshore wind farm built on land!"

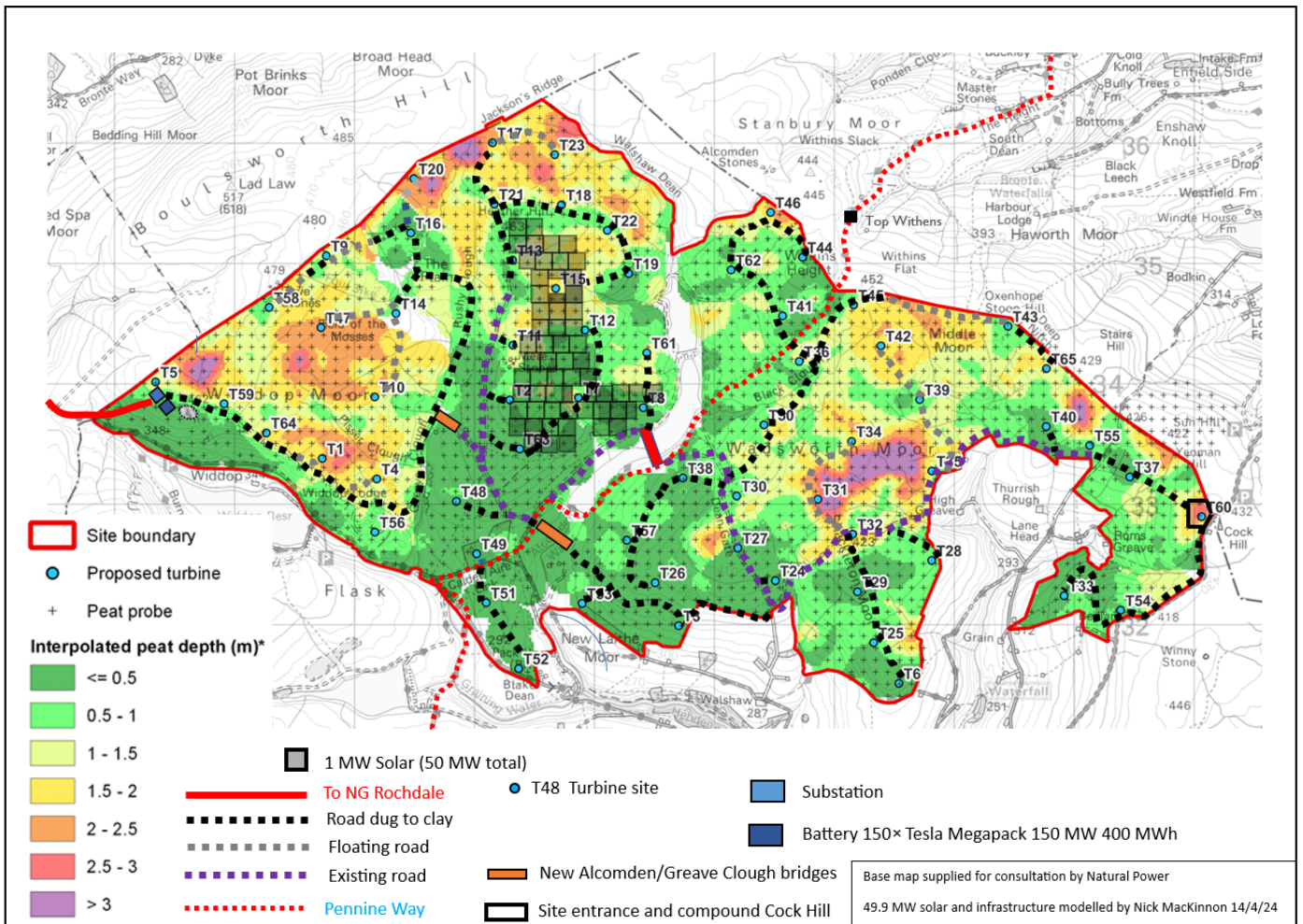
There's just two ways to reach the site from the motorways: Widdop in the south, and the Oxenhope to Hebden Bridge road from the east. Widdop is useless for stone delivery and turbine blades. All the evidence, including a mole close to the owner Richard Bannister, points to a site entrance just outside Oxenhope...



2. "Opposite the Elephant". There will be a fenced compound on Cock Hill Swamp to receive all the stone, cement, pylons and turbine blades.



3. Turbine T60 is so close and huge there isn't enough sky to show it. This dull looking place was raucous with skylarks; it is one of the best bits of CWF, partly because nobody goes there. You'll see 40 turbines by day, more at night when they'll be lit.



4. This is a model of the infrastructure overlaid on the developer's peat map (which should be redrawn to show peat depths in the ranges 0-0.4 metres and 0.4-1 metres). 39 km of crushed stone roads 6m wide. The buried electricity cable goes out at the western point to Rochdale (£36 million) via a substation and battery (50-150 MW at £1 million/MW). The battery is to smooth the output over an hour or two. No battery can cover days of windlessness, so gas back-up must often work in tandem with wind. The 300 MW "nameplate" rating of CWF is its maximum output. It will work at an average of perhaps 100 MW but in a bumpy way. The map shows "50 MW" of solar which is again a maximum figure. A big mess and it's not very sunny, but they get the wiring for free with the wind farm so it's not stupid. The solar will happen if the wind farm does and all wind farms should have solar: to some extent they balance out.

CWF is not a charity spending £500 million on us. They will sell the wind farm to a pension fund for much more than it cost to build (their reasonable profit on risk capital). We pay the pension fund back (with interest) via our utility bills, at prices related to gas generation. We also have to pay for grid up-grades to handle the intermittency of wind and solar, and for a quite different geography of supply because the grid is based on the old coal generators (one of which was at Rochdale, the target for CWF). We have to pay for the gas generators back up when it is not generating, and we will pay individually for storage, in the form of electric car batteries and heat pump hot water cylinders. The wind is 'free' but private wind generation is expensive. There is no reason to anticipate lower bills because of CWF. We could strip both layers of profit out of such projects by nationalising generation.


The site is covered in peat and some of it is deeper than the three-metre probe. British peat is our Amazon rain forest, storing far more carbon than our woodland. It will be lost directly to turbines and roads, but much worse is the drying-out downhill of the infrastructure, and the deepest peat is all downhill of the infrastructure.

Avoid constructing wind farms on peat

Jo Smith , Dali Rani Nayak & Pete Smith

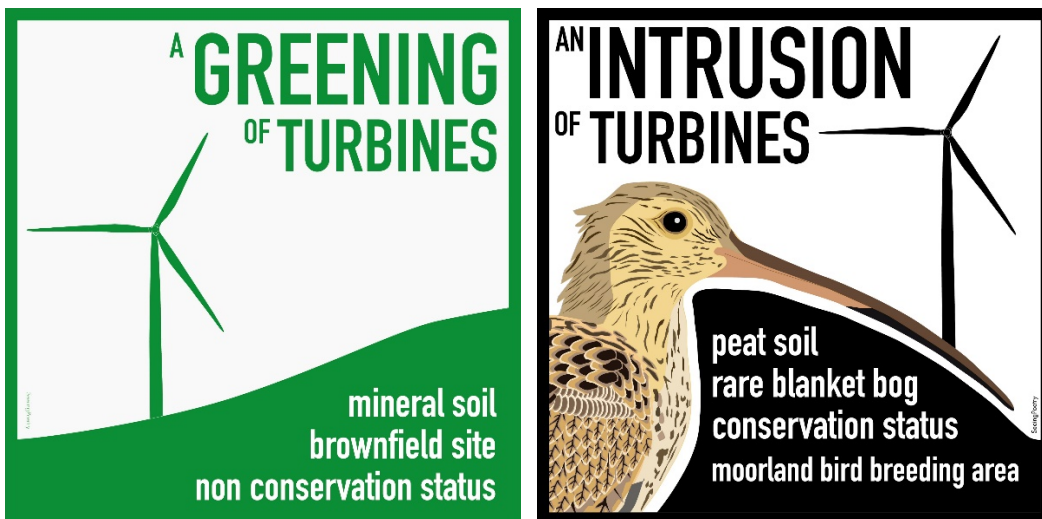
Nature **489**, 33 (2012) | [Cite this article](#)

4177 Accesses | 8 Citations | 34 Altmetric | [Metrics](#)

 A [Clarification](#) to this article was published on 27 February 2013

Scotland's government is planning to build large-scale wind farms to reduce carbon emissions from electricity production, some of which could be situated on peatlands. We contend that wind farms on peatlands will probably not reduce emissions, unlike those on mineral soils.

5. The scientists who built the Scottish carbon calculator wrote to *Nature* in 2013. **Avoid constructing wind farms on peat.** The CO₂ released in the manufacture, building and gas back-up for CWF may never be recovered.



6. Wind farms in tandem with gas back-up can make low carbon electricity, but not if the turbines are on peat. These superb posters by Hebden-based artist Lou Crosby make this point.

Calderdale WF Infrastructure	Area (m ²)	Depth (m)	Volume (m ³)
Turbines (65 no)	702	0.75	34,223
Turbine hardstandings (65 no)	1,984	0.75	96,720
Access track (39,000 m length) inc. turning heads & passing places	412,335	0.75	309,251
Met masts (2 no)	132	0.75	198
Compounds (12 no)	49,776	0.75	37,332
Total			477,724
Total including 25% contingency			600,000

7. They need 600,000 cubic metres, 900,000 tonnes of crushed stone called 'aggregate' for the roads and turbine foundations. This may be a big problem for Oxenhope but is certainly one for the developers.

“3.6. The Proposed Development would require crushed stone to construct new tracks and, where necessary, improve the existing tracks on site. The crushed stone will also be required to create the hardstanding areas for cranes and lay the foundations for turbines. Suitable volumes of stone and aggregate shall be sourced from onsite borrow pits. The utilisation of onsite borrow pits will assist with mitigating the potential environmental and transport network effects associated with transporting stone to the site.” CWF Scoping Report.

8. They say “Suitable volumes of stone and aggregate shall be sourced from onsite borrow pits (quarries) . This will assist with mitigating the environmental and transport network effects associated with transporting stone to the site”. This is their big mistake, because the local sandstone is strong in a block but too weak and porous to make concrete or roadstone. All the councils know this, but the developers didn't, though they do now. Many of you will have known this too. Any track round here is made of imported limestone.



West Yorkshire Local Aggregate Assessment - 2022 data



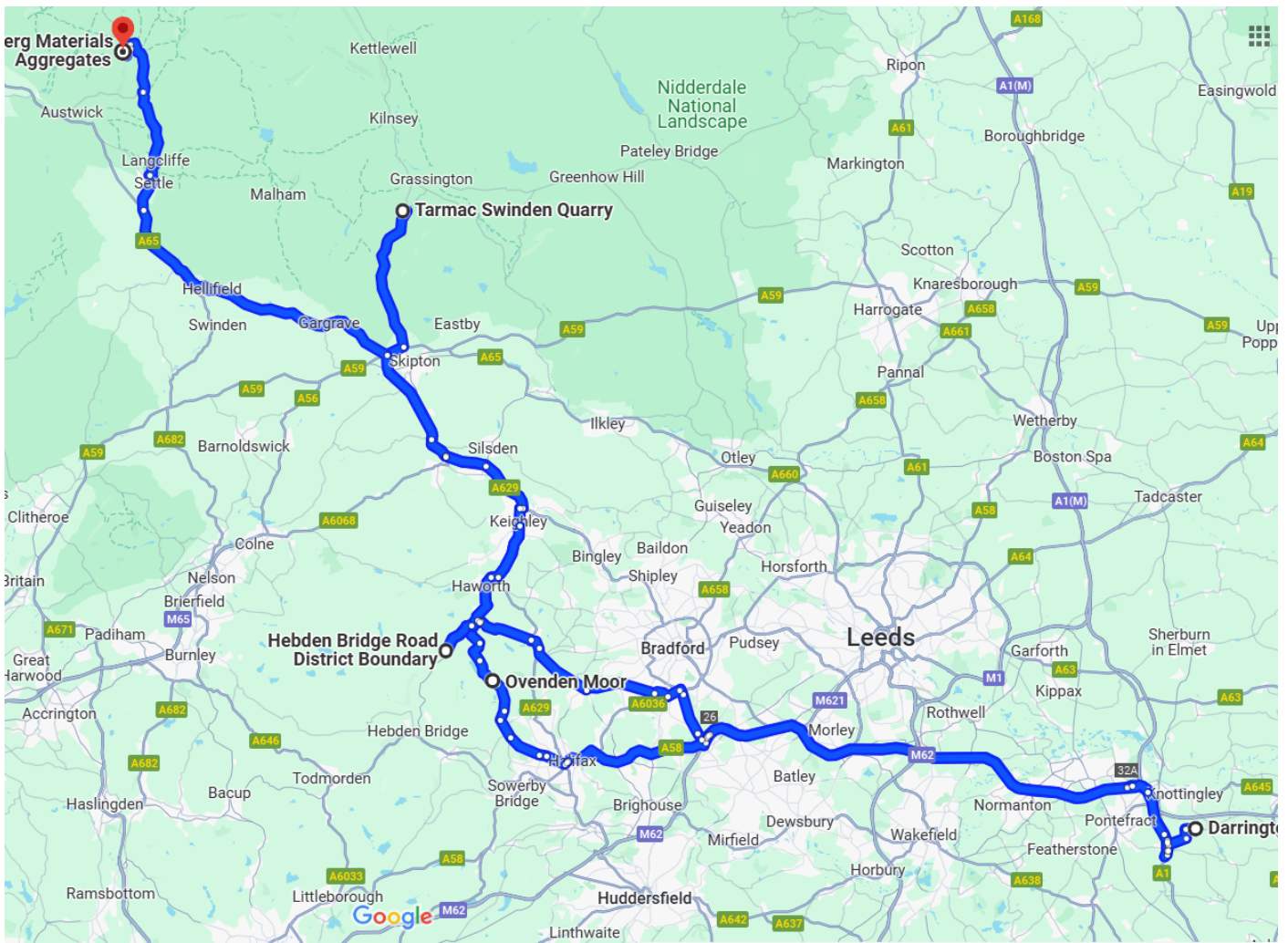
Adopted – December 2023

9. The five West Yorkshire councils make an annual audit of where our aggregate is going to come from, because crushed West Yorkshire stone turns to sand in a week under rain and light traffic. The sand itself can be useful, and several factories in Calderdale make reconstituted stone products out of it.

10. The Audit says: “The sandstones are too weak and porous for the manufacture of concrete or for road building and are commonly used for bulk fill.”

“No sandstone quarry exists solely to produce aggregate within West Yorkshire. The aggregate is produced in relatively small quantities as a by-product for low grade uses.”

“It must be acknowledged that the West Yorkshire aggregate reserve is predominated by material which is unlikely to be capable of meeting the specifications required for concrete manufacture and road construction”



11. So Calderdale Wind Farm will be built of imported limestone. The nearest quarries are at Grassington, Horton, and Knottingley. Two hilltop communities, probably Grassington and Oxenhope, will have to suffer an endless chain of limestone lorries.

12.

The on-site rock can't be used for roadstone or high-quality concrete.

Limestone aggregate must be imported.

600,000 m^3 is 900,000 tonnes in 45000 tippers

all of which must go back.

One huge tipper truck every 90 seconds,

Monday to Friday, 9a.m.-5p.m. for a year.

More likely every 3 minutes for two years.

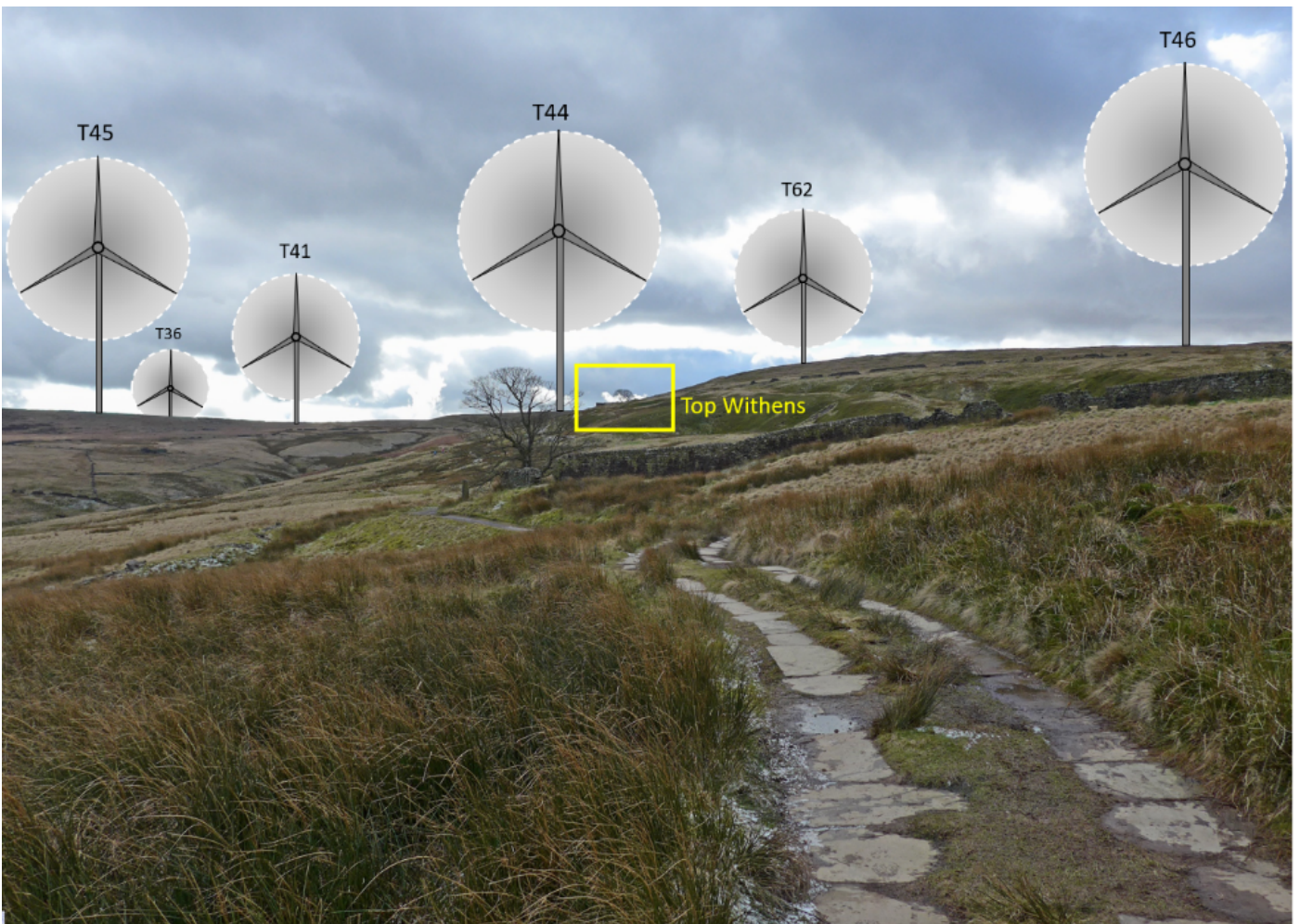


13. Along the spectacular cornice from Crossroads and Lees.





14. Over the mini-roundabout and past the school



15. These turbines are huge and will dominate Brontë country. People come from all over the world to see somewhere they have experienced in imagination, and they will be astonished to find a vast wind farm looming over it, and more so if they climb up to the trig point to see what the Emily Brontë called “the wild”.

[Save And Restore Walshaw Moor – Stop Calderdale Windfarm! Ban the Burn \(wordpress.com\)](https://www.wordpress.com)

The campaign against CWF has to be disciplined, because the final decision will be made in Westminster in 2026 by the Secretary of State for Energy Security and Net Zero. People respond first to how the thing will look, but every time we say “It will spoil our view” the decision makers think, “NIMBY”. We need everyone local to understand these strong non-visual national and international arguments.

Not green Wind generation on peat releases a plume of CO₂.

Red-listed birds. We expect a poor country like Botswana to protect the rhinoceros, while we destroy the breeding grounds of the great waders, curlew, lapwing and golden plover to make not very much electricity. It is much more amazing up there than you might realise. There’s a golden eagle and an osprey right now, and ground nesting chicks fledging everywhere. The Dales national park, the Lake District and upland Wales are almost lifeless by comparison.

Habitat. The blanket bog is rare and deeply protected by legislation. We’ve walked over the best bit with a bryologist for five hours. He wanted five months but thought it was great. The site is SSSI, SAC and the big one SPA. Special Protection Area. There are only 62 SPAs in England and include the Farne Islands and Flamborough Head.

Flooding Hebden Bridge and Mytholmroyd have had terrifying floods. Stop the Flow have made low-tech interventions that have reduced the peak flow. CWF is a massive high tech intervention that will greatly increase peak flow.

International cultural heritage. The site is sacred to the Bronte sisters who have had an worldwide reach into people’s imaginations for centuries.

These non-visual arguments, and the gross disturbance to valley and hilltop communities of the limestone deliveries are so powerful that Calderdale council will surely deny planning permission. **Our problem starts then.** The Oxenhope-based world-leading expert on wind farms said the site will definitely be called in by the Secretary of State and can then be passed ‘with a tick in a box’. Our argument has to aimed nationally and internationally, but local people are best placed to make it if we don’t go on about what an eyesore it is for us. By explaining the thing to everybody we explain the thing to well... to Ed Miliband.

We hope Oxenhope Council and residents will help lead the argument. Walshaw Moor is a wonderland, and brings national and international obligations not to destroy it. We can meet them.