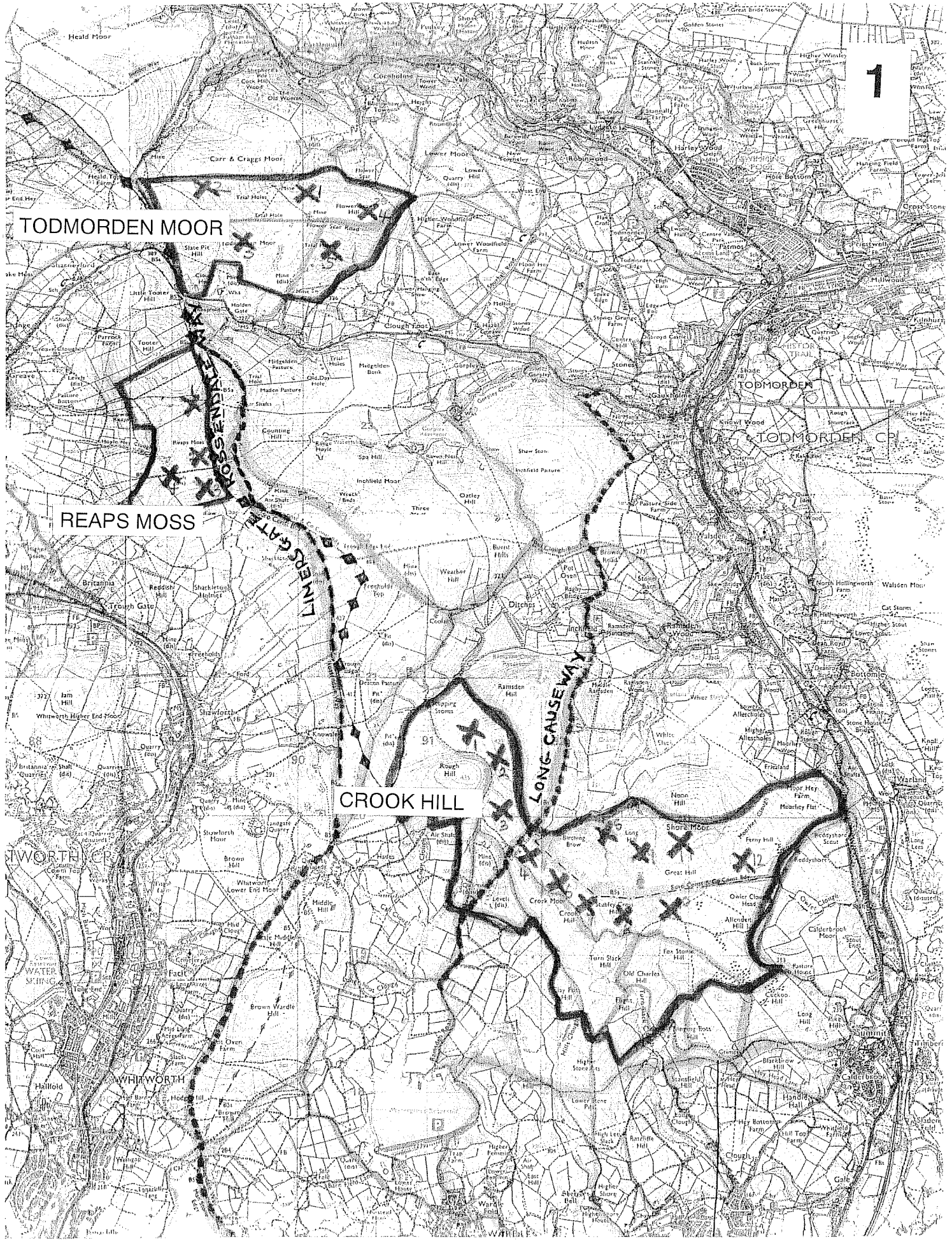
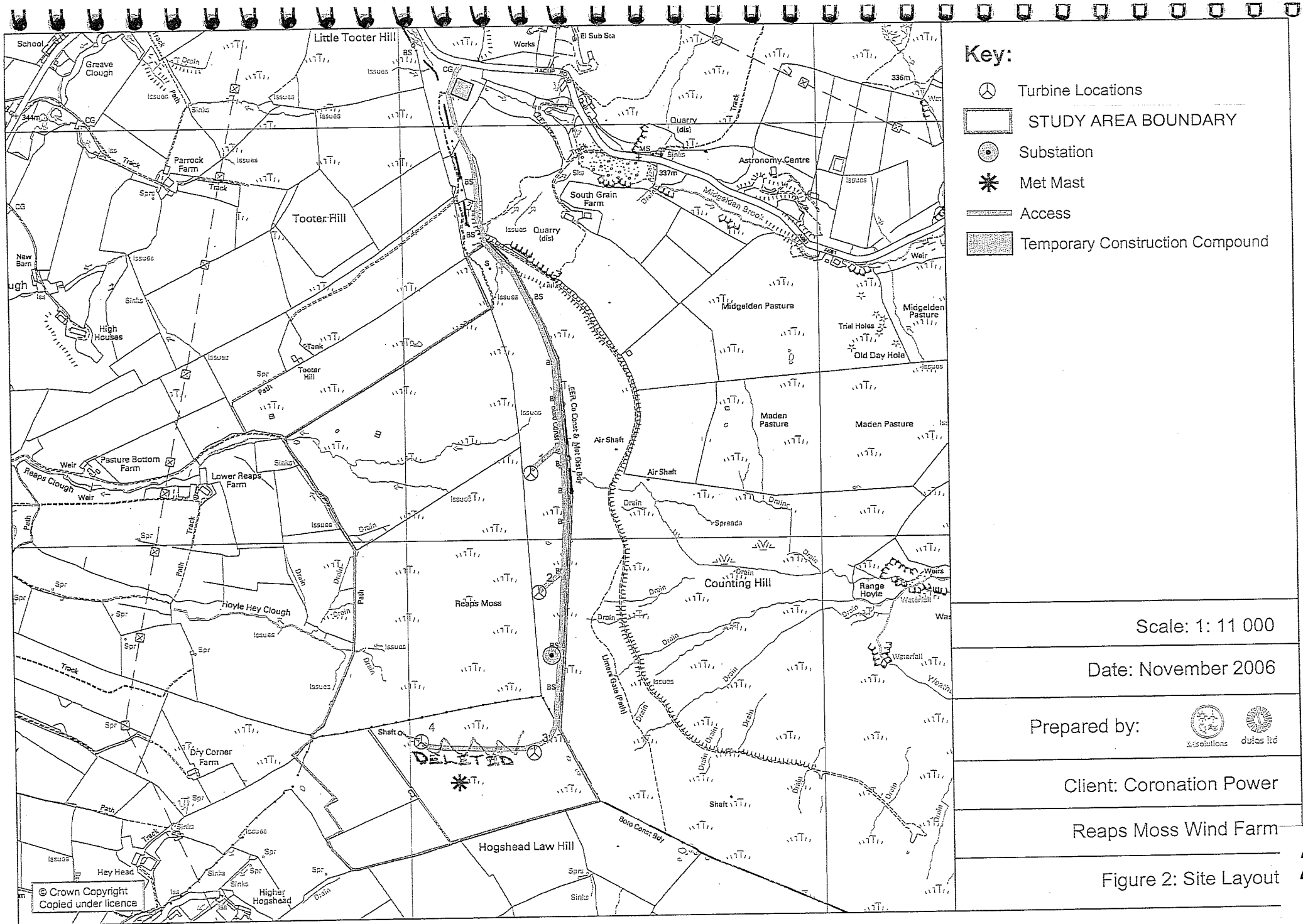


TODMORDEN MOOR







REAPS MOSS

CROOK HILL







**Key:**

-  Turbine Locations
-  STUDY AREA BOUNDARY
-  Substation
-  Met Mast
-  Access
-  Temporary Construction Compound

Scale: 1: 11 000

Date: November 2006

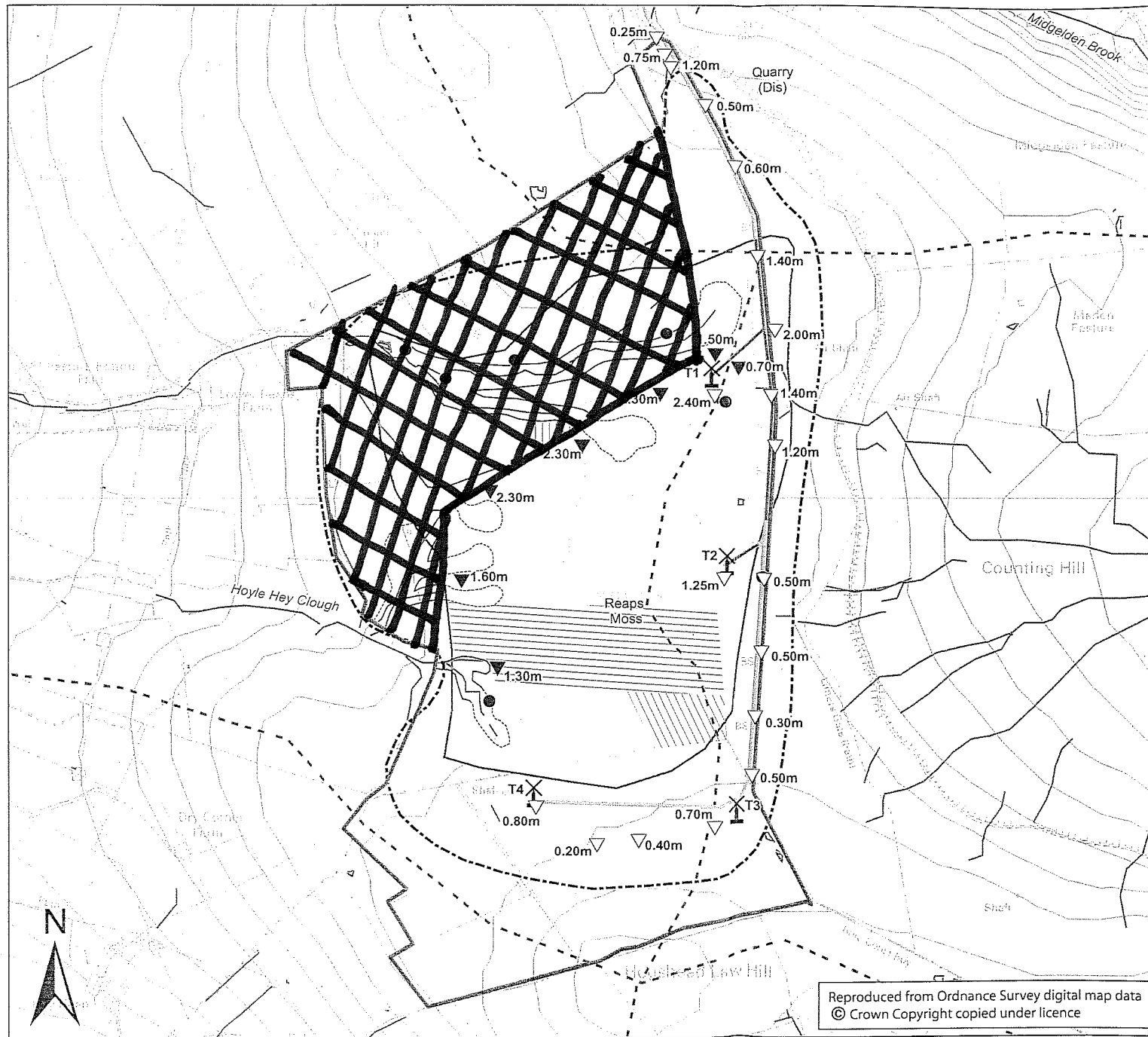
Prepared by:  

Client: Coronation Power

Reaps Moss Wind Farm

Figure 2: Site Layout

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- Key:**
- Site boundary
  - Sub-catchment boundaries
  - Floating road
  - Grips
- Peat Prodding Depths**
- PWS results (measured)
  - SKM results (measured)
  - SKM results (>1.0m)
  - Inferred peat area, >1.0m depth
  - Approximate extent of peat moss
  - Steep slope
  - Shallow depression

**## Part of study area outside Red. & Blue-Flagged land**

Approximate Scale: 1: 6000

Original Map: OS 1: 10 000

Date: July 2007

Prepared by:

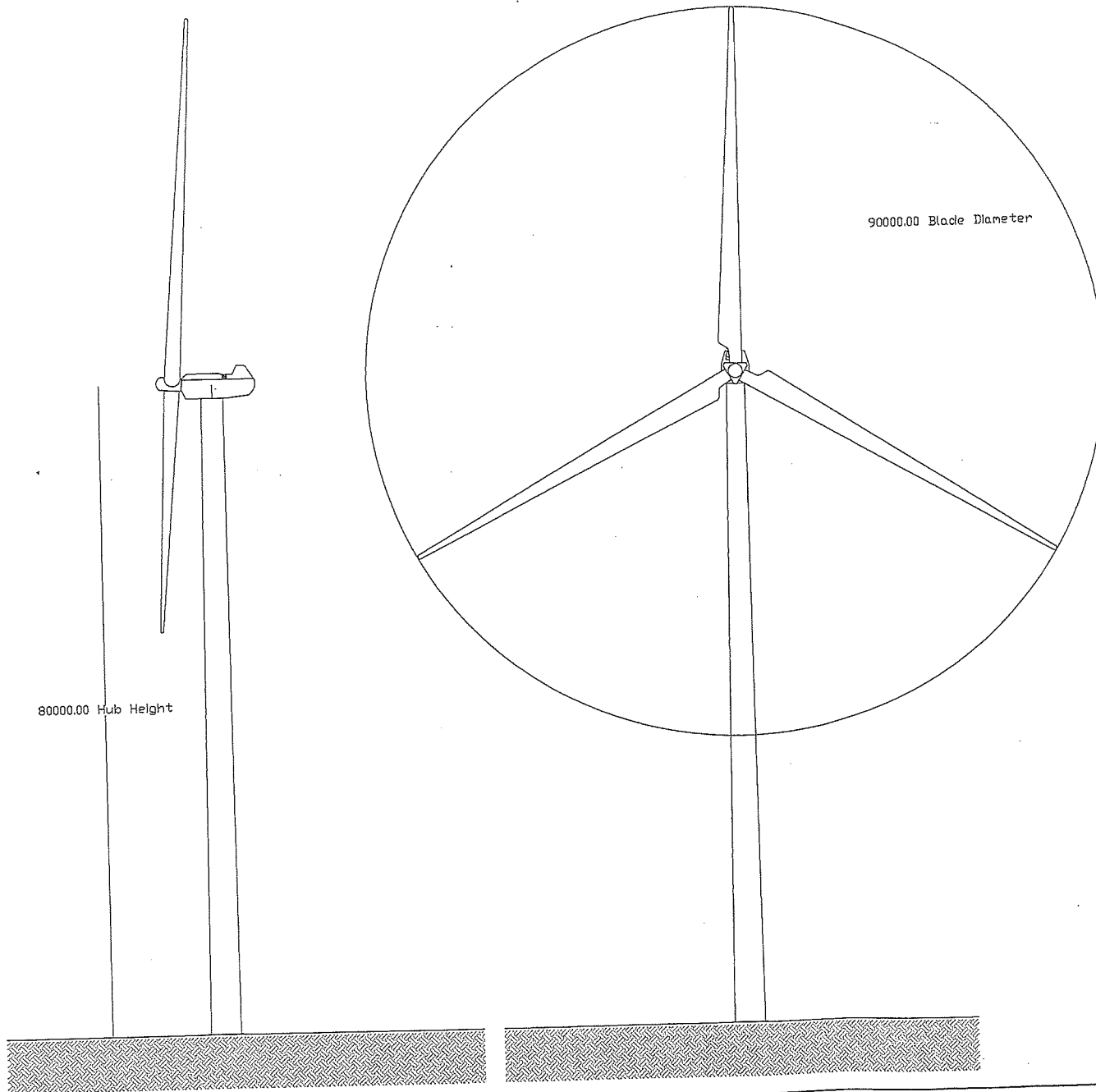


Client: Coronation Power

Reaps Moss Wind Farm

Figure 40 - Peat Extents and Depths

Reproduced from Ordnance Survey digital map data  
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Legend:

1. All dimensions in mm unless otherwise stated

Approximate scale 1:500

Date: November 2006

Prepared by:

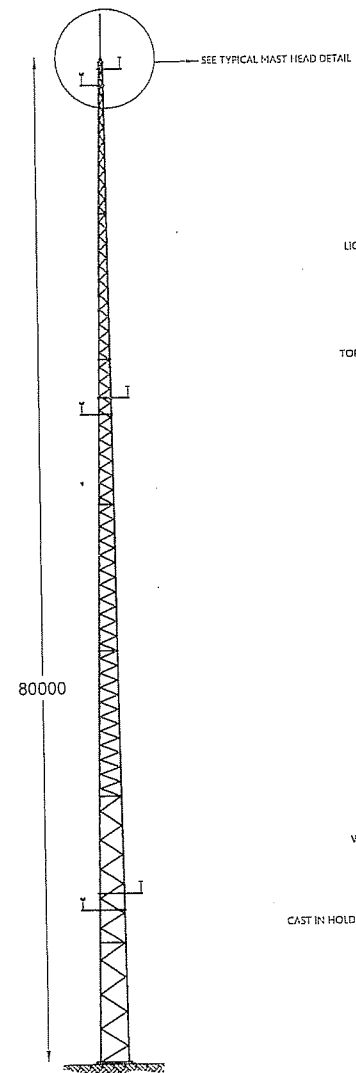


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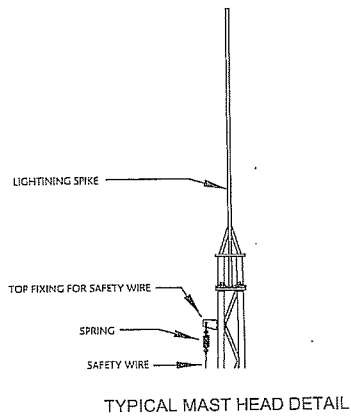


Reaps Moss Wind Farm

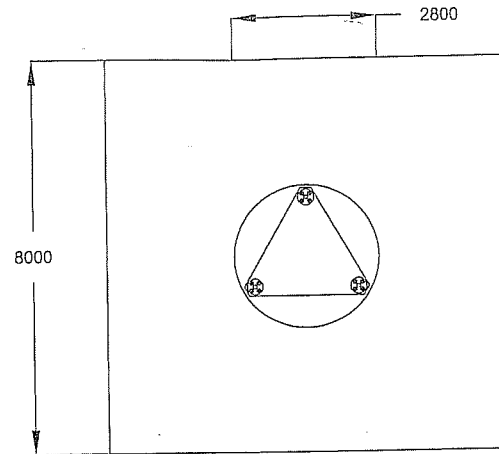
Figure A-7: Wind Turbine Schematic



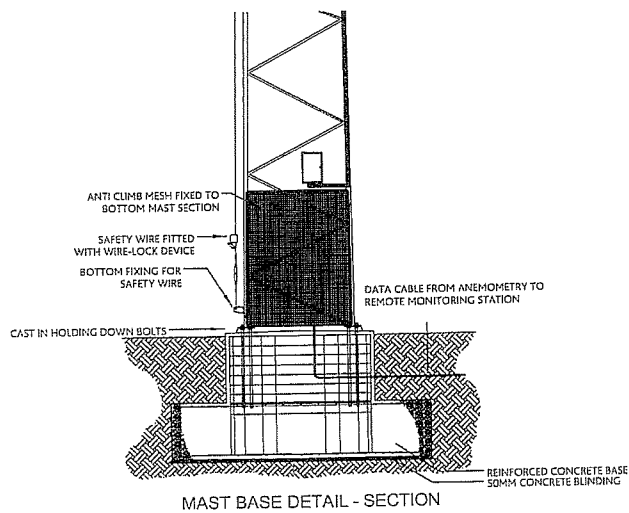
FULL MAST VIEW DETAIL  
(1:400 SCALE)



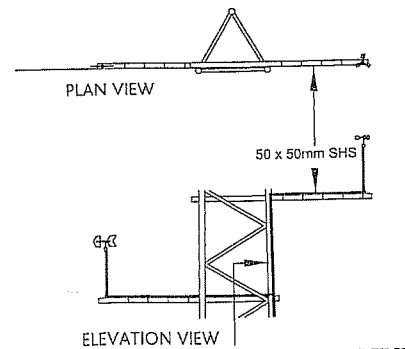
TYPICAL MAST HEAD DETAIL



MAST BASE PLAN  
SCALE 1:100



MAST BASE DETAIL - SECTION



ANEMOMETER & WIND VANE  
DETAIL SCALE 1:50

Legend:

1. All dimensions in mm unless otherwise stated

Approximate Scale: various

Date: December 2006

Prepared by:



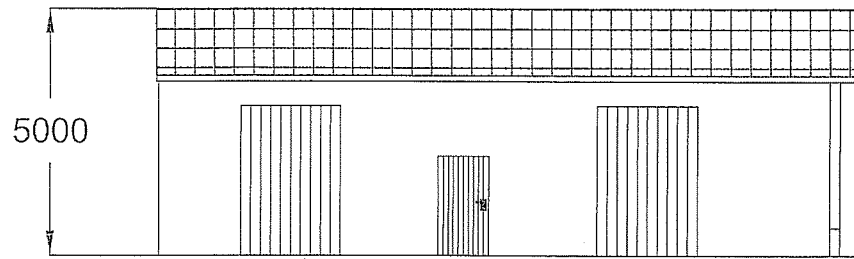
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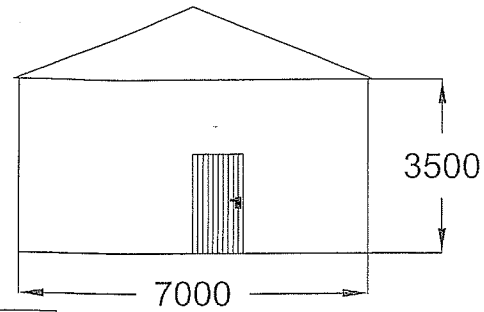
Reaps Moss Wind Farm

Figure A-8: Meteorological Mast

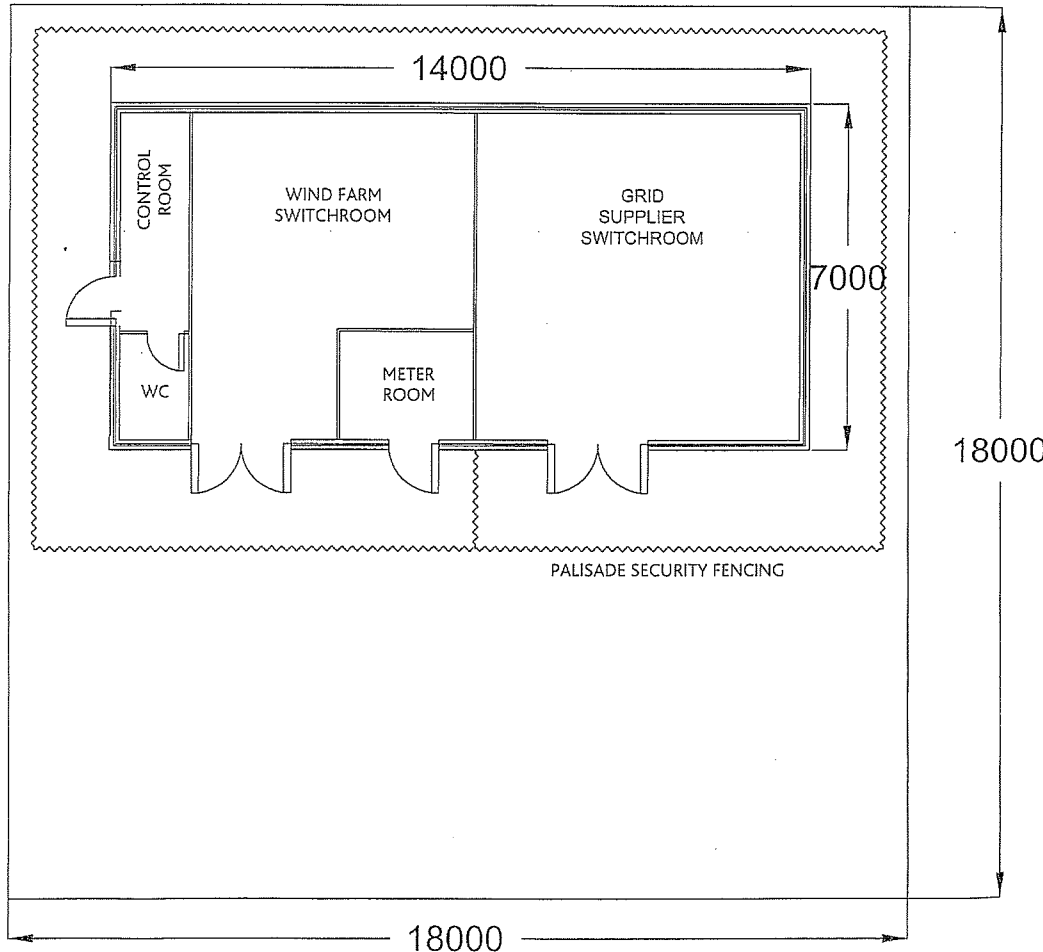
Front Elevation



Side Elevation



Layout Plan and Hardstanding



Legend:

1. All dimensions in mm unless otherwise stated

Approximate Scale: 1:100

Date: December 2006

Prepared by:

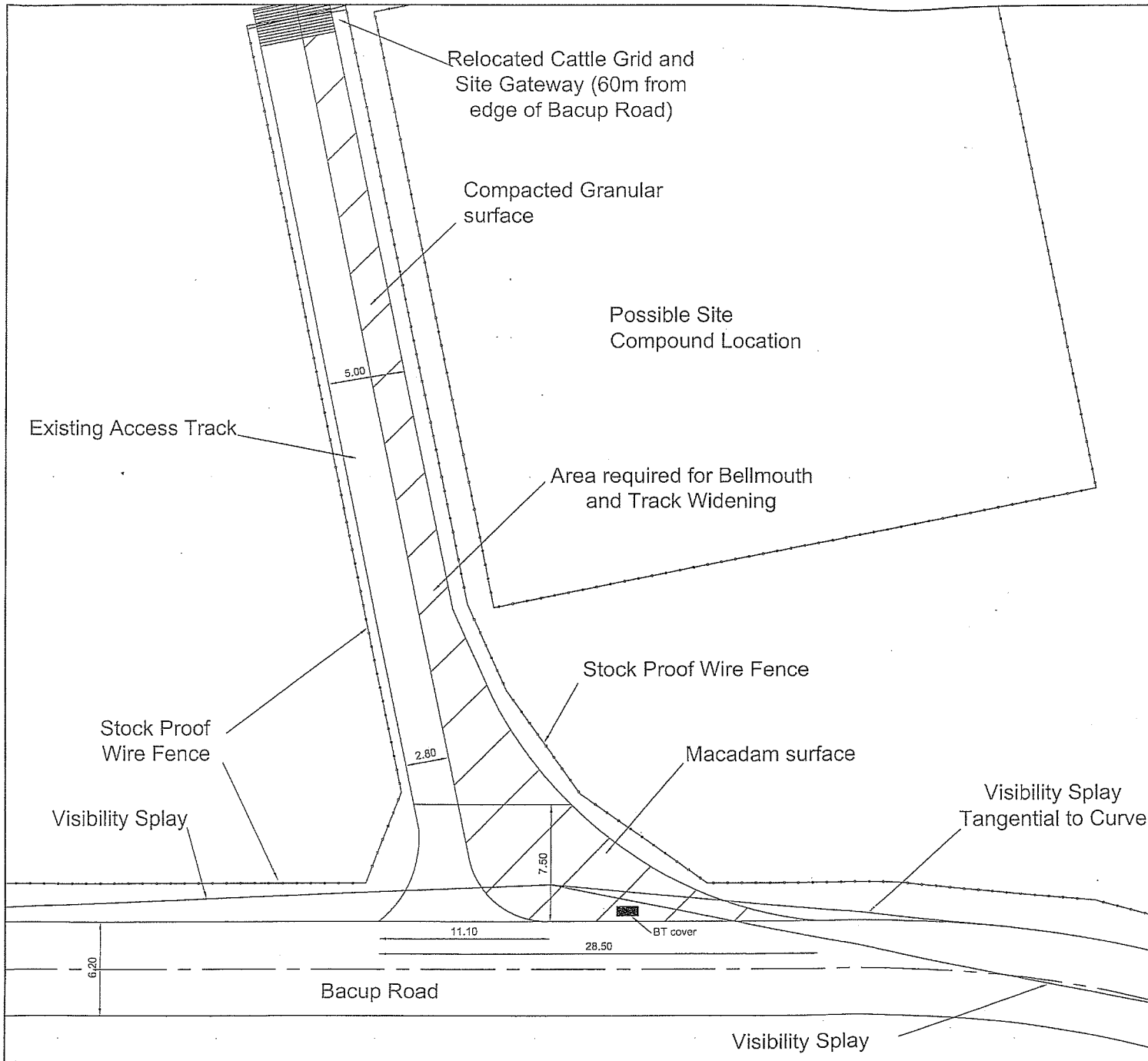


Client:



Reaps Moss Wind Farm

Figure A-6: Typical Substation Details



Legend:

1. All dimensions in m unless otherwise stated

Approximate Scale: 1:250

Date: December 2006

Prepared by:

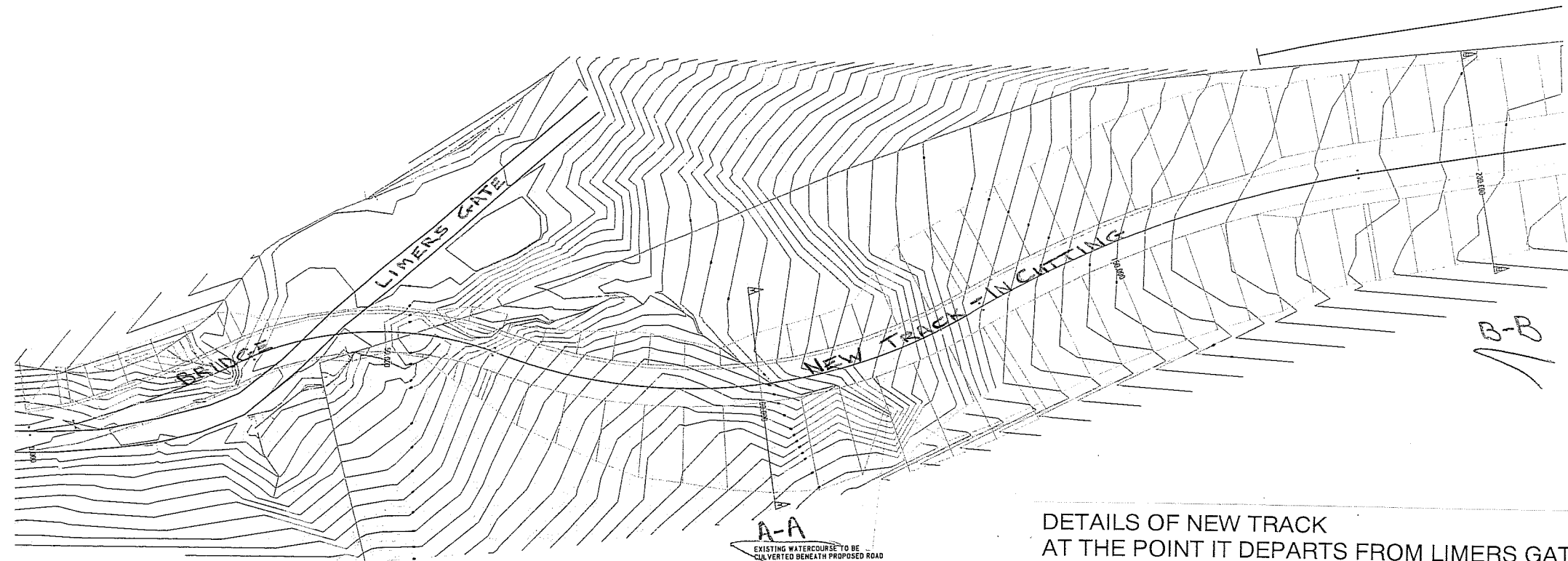


Client:



Reaps Moss Wind Farm

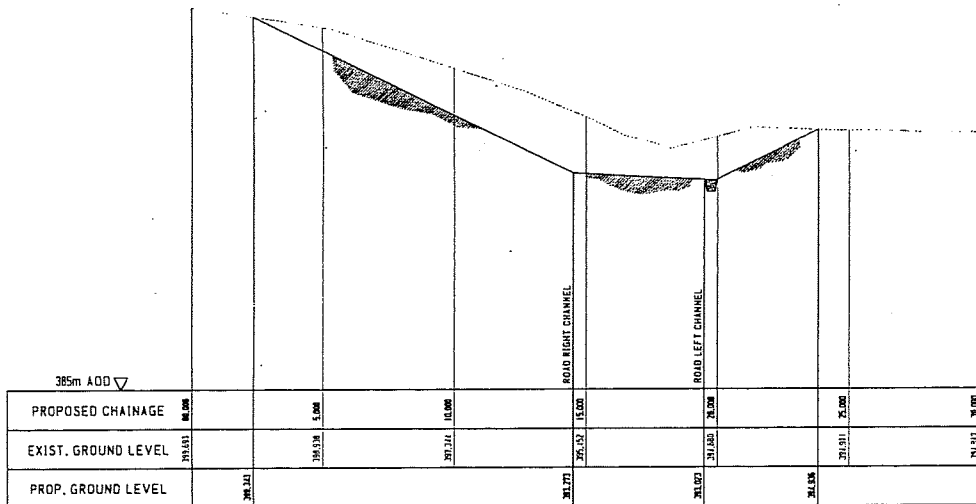
Figure A-9: Site Entrance and Edge of Carriageway



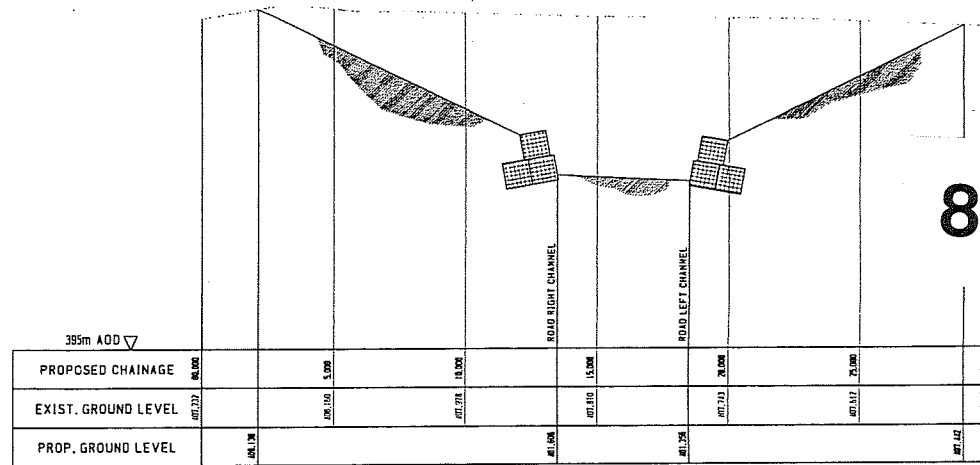
A-A  
EXISTING WATERCOURSE TO BE  
CULVERTED BENEATH PROPOSED ROAD

DETAILS OF NEW TRACK  
AT THE POINT IT DEPARTS FROM LIMERS GATE

EXISTING FENCE LINE



SECTION A-A  
SCALE 1:100



SECTION B-B  
SCALE 1:100



**JULIE MARTIN**  
ASSOCIATES

landscape & countryside POLICY, PLANNING AND MANAGEMENT

Final Report to  
Calderdale Metropolitan Borough Council  
Lancashire County Council  
Rossendale Borough Council  
Rochdale Metropolitan Borough Council

**Landscape and Visual Impact Assessment  
of Wind Power Proposals at  
Todmorden Moor, Reaps Moss and Crook Hill**

May 2007

Ref: 054

**Julie Martin**  
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*Table 1: Key Terms*

### **General terms relating to landscape and visual resources**

**Landscape fabric** – Physical landscape elements and features, such as landform, land cover, boundary features, trees and woodland, that make up the landscape we see, and that may be affected for example by recontouring, land use changes, or damage to vegetation in the course of development.

**Landscape character** – The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.

**Landscape quality (or condition)** – A term based on judgements about the physical state of the landscape, and about its intactness, from visual, functional and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.

**Landscape value** – The intrinsic value that is attached to a landscape, often reflected in designation or recognition. It expresses national or local consensus as to the (degree of) importance of a landscape, for reasons including landscape quality, scenic (or visual) quality, rarity/ representativeness, conservation interests, wildness/tranquillity, cultural associations and recreational opportunities.

**Amenity** – The benefits afforded to people by a particular area in terms of what is seen and experienced. Amenity includes not just visual amenity and views but also the experience of landscape in its widest sense. Different groups of people such as walkers, residents and motorists may have different amenity expectations.

### **Terms used in landscape and visual impact assessment**

**Landscape impacts** – Changes in the physical landscape which give rise to changes in its character and how it is experienced, and may in turn affect the value attached to a landscape. Landscape impacts may be beneficial (for example where a characteristic feature is restored) or adverse (for example where a characteristic feature is damaged or lost).

**Visual impacts** – Changes in the appearance or perceptions of a particular area or view as a result of development or other change. Visual impacts can be beneficial (for example where a new view is opened up) or adverse (for example where an existing view is affected by the addition of an intrusive feature).

**Landscape sensitivity** – A term based on the inherent sensitivity to change of a landscape in both landscape character and visual terms (as a result of its type of character, visibility etc), and also taking account of the value placed upon the landscape.

**Landscape capacity** – A term used to indicate – generally for the purposes of planning policy or guidance – the extent to which a landscape can accommodate specific types of change or development. Capacity assessment should identify key aspects of the specific change or development that are likely to have an impact on the landscape.

**Visual sensitivity** – The sensitivity of visual receptors (viewers and views) to changes in the appearance of the landscape. Sensitivity depends on the location and context of the viewpoint, the expectations and occupation or activity of the viewer, and the importance or value of the view.

**Magnitude** – A combination of the scale, extent and duration of an effect. The nature and degree of change to the landscape resource, the scale of the change in view resulting from the loss or addition of features, the degree of contrast or integration of new features in the landscape, the angle and distance of view, the extent of the area over which the changes would be visible, and the duration of the effects are all relevant considerations.

**Impact significance** – A term that is not absolute and can only be defined in relation to each development and its location. The two principal criteria determining significance are the sensitivity of the landscape or viewer and the magnitude of the effect.

**Table 4: Summary of the Principal Impacts of the Three Wind Farms**

| Type of Impact      | Todmorden Moor   | Reaps Moss   | Crook Hill  |
|---------------------|--|--|---|
| Landscape fabric    | <ul style="list-style-type: none"> <li>Slight to moderate impacts due to temporary construction compound and loss of 1.9ha of grazing and semi-natural habitat</li> </ul>  | <ul style="list-style-type: none"> <li><b>Moderate to major</b> impacts from 2000m of proposed new access track requiring extensive earthworks</li> <li>Slight to moderate impacts due to prominent temporary construction compound and loss of 1.6ha of grazing and semi-natural habitat</li> </ul>   | <ul style="list-style-type: none"> <li><b>Major</b> impacts from the construction of a wholly new 5250m site access from Calderdale, removing trees, affecting the setting of the church, cutting through Cuckoo Hill and crossing the Pennine Bridleway and Rochdale Way</li> <li>Also moderate impacts due to loss of 4ha of grazing and semi-natural habitat</li> </ul>  |
| Landscape character | <ul style="list-style-type: none"> <li><b>Major</b> impact on the character of the eastern outskirts of Bacup due to close range skyline views of turbine and monitoring mast in conjunction with transmission lines and pylons</li> </ul>   | <ul style="list-style-type: none"> <li><b>Major</b> impact on the character of the central section of the moorland ridge and on the setting of Bacup due to very close range skyline views</li> </ul>  | <ul style="list-style-type: none"> <li><b>Major</b> harm to key characteristics and integrity of a highly sensitive landscape, as development would be out of scale, would dominate important skylines, and would adversely affect openness, wildness and tranquillity</li> </ul>   |
| Landscape value     | <ul style="list-style-type: none"> <li>Slight to moderate impact on the settings of the Forest of Bowland and Peak District National Park</li> <li>Moderate impact on the South Pennines Heritage Area (impact mitigated by close proximity to Coal Clough)</li> <li>Slight to moderate impact on the setting of the Conservation Area at Todmorden</li> <li>Slight to moderate impact on the setting of the Conservation Area of Lumbutts and Makinholes</li> <li><b>Moderate to major</b> impact on the setting of the Conservation Area at Bacup</li> </ul> | <ul style="list-style-type: none"> <li>Slight to moderate impact on the settings of the Forest of Bowland and Peak District National Park</li> <li><b>Moderate to major</b> impact on the Southern Pennines Heritage Area, due to effect on integrity of moorland ridge</li> <li>Slight or negligible impact on the setting of the Conservation Area at Todmorden</li> <li>Slight to moderate impact on the setting of the Conservation Area at Lumbutts and Makinholes</li> <li><b>Moderate to major</b> impact on the setting of the Conservation Area at Bacup</li> </ul> | <ul style="list-style-type: none"> <li>Slight impact on the setting of the Forest of Bowland AONB</li> <li>Moderate impact on the setting of the Peak District National Park, just 13km away from this wind farm</li> <li><b>Major</b> impact on the Southern Pennines Heritage Area, due to size of wind farm and prominent location at heart of principal area of intact moorland, facing main Pennine edge</li> <li>Moderate impact on the setting of the Conservation Area at Calderbrook</li> <li>Slight or moderate impact on settings of Conservation Areas at Wardle, Littleborough, Todmorden and elsewhere</li> </ul> |

|  |   |  |   |
|--|---|--|---|
| <p><b>Amenity</b></p>  | <ul style="list-style-type: none"> <li>• <b>Major</b> impact on the settlement of Bacup, potentially affecting around two-thirds of the town, especially the eastern suburbs</li> <li>• Moderate impact on residents north-east of Todmorden and on the northern slopes of Cliviger Gorge</li> <li>• Slight or moderate impacts elsewhere, although views from the north-west and south-east along the ridge cause concern since turbines are seen as two separate groups</li> <li>• In the area just east of Flower Scar Hill, <b>localised major</b> impacts, moderated by existing views to Coal Clough</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Major</b> impact on the settlement of Bacup, potentially affecting almost all of the town</li> <li>• Moderate or slight impacts on Whitworth and Todmorden</li> <li>• <b>Major</b> impacts on users of the Limers Gate bridleway (375m bridleway standoff not observed) and the Rossendale Way. The wind farm is so close as to deter people from using these strategic ridge top rights of way connections</li> <li>• Generally moderate impacts on recreational viewers and motorists in most of the surrounding area, including at least moderate impacts on the visual amenity of the Pennine Way and Pennine Bridleway National Trails on the Pennine edge to the east</li> <li>• <b>Moderate or major</b> impacts looking along the moorland ridge from the north-west and south-east, reflecting loss of open, wild unspoilt views</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Moderate, locally major</b> impact on the settlements of Wardle, Walsden, Hurstead, Stubley, Caldermoor and Littleborough</li> <li>• <b>Major</b> impact on nearly all those using the upland area and Watergrove Reservoir for recreation, by seriously damaging the landscape qualities on which the recreational experience is based</li> <li>• <b>Major</b> impacts on the recreational experience of users of the Pennine Bridleway Mary Towneley Loop (although 500m standoff is observed), Rochdale Way and other long distance routes, as well as on users of wider rights of way network</li> <li>• <b>Moderate to major</b> impacts on a range of other sensitive recreational receptors</li> <li>• <b>Major</b> impacts on the setting and visual amenity of the Pennine Way and Pennine Bridleway National Trails</li> <li>• At least moderate impacts on travellers in the area, particularly on the B6225, A58 and M62</li> </ul> |
| <p><b>Cumulative (with existing and consented sites)</b></p> | <ul style="list-style-type: none"> <li>• Slight to moderate cumulative impacts, reflecting the site's location towards the northern end of the moorland ridge close to the existing wind farm at Coal Clough</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Moderate to major</b> cumulative impacts, especially on views from the sensitive Pennine edge to the east, in which the wind farm would link Coal Clough and consented Scout Moor</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Major</b> cumulative impacts on views from the sensitive Pennine edge to the east. Crook Hill's size, proximity to the Pennine edge and strategic location would significantly extend the influence of wind energy development over the surrounding countryside, connecting Coal Clough, Scout Moor and also Ovenden Moor</li> </ul>  |