CHAPTER 7 - DECOMMISSIONING

Introduction

7.1 This section deals with the decommissioning of the wind farm at the end of its useful life. As such it covers the scope and sequence of works required, identifies the waste generated and identifies the traffic movements necessary to carry out the decommissioning activities.

Scope of Works

7.2 Prior to the decommissioning commencing a Decommissioning Plan will be prepared and submitted 12 months prior to the works commencing, for approval by the Local Planning Authority.

7.3 The Decommissioning Plan will cover, amongst other things:

- the method of removing turbine components;
- a method statement for abandoning or removing the cabling and restoration of the trenches;
- a method statement for the removal and/or abandoning of the turbine and meteorological mast bases;
- a method statement for abandoning or removing the substation;
- a traffic impact statement and updated review of the routes to be used; and
- a programme for the decommissioning works.

7.4 It is envisaged that the decommissioning of the wind farm will include the following activities:

- dismantling and removal of the meteorological mast and the turbines' blades, nacelles and towers, down to and including the towers' base sections which will have been cast into each of the concrete bases;
- removal of the full depth of the stone making up the crane hardstandings and working areas, down to and including the geotextile membrane on which the stone was laid;
- reinstatement of the working areas utilising the original soil stripped from the working area;
- disconnection and abandonment of all underground cables laid from the turbines to the final point of connection at the substation site, or alternatively their removal: see **Paragraph 7.7** below;
- demolition and removal of the substation's control building, concrete slabs, perimeter fence and associated electrical equipment; and

- the substation electrical components, building, concrete slab and fence will be removed and the area returned to its current use as a car park for rally events.

7.5 The turbine and meteorological mast bases will be left in the ground but any concrete within 500mm of ground level will be removed and the resultant void backfilled with the original subsoil and topsoiled over with sufficient depth to allow future use of the affected area.

7.6 Topsoil, stripped during the construction of the tracks will be stored in shallow bunds adjacent to the tracks; after the removal of the turbine components, the top soil will be spread in its original location using a 360 degree excavator. The decision whether to remove the stone will be taken at the time of preparing the decommissioning plan; and will be informed by discussion with NRW.

7.7 Recovery of cables from the trenches will be carried out where it is deemed environmentally and commercially viable to do so. The decision to do so will be based on an energy assessment to be carried out at the time and the prevailing scrap value of the recoverable material.

Turbine and Meteorological Mast Dismantling and Removal from Site

7.8 The same types of crane used to erect the turbines and meteorological mast initially will be required to dismantle them, with the sequence of works being in reverse order to their original erection.

7.9 Where a follow-on use for the components has not been identified, the turbine blades will be broken up on site to allow removal of the blades from site without the need for the abnormally long trailers that originally delivered them.

7.10 The nacelle units will be de-mounted from the tower and removed from site in complete units.

7.11 The towers will be dismantled in sections and removed from site.

7.12 The tower base ring sections that were cast into the concrete foundation bases will be removed from the bases using concrete breakers attached to mobile plant, and removed from site.

7.13 The tower bases will be left in the ground but, subject to discussions with the Local Planning Authority and the landowner, any concrete at ground level will be removed down to a maximum of 500mm depth.

Disposal Routes

7.14 Any material that will be returning via the original port of entry will follow the original delivery route in reverse. A pre-decommissioning route survey will be carried out along with all the associated consultations. As with the construction phase, no works-related traffic will be allowed to deviate from the identified route in order to reduce any inconvenience or impact on the local highway network.

7.15 The highway authority and police will be notified of the transportation route of any material not returning via the port of entry and the associated consents obtained.

On-site Facilities

7.16 The decommissioning works will take approximately five months to complete and will necessitate the re-establishment of a contractor's compound and welfare facilities; this will be carried out as described in the 'Temporary Works' section within **Chapter 6**.

Sequence of Works

7.17 The decommissioning works will be carried out typically in the following sequence:

- establishment of the contractor's compound and facilities;
- dismantling and removal of the turbines and meteorological mast;
- recovery and removal of underground cables if required;
- removal of working areas;
- reinstatement of working areas with subsoil, topsoil and reseeding being carried out as necessary;
- removal and replacement of field gates no longer required, together with associated fencing works; and
- termination of the underground and overhead 132kV lines from the control building to the point of connection onto the electricity network.

Vehicle Movement During Decommissioning

7.18 The decommissioning period vehicle movements are provided in **Chapter 13**.

Waste Generation

7.19 The recyclable waste material generated as a result of the decommissioning process has been identified in **Table 7.1**.

Table 7.1: Decommissioning Phase – Recyclable Waste Generation

Material	Source	Weight (tonnes)
Fibre Glass/Carbon Fibre	Turbine Blades	567
Steel	Turbine Towers Nacelles	4,350 3,607
Aluminium/Copper	Cables	221
Masonry	Control Building	58
Concrete	Substation slab	45