

PREFACE

This Supplementary Environmental Information (SEI) has been prepared in support of a planning application for a proposed wind farm at Tallentire in western Cumbria.

The SEI is contained within three separate volumes:

- Volume I** Non-Technical Summary of the detailed Supplementary Environmental Information.
- Volume II** The full Supplementary Environmental Information which contains text and supporting information in appendices.
- Volume III** Figures

The SEI has been prepared by RES UK & Ireland Ltd (RES) in collaboration with the following specialist consultants:

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Copies of the full SEI may be viewed during normal opening hours at the following locations:

Allerdale Borough Council Allerdale House Workington Cumbria CA14 3YJ Tel: 01900 702702	Cockermouth Library Main Street Cockermouth Cumbria CA13 9LU Tel: 01900 325990	RES UK & Ireland Ltd Beaufort Court Egg Farm Lane Kings Langley Hertfordshire WD4 8LR Tel: 01923 299200
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Copies of the full Supplementary Environmental Information are available from RES priced £340 each, the Environmental Statement (ES) is also available priced £150 each. A Loan Copy of both documents can be supplied free of charge for a limited duration.

Copies of the ES and SEI are available on CD-ROM free of charge. Copies of the Non-Technical Summary are also available free of charge. The Non-Technical Summary can also be viewed on the RES web page www.tallentire-windfarm.co.uk.

Requests for either document should be made in writing to RES at the address above, including payment if purchase of the full ES and SEI are required.

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RES has an Environmental Management System which actively encourages the reduction of paper consumption and recycling where possible.

Volumes I, and II of this SEI are printed on recycled paper.

1 INTRODUCTION

- 1.1 This Non-Technical Summary (NTS) accompanies Supplementary Environmental Information (SEI) that has been submitted in respect of an application by RES UK & Ireland Ltd (the Applicant) to construct a wind farm at Tallentire near Workington in western Cumbria. The location of the application site is shown on SEI Figure 4.2.
- 1.2 A planning application was submitted to Allerdale Borough Council in March 2008 under the Town and Country Planning Act 1990 seeking consent to construct and operate a wind farm near Tallentire. The application was accompanied by an Environmental Statement (ES), and no date has yet been set for the application to go before the Development Control Committee.
- 1.3 This SEI has been submitted voluntarily but advertised under Regulation 19 (3) of the EIA Regulations. This SEI forms RES's response to a request from Allerdale Borough Council for further information following submission of the ES in March 2008.
- 1.4 The SEI supplements the ES and should be read in conjunction with it.
- 1.5 The project is described as:
- 6 wind turbines with three blades and a tapered tubular tower with an overall height to blade tip not to exceed 100m, 300 feet;
 - associated electricity transformers at each turbine;
 - access tracks;
 - crane hardstandings;
 - an anemometry mast;
 - borrow pit;
 - a control building and substation compound; and
 - temporary works including a construction compound and up to two 60m high temporary guyed meteorological masts.
- 1.6 SEI Figure 4.2 shows the site location and proposed infrastructure respectively.

2 CLARIFICATIONS AND CORRECTIONS

- 2.1 RES met with Allerdale Borough Council and their independent landscape architect in September 2008. The scope of work resulting from this meeting was agreed by letter dated 23rd September 2008. The further information focussed around site selection, design development, the Cumbria Wind Energy Supplementary Planning Document and Landscape and Visual Impact Assessment, and further clarifications and corrections of the ES were also requested.

3 NEED AND POLICY

- 3.1 The Cumbria Wind Energy Supplementary Planning Document was adopted by Allerdale Borough Council on 23rd January 2008. This document was developed in consultation Cumbria County Council and local planning authorities in Allerdale, Carlisle, Copeland, Eden, South Lakeland and the Lake District National Park to produce guidance to help

decide where wind farms might be built. It is an iterative document which provides detail of the design stages of a wind farm and assesses the criteria which should be reviewed prior to the selection of potential sites for wind farm development.

- 3.2 RES considered the criteria set out in the SPD at site selection stage, although it is noted that when the site was first identified as viable by RES, the SPD had not been adopted. The SEI provides an analysis of the site characteristics in relation to the criteria set out in the SPD.
- 3.3 The site lies on the boundary of two Landscape Character Areas, Type 12 (Higher Limestone) and Type 5 (Lowland) which have been classified within the SPD of having Low/Moderate and Moderate capacity to support wind farm developments respectively. Although these are individually classified, Map 8 (Landscape Character Assessment) of the SPD described both landscapes of being able to support *“up to a small group, exceptionally a larger group”*. A small group is assessed by the SPD as being between 3 and 5 turbines, and a large group between 6 and 9 turbines.

4 SITE SELECTION AND DESIGN DEVELOPMENT

- 4.1 The SEI provides additional detail on the background to the choice of the Tallentire Wind Farm site and consideration of alternative sites as set out in the ES. It also assesses the Proposal against the criteria set out in the SPD, its GIS score, its connection to the local grid network and the comparison between a 15 V52 layout and a 6 V80 layout in terms of capacity factor and landscape and visual impact. Vestas V52 and V80 turbines are different in size, with the V52 having an overall height of 86m to the tip of the vertical blade when compared with the V80 overall height of 100m to blade tip. A typical turbine is shown in SEI Figure 4.3a which shows the hub height and rotor diameter measurements for a Vestas V80 which is the candidate turbine for the Tallentire wind farm proposal.
- 4.2 RES completed a review of the wind resource across England in 1999 - 2000 as a manual desktop study which was then verified using a Geographic Information System computer model (GIS), this identified broad areas of search for sites that may be viable for medium to large scale wind farms. The study identified 336 potential sites in 9 regions across England which were then ranked according to their suitability as wind farm sites. The ranking process considered key criteria including site size, wind speed, distance to grid connection, and proximity to houses.
- 4.3 Tallentire emerged from both the desktop and GIS studies as a good location for a wind farm with a score of 0.71 out of a maximum score of 1.0.

5 LANDSCAPE AND VISUAL IMPACT ASSESSMENT (LVIA)

- 5.1 The SEI provides further assessment of the potential landscape and visual effects associated with the development, in the form of further impact assessment, additional viewpoints and mapping relating to the Tallentire proposal.
- 5.2 The following assessments have been revisited;
- potential effects on the Solway Coast AONB;
 - potential effects on Landscapes of County Importance; and
 - cumulative assessment to consider the potential effects of Tallentire in relation to other wind farms.
- 5.3 Six additional viewpoints from Brigham Hill, Broughton Moor, Dearham Layby, south-western Gilcruix, Swarthy Hill and Tallentire have also been assessed to provide additional viewpoint coverage, and have been presented with the viewpoint photographs, accompanying wireframes and photomontages in SEI Volume III.
- 5.4 The proposed wind farm at Tallentire will be situated on the lower slopes of Tallentire Hill (on the north west side of the ridge). An agricultural landscape, used primarily as pasture. Tallentire Hill is one of a series of hills that forms a distinct ridge to the south east of the Ellen Valley. The relative elevation of the site, particularly compared with the land to the north, north west and west results in a high degree of potential visibility of the proposed wind farm. As the distance to the site increases, surface features such as vegetation and buildings reduce the potential visibility and the likely significance of the effects. Potential visibility to the east, south east and south is more fragmented and the intervening landform gradually prevents potential views to the proposed Tallentire Wind Farm.
- 5.5 It is considered that while the wind farm would introduce a new and distinctive element into the local landscape, it would not be incompatible with the character of this landscape. The land in the vicinity of the site is very much an active and working agricultural landscape. In addition, the elevation of the site affords a relatively open aspect to the west, to the Solway Firth, and consequently the site forms an open and windswept location. As wind farms are designed to capture wind energy it follows that they are more likely to be associated with higher and more exposed ground. Therefore the introduction of a wind farm would be compatible with several of these characteristics. The SPD for Wind Energy in Cumbria suggests that the landscape types that the proposed development site is within, has moderate or moderate/high sensitivity to such developments. Within these areas the guidance says that there is scope for small cluster development (2-5 turbines) and exceptionally a large cluster (6-9 turbines).
- 5.6 The assessment has concluded there will be localised significant effects upon Lowland and Higher Limestone landscape types, in which the proposed wind farm will be sited. The wind farm will be viewed from a considerable part of these character types, particularly the Lowland landscape type. While the proposed development would introduce a new and distinctive development, the scale of the proposed development in relation to that of the local landscape will be acceptable. The wind farm will change the environs, adding visual diversity and a new feature and foci into landscape. The effects upon landscape character are significant within the vicinity of the development, however these effects reduce with distance so that only a small component of the more distant landscape types will experience localised significant effects as a result of the proposed development.

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- 5.7 Within the study area, visibility of Tallentire is most significant to the north west and south east of the River Ellen. The principal receptors within this area for which potentially significant effects have been identified include the populations of settlements including Tallentire, Gilcrux, Dovenby, Prospect, Oughterside Crosby, Aspatria and Great Broughton/Little Broughton. With relatively close range and/or open views towards the site from these settlements.
- 5.8 The proposed wind farm at Tallentire will be visible from parts of the Lake District National Park and Solway Coast AONB. The assessment identifies that there will be some potentially significant visual effects on these landscape designations, however such effects will be localised and limited to locations in close proximity to the site. These visual effects will not contribute to significant effects on the designated areas in terms of their purposes of designation and special qualities.
- 5.9 Taking into account the existing and approved wind farms, Tallentire wind farm would not combine with those wind farms to create cumulative effects on landscape character, designated areas, viewpoints or routes that would not be expected to arise from the developments alone. There would be no significant effects on landscape character or designated areas overall; most viewpoints would have effects no greater than that caused by the nearest wind farm (though in some areas, e.g. Great Clifton, Brigham) a new part of the view may be occupied by turbines; and routes would be affected by wind farms, but there would still be long stretches of each route with no views of wind farms.
- 5.10 All of the four proposed wind farms in this cumulative study are in the same two character areas. For this reason, significant cumulative effects would arise if more than one of these developments is constructed. Any combination of three or four of the proposed wind farms would give rise to significant cumulative effects on the Ridge and Valley (5a) landscape character type, which already has the beginnings of an association with wind development from the existing and approved wind farms. There would be no significant effects on the Solway Coast AONB or the Lake District National Park, even if all four proposed developments were to be constructed. In terms of viewpoints, those most affected by combined effects (rather than those arising simply from the nearest wind farm) would be wide north or northwest facing panoramas from areas south or southeast of the proposed developments (e.g. Brigham, Great Clifton); and wide east or southeast facing panoramas from areas north or northwest of the proposed developments (e.g. Crosby, Prospect). These viewpoints could expect to see a number of windfarms, in most areas of the view and at a range of distances if 3 or more of the wind farms were to be constructed. In terms of routes, cumulative effects would be most pronounced on the A66-A595 route, which already passes close to the Wharrels Hill and Winscales wind farms. Broughton Lodge, Threapland Lees and Tallentire wind farm all have the potential to give rise to noticeable visual effects on this route, though mainly arising from the other two wind farms rather than Tallentire. Broughton Lodge would be a noticeable presence on the north slopes of the valley as the route passes between Great Clifton and Brigham; Threapland lees would create the effect of passing through a wind farm near Bothel. Tallentire would occasionally be seen in the stretch between these two areas, generally as blade tips over the ridgeline.



TALLENTIRE HILL WIND FARM

SEI FIGURE 4.2

INFRASTRUCTURE LAYOUT

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KEY

- WIND TURBINE
- SITE TRACK 5m (min)
- DELIVERY HOLDING AREA
- SUBSTATION
- CONSTRUCTION COMPOUND
- NEW WOODED AREA (1450m²)
- UPGRADE OF EXISTING WATERCOURSE CROSSING
- CRANE HARDSTANDING
- PASSING PLACES
- PERMANENT MET MAST
- TEMPORARY MET MAST
- TEMPORARY SITE CALIBRATION MAST
- BORROW PIT
- DEVELOPMENT SITE BOUNDARY
- GAS PIPELINE CROSSING POINT



LAYOUT DWG 01077D0002-03 T-LAYOUT NO. PENGt1016

DRAWING NUMBER 01077D1001-10

SCALE - 1 : 5,000 @ A1

SUPPLEMENTARY ENVIRONMENTAL INFORMATION 2010

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