



THE UNIVERSITY *of* EDINBURGH

TOURISM IMPACT ANALYSIS

Garreg Lwyd Hill Wind Farm Proposal

Powys

Wales

Conducted by Professor Cara Aitchison

University of Edinburgh

On Behalf of

RES UK & Ireland

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## 1. QUALIFICATIONS AND EXPERIENCE

- 1.1 This report has been compiled by Professor Cara Carmichael Aitchison. Professor Aitchison holds an MA (Honours) degree in Geography (Edinburgh), specialising in integrated rural development, a Postgraduate Diploma in Recreation and Leisure Practice, a Certificate in Education, a postgraduate MA in Social Science and a PhD in Geography and Leisure Studies (Bristol).
- 1.2 Professor Aitchison is an Academician (Fellow) of the Society for the Social Sciences, elected in 2003. She has been a member of the Leisure Studies Association since 1989 and was Chair of the Association from 2001-2004. She is a Senior Fellow of the World Leisure Academy and held the position of Commission Chair of one of the eight World Leisure Research Commissions from 2002-2008. In 2004 Professor Aitchison was appointed as the tourism and leisure expert to the UK government's Research Assessment Exercise (2008) to assess the quality of research in UK universities between 2001 and 2008. In 2010 she was appointed as Chair of the subsequent Research Excellence Framework (2014) Sub-Panel for Sport and Exercise Sciences, Leisure and Tourism to lead the assessment of research between 2008 and 2013. This Sub-Panel is one of 36 covering all areas of research in UK universities and is the only panel to explicitly include tourism within its remit.
- 1.3 Professor Aitchison is an Associate Editor of *Annals of Tourism Research*, recognised as the leading international peer reviewed tourism research journal. She is an Editorial Board member of the *Journal of Leisure Studies*, recognised as the leading international peer reviewed leisure research journal. She is regularly invited to review research papers and research proposals for major research funding bodies including the UK Research Councils. She was a member of the Arts and Humanities Research Council (AHRC) Peer Review College from 2004-2007 and is currently a member of the Economic and Social Research Council (ESRC) Peer Review College, having been nominated by the UK Association of Tourism in Higher Education (ATHE).
- 1.4 Professor Aitchison has been employed in higher education tourism education and research for 24 years. She was the Programme Leader of the UK's first BA (Honours) Leisure and Tourism Management degree and then the Programme Leader of the UK's longest established Masters degree in Leisure and Tourism Studies, both at the University of North London where she was a Senior Lecturer

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and then Principal Lecturer in Leisure and Tourism Studies between 1990 and 1997. She developed her research career to become the Head of the Leisure and Sport Research Unit at the University of Gloucestershire in 2001 where she was also a Reader in the world-renowned Countryside and Community Research Institute under the Directorship of Professor Nigel Curry. In 2003 she was appointed Professor in Human Geography at the University of the West of England and subsequently established and became the Director of the Centre for Leisure, Tourism and Society.

- 1.5 In 2008 Professor Aitchison was appointed Dean of the Faculty of Education, sport and Tourism at the University of Bedfordshire and Professor in Leisure and Tourism Studies where she managed a Faculty of over 4,000 students and over 100 permanent academic staff. The University of Bedfordshire was judged to have 'world leading research activity' in tourism in the Research Assessment Exercise (2008) and was one of only three UK universities to achieve the highest grade for tourism in the previous Research Assessment Exercise (2001).
- 1.6 In 2010 Professor Aitchison was appointed to the role of Head of Moray House School of Education at the University of Edinburgh where she also took up an established Chair in Social and Environmental Justice. Moray House is the largest School of Education in Scotland and the second largest in the UK with 245 permanent staff, approximately 200 fixed term, seconded and visiting staff and approximately 3,000 students, including over 100 PhD students. The University of Edinburgh is Scotland's premier research university and was graded 6<sup>th</sup> among UK Universities in the national Research Assessment Exercise (2008). Research, including tourism and leisure studies, submitted by Moray House School of Education to the RAE (2008), received the highest award of all Education submissions in Scotland and the second highest in the UK.
- 1.7 Professor Aitchison's research focuses on three areas:
- Leisure, sport, recreation and tourism policy
  - Sustainable rural economies and communities: the development and impact of tourism, leisure and recreation and their integration with other sectors of sustainable rural development, particularly energy and food production
  - Social inclusion, community development and global citizenship: the integration of social, cultural, economic and environmental policies to effect development in and through leisure, sport and tourism

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- 1.8 Professor Aitchison's assessment of the Garreg Lwyd Hill Wind Farm project draws on her extensive academic and theoretical research in tourism studies, together with her knowledge of research methodology, to inform her applied research and consultancy in rural tourism. She has taught tourism studies and research methods at postgraduate level, has supervised nine doctoral students to completion and has published research on qualitative research methods in tourism. She has an international reputation for her research in tourism and leisure with almost 200 research outputs including: nine books; 50 refereed academic research papers and book chapters; 60 invited presentations and lectures including keynote papers at international tourism and leisure conferences in Australia, Brazil, Iran, Latvia, the Netherlands, the UK and the USA; 46 peer reviewed presentations at national and international conferences and over 60 other non-refereed research reports and published articles.
- 1.9 Professor Aitchison has an interest in developing both original conceptual research and theory-informed applied research that contributes to policy and practice in leisure, sport, tourism and rural development. As Principal Investigator she has managed 25 funded research projects including needs analyses, community consultations, feasibility studies, impact assessments, policy evaluation studies and research networks. These projects have been funded by the ESRC, British Academy and national, regional and local bodies in the public, commercial and third sectors including the Countryside Council for Wales, local authorities in England and Scotland, the Forestry Commission, renewable energy companies, a number of national disability organisations and professional bodies in leisure, sport and recreation including the Institute for Sports, Parks and Leisure.
- 1.10 Professor Aitchison's experience in research specifically examining the tourism impact of wind farms has been developed over the last eight years. In 2004 she undertook extensive survey research of the tourism impacts of existing wind farms in Mid Wales and Cornwall and of a proposed wind farm (Fullabrook) in Devon. She then acted as an Expert Witness at the Public Inquiry into the Fullabrook Wind Farm proposal in North Devon in 2006-2007. In 2009 she undertook research into the potential tourism impact of proposed wind farms in Northumbria, focusing particularly on the Moorsyde Wind Farm proposal by Your Energy Ltd. and, in the same year, she then acted as an Expert Witness at the Moorsyde Planning Appeal. In 2011 Professor Aitchison undertook a tourism impact analysis of the proposed Bryn Llywelyn Wind Farm in Carmarthenshire, Wales on behalf of RES Ltd. and in 2012 she undertook a similar study of Llanbrynmair Wind Farm in Powys on behalf of RES Ltd. The analysis presented
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here forms Professor Aitchison's third study conducted in relation to wind farm proposals by RES Ltd. in Wales. It draws on her previous research including her earlier survey research of tourists at and around the wind farms of Carno and Bryn Titli in Mid Wales.

- 1.11 Professor Aitchison's research has been disseminated in documentary form for academic and policy audiences, including to the Scottish Government Renewables Inquiry (2012) and as an invited speaker to the recent Scottish Tourism Alliance Workshop on *Tourism and Wind Farms* (2012). She has presented evidence as an Expert Witness at both a Public Inquiry and Planning Appeal and her research has been scrutinised at the highest level in academic, planning and legal fora including the High Court. In all cases her research has been found to meet the highest standards of originality, significance and rigour as specified by assessment criteria of the UK Research Excellence Framework. In addition, the Planning Inspector for the Fullabrook Wind Farm Public Inquiry drew particular reference to the quality of Professor Aitchison's research relative to other tourism research that had been presented at the 2006-2007 Public Inquiry.

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## 2. PURPOSE AND SCOPE OF EVIDENCE

- 2.1 The evidence submitted here is designed to provide data, information and informed analysis of the actual and potential impact of wind farms on tourism and, specifically, the potential impact on tourism of a wind farm at Garreg Lwyd Hill, Powys. This evidence is compiled to supplement that provided in the *Garreg Lwyd Hill Wind Farm Environmental Statement* produced by RES and, in particular, the section on Socio-Economic Impact.
- 2.2 The evidence presented here is divided into four sections which progress from the general to the specific in order to relate the wider evidence available on tourism impacts of wind farms to the particular policy context and proposal to develop a wind farm at Garreg Lwyd Hill.
- 2.3 Section 3 of this report summarises and evaluates secondary evidence of the impact of wind farms on tourism. The analysis progresses from a general introduction to tourism research and rural economic development to a more detailed examination of previous research on the tourism impact of wind farms. Section 3.5 in particular draws on the findings of the two largest studies conducted to date into the tourism impact of wind farms: University of the West of England (2004) and Glasgow Caledonian University (2008a).
- 2.4 The University of the West of England study was commissioned by Devon Wind Power and designed and conducted by Professor Aitchison and hereafter referred to as Aitchison (2004). The study formed the basis of Professor Aitchison's evidence as an Expert Witness at the Public Inquiry into the 66MW Fullabrook Wind Farm in 2006-07.
- 2.5 Particular significance is given to the findings of the two studies conducted by UWE and GCU and their relevance to the Garreg Lwyd Hill proposal for the following reasons:
- the two studies form the largest pieces of academic research conducted to date and therefore offer the greatest 'evidence' relating to the impact of wind farms on tourism
  - the studies were conducted by highly qualified academic research teams that adopted rigorous research methodologies and used multiple research methods to triangulate findings, thus providing a high degree of validity and reliability

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- the studies were conducted in different areas of the UK but in areas that have a number of similarities with Garreg Lwyd Hill and the surrounding countryside in relation to landscape, access, visitor attractions, tourist accommodation, tourism patterns and tourist profile
- 2.6 Located in Powys, Mid Wales, Garreg Lwyd is situated in the east of the county close to the border with England. Section 4 of this report assesses the policy context of rural tourism in Mid Wales, focussing on the area in and around Garreg Lwyd Hill and to the town of Newton in the north and Llandrindod Wells to the south. The evidence presented takes four forms: first, section 4.2 presents an overview of tourism policy in Wales; secondly, section 4.3 examines tourism policy in Mid Wales and Powys; thirdly, section 4.4 evaluates the volume and value of tourism in Mid Wales and Powys; fourthly, section 4.5 assesses the nature of tourism in the vicinity of Garreg Lwyd Hill and evaluates the significance of this area to tourism within the wider context of Mid Wales.
- 2.7 Section 5 assesses tourism in the Garreg Lwyd Hill area in more detail by examining the range of visitor attractions and visitor accommodation within the area. Three important forms of tourism for the area surrounding Garreg Lwyd Hill are identified: museums, castles and crafts; nature and wildlife; outdoor and active recreation, highlighting the importance of particular forms of tourism and recreation for the area, most notably walking.
- 2.8 Finally, section 6 synthesises the evidence presented in the previous sections to provide an assessment of the potential economic impact of Garreg Lwyd Hill Wind Farm on tourism by evaluating the likely impact of the wind farm development on the specific visitor attractions and visitors attracted to this area of Wales.



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### **3. EVIDENCE FROM PREVIOUS TOURISM STUDIES**

#### **3.1 Introduction**

3.1.1 This section outlines secondary evidence of the impact of wind farms on tourism and addresses five aspects of tourism-related evidence. First, a general introduction to tourism research and rural economic development is presented in section 3.2. Secondly, a critical review of the research methods employed in previous studies of tourism impacts of wind farms is given in section 3.3. The results of all previous major studies of the tourism impact of wind farms are discussed in section 3.4 with the findings evaluated in relation to developing a wind farm at Garreg Lwyd Hill. Finally, section 3.5 examines in more detail the findings from the two largest and most rigorous studies conducted to date: Aitchison's (2004) University of the West of England's report titled *The Potential Impact of Fullabrook Wind Farm Proposal, North Devon: Evidence Gathering of the Impact of Wind Farms on Visitor Numbers and Tourist Experience*, commissioned by Devon Wind Power, and Glasgow Caledonian University's (GCU) (2008a) report titled *The Economic Impact of Wind Farms on Scottish Tourism* which was commissioned by the Scottish Government.

#### **3.2 Tourism Research**

3.2.1 Tourism plays an increasingly important role in contributing to rural regeneration in the UK. New forms of rural tourism associated with landscape, culture and active recreation are increasingly important to rural tourism economies (Scottish Government 2012). Activities related to natural history and birdlife, cultural heritage and historic gardens, local food and drink and a range of active outdoor pursuits, including walking and mountain biking, are increasingly promoted as policy priorities through which wider agendas of sustainable development can be addressed. The prevalence of high wind speeds in these same upland and coastal areas means that they are also the preferred destinations for wind farm developments. In spite of this proximate and apparent inter-relationship between wind farms and tourism it is only recently that research examining tourists' attitudes towards the location of wind farms in or near areas that they visit for holiday and/or leisure has been conducted in any depth (Aitchison, 2004; British Wind Energy Association 2006; Glasgow Caledonian University, 2008a; MORI Scotland, 2002; Starling, 2006).

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- 3.2.2 Although tourism research relating to wind farm developments is limited compared with that on policy, design, visual impact, ecology, ornithology, hydrology, acoustics and transport it is increasingly evident that there is an emerging consensus within the research examining the actual and potential impact of wind farms on tourism. The clear consensus is that there has been no measurable economic impact, either positively or negatively, of wind farms on tourism. Similarly, there is consensus among researchers of studies that have sought to predict the potential economic impact of wind farms on tourism. Here again, there is no evidence to support the assertion that wind farms are likely to have a negative economic impact on tourism. Moreover, all of the studies that have sought to predict impact have demonstrated that any negative impact of wind farms on tourism will be more than outweighed by the increase in tourists that are attracted by wind farms or by the increase in employment brought about by the development of wind farms or by the continuing growth of tourism.
- 3.2.3 However, it is clear that some local authorities, business owners and residents in rural areas that fall within Strategic Search Areas for wind farm developments continue to voice opposition to such developments, increasingly citing negative impact on tourism as a reason to reject planning applications. This report therefore seeks to clarify the evidence relating to tourism impacts of wind farms so that remaining opposition to development is based on *fact* rather than unfounded, but nonetheless understandable, *fear*.
- 3.2.4 It is clear that tourism research data must be interpreted carefully. The care with which such research must be approached was highlighted by the Inspector to the Fullabrook Wind Farm Public Inquiry in 2007 when he stated that '*...the question of impacts on tourism is extremely nebulous and vulnerable to assessment by assumption rather than by evidence; it is an area where it is easy to hold opinions but harder to back them up with firm data. There is also the fact that in 15 years or so of wind farm development no evidence has emerged from developed sites that tourism has suffered as a result*' (The Planning Inspectorate, 2007: 48). This lack of evidence has been documented in reports from a number of previous Inquiries. A recent report recommending approval of the Middlemoor proposal in Northumberland stated in relation to tourism that '*Although attention is drawn to this matter by objectors, little or no evidence based analysis is supplied*' (The Planning Inspectorate, 2008: 89).
- 3.2.5 The next section of this report therefore highlights the need for careful and critical assessment of the methodology adopted, the research methods employed and the
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research conclusions drawn in each study when evaluating the 'evidence' from research designed to assess the impact of wind farm development on tourism.

### 3.3 Research Methods

- 3.3.1 Whereas the research methodologies designed to assess the impacts *of* tourism in rural areas have been developed and honed over many decades, the methodologies developed to evaluate impacts of other sectors of industry *on* tourism in rural areas are still in their infancy. As a result, when considering research into the impact of wind farms on tourism it is vital to scrutinise the methodology adopted, the research methods employed and the research conclusions drawn in each study when evaluating the 'evidence' from each piece of research. The lack of maturity of the field of study has, to date, resulted in a lack of rigorous peer review of research methodology, methods, analysis and findings resulting in some poor research and spurious findings being used in planning applications, inquiries and appeals.
- 3.3.2 Two major errors have been identified in previous research and, when primary research containing errors is used to inform secondary research, these initial errors can become compounded. The first error relates to survey methodology and sampling used in primary research and the second to the interpretation and extrapolation of data from secondary research.
- 3.3.3 Some primary survey research commissioned by local authorities and tourist boards has adopted inappropriate and biased sampling methods that have distorted results. In a number of surveys, such as that undertaken by the Western Isles Tourist Board (2005), tourism businesses rather than tourists have been taken as the sampling frame. These research findings therefore provide some insights into *business owners'* views but are wholly unrepresentative findings of *tourists'* perceptions of wind farms. In a number of other surveys, where tourists have provided the sampling frame, the actual sampling methodology has been fundamentally flawed. Such a shortcoming was identified by the Inspector in the Public Inquiry into Fullabrook Wind Farm in Devon where North Devon Marketing Bureau (NDMB) commissioned a public relations company, Bray Leino, to conduct a survey and then used the 'evidence' collected to support their argument that the wind farm would have a detrimental impact on tourism. The validity of the survey was called into question by the Inspector who stated '*I have considerable reservations about the validity and usefulness of the NDMB survey. Under this,*

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*5000 questionnaires were distributed to tourist accommodation and attractions in North Devon. 626 questionnaires were completed and analysed (giving a 13% response rate). First, I agree with Devon Wind Power [Aitchison, 2004] that there is simply no guarantee that the results of a self completion questionnaire can be representative of public opinion. Such questionnaires tend to be filled in by those who have strong opinions about an issue, and thus who are motivated to express those opinions, as opposed to those who may have more measured views. Secondly, the response rate was very low, again throwing into doubt the reliability of the results. In contrast, the methodology employed by UWE [Aitchison, 2004] was far more likely to provide a representative sample of views. Thus, 196 interviews were conducted in representative tourist locations in North Devon, by interviewers trained in tourism research techniques. The technique was to question tourists in order of their arrival ... The survey was supplemented by comparative studies at two existing wind farms in Cornwall and two others in Mid Wales. In total, 379 day visitors and tourists were interviewed at these locations...My conclusion is that of the various studies put before me, it is the findings of Devon Wind Power [Aitchison, 2004], supported by those of the Green Business Forum, that provide the most likely prediction of the overall impact upon tourism. That prediction is that tourist numbers, as well as income, would be maintained.'* (The Planning Inspectorate, 2007: 147-149).

- 3.3.4 The second major error relates to the interpretation and extrapolation of data where, instead of conducting primary research, conclusions have been drawn by extrapolating data, often in a selective or even biased way, in an attempt to demonstrate that conclusions reached in one study at one time and in one location will not only hold true in other temporal and spatial environments but can be applied to much larger areas with an exaggerated effect. Clearly, it is inconceivable that one wind farm, or even a group of wind farms such as those proposed in the Llanbadarn Fynydd area, would impact across the entire area of Powys or Mid Wales. As the authors of the Glasgow Caledonian University (2008a) research emphasised in relation to the economic impact of wind farms in Scotland, 'the total impact is not equal to all the local area effects added together' (Glasgow Caledonian University, 2008b: 6).
- 3.3.5 Moreover, reliance is often placed on selective studies, the findings of which have been discredited or disproved by later research, rather than the whole body of research being considered. For example, the NFO System 3 (2002) survey conducted by for VisitScotland has been widely discredited as a result of its highly

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flawed and biased sampling technique which deliberately 'deselected' a number of groups of respondents and then used leading questions and prompts. The survey, carried out by the Western Isles Tourist Board in the Western Isles in 2005, used local tourist board members and *not* actual tourists as respondents. Selective references can also be made, such as emphasising from the 2008 Glasgow Caledonian Study that 'nearly 18% of respondents indicated that they would not visit an area if a wind farm was constructed' but ignoring the conclusion considering the economic impact of wind farms to Scottish tourism as representing a 0.18% reduction in *growth* prospects for tourism employment: '*It should be remembered that these are not job losses that will be felt instantaneously, rather it is a reduction in the number of jobs that will be created in future as a result of tourism spending*' (Glasgow Caledonian University, 2008b: 6). This potential reduction in growth in tourism employment is likely to be more than off-set by the potential growth in employment related to wind farm development and operation.

### **3.4 Tourism and Wind Farms**

- 3.4.1 The findings of academic research on tourism impacts, together with the tourism policy priorities outlined by a range of public and commercial sector tourism organisations, informed the 2006 *Good Practice Guide on Planning for Tourism* which replaced *Policy Planning Guidance for Tourism* (PPG 21) (Department for Communities and Local Government, 2006). The *Guide* informs planners of the economic, social and environmental significance of tourism and seeks to ensure they take due account of tourism in planning decisions. The guidance does not seek to limit other forms of development; rather, it emphasises that tourism development is compatible with a range of other economic, social and environmental objectives including the development of renewable energy. Such a conclusion is supported by other research including that by Gee (2005) who found that existing economic activities, such as farming, can continue unaffected by the development of wind farms. Within the *Guide* tourism is identified as a key element in promoting sustainable development through: rural farm diversification, aiding the revitalisation of market towns and villages, supporting important rural services and facilities and as a means by which environmental schemes and improvements to the built and natural environment can be enhanced (Department for Communities and Local Government, 2006: 20-21). Moreover, the policies outlined in the *Guide* are intended to be consistent with the principles of *Planning Policy Statement 7: Sustainable Development in Rural Areas* which sets out

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national planning policies for the development of rural tourism and leisure (Department for Communities and Local Government, 2004).

- 3.4.2 Research undertaken by Young (1993), and subsequent research undertaken by Starling (2006), has similarly demonstrated that the development of wind farms is compatible with the development of other economic activities including the service industries of leisure, recreation and tourism.
- 3.4.3 Later research, conducted in relation to the development of the Delabole wind farm in North Cornwall, found that concerns expressed by residents relating to both noise and visual impact fell significantly between pre- and post-construction questionnaires thus indicating that levels of concern can fall after construction of a development (DTI and Exeter Enterprises, 1994). These findings were further supported by those of Eltham, Harrison and Allen (2008) who demonstrated in their study of residents' attitudes before and after a wind farm was constructed in Cornwall that 'No statistically reliable change in opinion was identified for the residents' general acceptance of the wind farm between 1991 and 2006. However, the majority of the population was in support of the development both 'before and after' (Eltham, Harrison and Allen 2008: 32).
- 3.4.4 Echoing the findings of the two studies outlined above, Starling (2006) conducted a comparative study of the impact on residents of the existing wind farm at Delabole, Cornwall and a, then, proposed wind farm at Red Tile, Cambridgeshire and concluded that residents living near to the existing wind farm (Delabole) were more accepting of wind farm development than those at Red Tile where the wind farm had yet to be constructed.
- 3.4.5 These findings are also similar to those highlighted in a range of earlier research surveys examining the impact of wind farms on tourism. Table 1 below indicates the percentage of tourists that would *not* be discouraged from visiting an area if a wind farm was developed. There are two important points to note when drawing conclusions from these results. The first is that those surveyed are generally tourists visiting areas where wind farms do not yet exist but where there is a level of public anxiety as to the development and impact of proposed wind farms. As outlined in 3.4.3 above, opposition to wind farms tends to fall after the wind farm is developed and in operation. The second point to note is that the sampling frame is not all potential tourists but those tourists who have chosen to visit a particular area at a particular time, usually in the absence of a wind farm. To make an

accurate assessment of the impact of wind farms on tourism requires that potential as well as actual tourists be taken into account. However, even among existing samples of tourists it is clear that a significant number of tourists are more and not less likely to visit an area if there is a wind farm. The research carried out in North Devon, for example, demonstrated that the majority of tourists (51%) thought that wind farms could also be visitor attractions for tourists and, in research conducted by NFO in Wales, 68% of tourists said they would be interested in attending a visitor centre at a wind farm development (Aitchison, 2004; NFO, 2003). In more recent research conducted for Visit Scotland (2012) 40% of UK respondents stated that they would be interested in visiting a wind farm visitor centre, 33% stated they had no interest in visiting and 27% were neutral on the subject. Among respondents in Scotland only, 46 % stated that they would be interested in visiting and 27% stated they would not.

Table 1. Percentage of tourists not discouraged from visiting an area with a wind farm

Date	Author	Survey Locality	% Tourists Not Discouraged
1996	Robertson Bell Associates	Cornwall	94
1997	Robertson Bell Associates	Wales	83
2000	Cornwall Tourist Board	Cornwall	81.5
2001	Wales Tourist Board	Wales	96
2002	Centre for Sustainable Energy	Somerset	91.5
2002	MORI Scotland	Scotland	95
2004	University of the West of England (Aitchison)	North Devon	93.9
2006	Whinash	Cumbria	91
2008	Glasgow Caledonian University	Scotland	93-99
2012	VisitScotland	Scotland	83
<b>Average</b>			<b>90.5</b>

### 3.5 Relevant Findings from the UWE and GCU Studies

3.5.1 Two major academic studies of the impact of wind farms on tourism have been conducted in the UK: the University of the West of England's (Aitchison, 2004) study titled *The Potential Impact of Fullabrook Wind Farm Proposal, North Devon: Evidence Gathering of the Impact of Wind Farms on Visitor Numbers and Tourist Experience* and Glasgow Caledonian University's (2008a) study *The Economic Impact of Wind Farms on Scottish Tourism*. Both of these studies address many of

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the shortcomings of earlier research in relation to weaknesses in the use of survey methods, sampling, interpretation and extrapolation of data as highlighted in section 3.3 above. The two university studies also meet the criteria of 'originality, significance and rigour' set out in the UK Government's Research Excellence Framework which is designed to identify high quality research in UK universities (Higher Education Funding Councils, 2011). Arguably, the two studies provide the most reliable knowledge base from which to draw conclusions about the impact of wind farms on tourism.

3.5.2 This report therefore accords greater weight to the findings of the studies conducted by UWE and GCU than to other smaller studies that have adopted less rigorous methodologies. Moreover, the findings of the UWE and GCU research are significant in relation to Garreg Lwyd Hill; not only because of the quality of the evidence presented but also because of the comparability between the tourism environments and policy contexts investigated in the UWE and GCU research (Devon, Cornwall, Wales, Scotland) and the tourism environment and policy context of Mid Wales. The relevant findings from these two studies are considered in turn below.

3.5.3 The UWE study is of relevance to the Garreg Lwyd Hill application because of the number of similarities between the two areas in relation to geography (rural and peripheral to main centres of population), landscape (predominantly rolling hills), proximity to National Parks (Exmoor in the case of Fullabrook and the Brecon Beacons in the case of Garreg Lwyd Hill), tourist profile (wide-ranging tourist profile spanning high season coach tours through to more discerning tourists in the shoulder season and with interests in the heritage tourism, nature tourism and active outdoor recreation) and, finally, tourism policy where in both Devon and Mid Wales the focus is upon developing sustainable tourism in the form of extending the tourism season and tourist expenditure by improving the quality of the tourist offer and experience in an effort to attract higher spending tourists, thus emphasising tourism value over tourist volume.

3.5.4 The sustainable development of the tourism sector has been identified as a strategic priority in both the South West of England and Mid Wales. In the case of Mid Wales this strategic direction aligns with wider Welsh Assembly Government spatial planning and economic development priorities for Wales and outlined in the following policy documents: *People, Places Futures: The Wales Spatial Plan* (2004a); *The Wales Spatial Plan Update* (2008); *Sustainable Development*



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*Strategy: Starting to Live Differently* (2004b); *Wales: A Vibrant Economy* (2005a); and *The Rural Development Plan for Wales Strategic Approach 2007-2013* (2005b).

3.5.5 The objectives outlined by South West Tourism for the development of tourism in the South West of England are almost identical to those of the Welsh Assembly Government and reiterated at a national level in *Achieving Our Potential: Tourism Strategy for Wales* (2006a) and *Tourism Strategy for Wales Mid Term Review* (2009) and at a regional level in the *Mid Wales Tourism Strategy* (Tourism Partnership Mid Wales, 2011). This similarity in policy context and strategic planning is both a reflection and consequence of the similar tourism environments and tourist profiles in both areas. Notwithstanding the different national contexts, it is appropriate to draw on the findings from the extensive research conducted in Devon and Cornwall to inform conclusions about the potential impact of wind farms in Mid Wales. Moreover, when combined with further primary research conducted by Professor Aitchison in other similar areas of Powys, Carmarthenshire and Northumbria, and further secondary research conducted in relation to Wales, Scotland and England, a clear body of evidence is amassed to build a consensus that, with current levels of development, wind farms do not have a negative impact on tourism.

3.5.6 In working with the South West Regional Development Agency to develop the ten year action plan *Towards 2015: Shaping Tomorrow's Tourism*, South West Tourism emphasised the following aims for tourism development in the region:

- Increase the proportion of GDP in the region from tourism and leisure
- Provide opportunities for new entrants and tourism-related businesses
- Make tourism a year-round activity
- Enhance the distinctive character and quality of local destinations

(South West Tourism, 2004)

3.5.7 Similarly, priority objectives for Visit Wales are identified as:

- Realising the importance of understanding and responding to customer needs
- Accepting that there is value to be gained from doing things differently to our competitors through innovative ways of working
- Acknowledging the need to secure a sustainable, long-term future through responsible destination and business management
- Seeking to maximise profitability to drive growth the tourism economy

(Visit Wales, 2006: 10)

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3.5.8 The UWE study formed the basis of Professor Aitchison's evidence at the Public Inquiry into the Fullabrook proposal in 2006-07 (The Planning Inspectorate, 2007). The evidence presented also considered the unreliability of alternative research findings published in the North Devon Marketing Bureau's Wind Farm Research Report (North Devon District Council, 2006). The research methodology, analysis and presentation of the UWE study findings relating to the tourism impact of wind farms were fully accepted by the Inspector in his report and were seen as a model of good practice in research design, implementation and analysis (The Planning Inspectorate, 2007).

3.5.9 The UWE study was designed to establish the specific impact on visitor numbers, tourist experience and tourism expenditure of the proposed wind farm development at Fullabrook in North Devon. Fullabrook Down consists of 22 turbines with a combined capacity of 66 MW and has been in operation since January 2012.

3.5.10 The Fullabrook tourism impact research conducted formed the largest academic study to date at the time of publication and had the following aims:

- To provide evidence and analysis of the attitudes of tourists towards renewable energy in general and wind energy in particular
- To provide evidence and analysis of the impact of existing wind farms in areas popular with tourists
- To provide evidence and analysis of the potential impact on visitor numbers of a wind farm at Fullabrook, North Devon
- To provide evidence and analysis of the potential impact on the tourist experience of a wind farm at Fullabrook, North Devon
- To provide evidence and analysis of the potential impact on the local tourism economy of a wind farm at Fullabrook, North Devon
- To assess the views of tourists relating to the development of wind farms as tourist attractions

3.5.10 The research was designed to provide evidence of the potential impact of the proposed wind farm development on both visitor numbers (tourism volume) and tourist expenditure (tourism value). To provide additional data relating to the impact of existing wind farms comparative studies were conducted at Bears Down and St Breock wind farms in Cornwall and Carno and Bryn Titli wind farms in Mid Wales. It should be noted that Bryn Titli Wind Farm is located only 10 miles due west of the Garreg Lwyd Hill site. The data gathered from the research in Mid Wales and Cornwall, combined with subsequent research results from

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Northumbria and Carmarthenshire is also of relevance to Garreg Lwyd Hill, again because of the similarities in tourism environment and tourist profile between the areas.

3.5.11 A total of 379 day visitors and tourists were interviewed in Devon, Cornwall and Mid Wales during May 2004 using an interviewer-administered questionnaire with 21 questions. In North Devon 196 interviews were conducted in coastal towns and villages including Ilfracombe, Woolacombe, Braunton and Barnstaple in addition to tourist sites at a range of quieter locations inland that are popular with walkers and closer to the wind farm site. In Cornwall 90 interviews were conducted at various locations within a 10km radius of the two established wind farms at Bears Down and St Breock north east of Newquay. In Mid Wales 93 interviews were conducted near the two established wind farms of Bryn Titli and Carno.

3.5.12 Interviewer-administered questionnaires were used as interviewers could ensure that the sample of respondents was obtained from a representative range of tourism locations. Whilst it is not possible to guarantee a truly representative sample of respondents in such a survey as the total population of tourists is not known exactly, the sample obtained was deemed to be as representative as possible. Interviewer-administered questionnaires were completed at a range of sites visited by tourists in North Devon. The interviewers were all trained in tourism research techniques with each interviewer questioning tourists in order of their arrival as soon as the interviewer became free. This method of research is therefore preferable to self-completion or postal questionnaires which have entirely self-selecting samples, notoriously low response rates and are open to misuse as one individual can complete more than one questionnaire.

3.5.13 Because there are difficulties in measuring the impact of something that has not yet been constructed, the comparative studies undertaken in Cornwall and Mid Wales were particularly important. It is significant that the findings from both Mid Wales and Cornwall, where interviewees were questioned near existing wind farms, supported the findings in North Devon; that wind farm developments do not have a detrimental impact on tourism.

3.5.14 The research findings revealed overwhelming support for renewable energy in general and the proposed wind farm in particular. The findings demonstrated that the construction of Fullabrook wind farm would not have a detrimental impact on visitor numbers, tourist experience or tourist expenditure in the area of North Devon.

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3.5.15 The findings from the North Devon study demonstrated that the potential impact of a wind farm in North Devon on day visitor and tourist numbers would be as follows:

- A total of 86.7% (n=170) respondents stated that the presence of a wind farm would neither encourage nor discourage them from visiting
- A further 7.2% (n=14) of those surveyed said that a wind farm would either marginally encourage or strongly encourage them to visit the area
- A further 6.1% (n=12) said that the presence of a wind farm would either marginally discourage or strongly discourage them from visiting

3.5.16 The potential impact of wind farms on the tourist experience was as follows:

- The majority of respondents (58.2%, n=114) thought that wind farms have 'no overall impact' on the visitor or tourist experience
- A total of 18.4% (n=36) of those questioned thought that wind farms have a positive impact on the visitor or tourist experience
- A total of 14.8% (n=29) thought that wind farms have a negative impact on the visitor or tourist experience

3.5.17 The findings of the research therefore contradicted the argument that tourists would inevitably view the wind farm as having a detrimental impact on the attractiveness of the landscape and would therefore be put off visiting North Devon as suggested by North Devon Marketing Bureau (2004) on behalf of North Devon District Council. Indeed North Devon's own research reported that more tourists surveyed (33%) stated that 'the wind farm would be aesthetically pleasing' than stated that it would be 'a blot on the landscape' (25%). Words such as 'graceful', 'elegant' and beautiful' were used to describe wind turbines/farms by respondents to the North Devon Marketing Bureau survey. Moreover, in a number of studies that have adopted qualitative measures, respondents have referred to synergies between green energy and green (or sustainable) tourism and the development of visitor centres associated with wind farm developments is a current topic of debate, particularly in Scotland (Horton, 2012).

3.5.18 As the construction of the proposed wind farm at Fullabrook was found to have no adverse effect on day visitor or tourist numbers it could not be deemed to have a likely negative impact on day visitor or tourist expenditure.

3.5.19 When asked 'Do you think wind farms can be tourist attractions?' just over half of those questioned (51.0%, n=98) answered 'yes'. A total of 43.8% (n=84)

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respondents said that they did not think wind farms could be tourist attractions and a further 5.2% (n=10) stated that they did not know or had no opinion. Recent research commissioned by Visit Scotland found that almost half of 3000 respondents surveyed expressed interest in visiting wind farm developments if they included a visitor centre (VisitScotland, 2012). Interestingly, the *Investigation into the Potential Impact of Wind Farms on Tourism in Wales*, by the Wales Tourist Board in 2003 found that 68% of those questioned would be interested in attending a visitor centre at a wind farm. At Rheidol, for example, the hydroelectric power station and wind farm receives approximately 10,000 visitors per year to the visitor centre (British Wind Energy Association, 2010). Whitelee wind farm in Scotland now receives over 250,000 visitors to its visitor centre and has embarked on a range of developments for active recreation provision within the site.

3.5.20 The findings related to the potential impact of the development of the proposed wind farm indicate there would be neither an overall decline in the number of tourists visiting the area nor any overall financial loss in tourism-related earnings as a result of the wind farm. In fact, it is quite possible that the wind farm could result in an increase in visitor numbers and tourist-related expenditure.

3.5.21 The findings from the UWE study in North Devon broadly accord with those of the other major academic study of the impact of wind farms on tourism; that conducted by Glasgow Caledonian University in 2008 into *The Economic Impact of Wind Farms on Scottish Tourism*.

3.5.22 Previous research has demonstrated that the development of sustainable tourism, and the attraction of tourists with an interest in the environment, natural heritage and culture, is wholly compatible with the development of renewable energy including wind farms. Predictions outlined in the GCU research examining the impact of wind farms on tourism are that 'If the renewables target (to generate at least 50% of Scotland's electricity from renewable sources by 2020) is met via substantial wind farm development, Scottish tourism revenues in 2015 are forecast to be 0.18% lower (£7.6 million) than they would have been if there were no wind farms in Scotland (Glasgow Caledonian University, 2008b: 1). It is vital to note here that the authors of the report emphasise that this figure of 0.18% does not represent a reduction from current levels of tourism revenue but a reduction in the predicted level of growth between 2008 and 2015. Moreover, as the authors of the study stress, 'Those areas with fewer wind farms are likely to see greater

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increases in tourism than they would otherwise and this will act to offset slower growth in other parts of the country. Only a negligible fraction of tourists will change their decision whether to return to Scotland as a whole because they have seen a wind farm during their visit' (Glasgow Caledonian University, 2008b: 6).

3.5.23 Indeed, the authors of *The Economic Impact of Wind Farms on Scottish Tourism*, concluded that 'Overall the finding of the research is that if the tourism and renewable industries work together to ensure that suitably sized wind farms are sensitively sited, whilst at the same time affording parts of Scotland protection from development, then the impacts on anticipated growth paths are expected to be so small that there is no reason to believe that Scottish Government targets for both sectors are incompatible' (Glasgow Caledonian University, 2008b: 8).

3.5.24 Similarly, the research conducted by GCU stated that 'Importantly, respondents that had seen a wind farm were less hostile than those who had not' (Glasgow Caledonian University, 2008b: 3). Starling's and Glasgow Caledonian University's findings therefore lend support to Young's 2003 research; namely, that opposition to wind farms tends to fall after construction.

3.5.25 The GCU research also reiterates findings from the research conducted in North Devon by Professor Aitchison and discussed in detail above. In particular, the Scottish research found that 'The vast majority (93-99%) of tourists that had seen a wind farm in the local area suggested that the experience would not have any effect on their decision to return to that area, or to Scotland as a whole (Glasgow Caledonian University, 2008b: 4).

3.5.26 The UWE and GCU studies are therefore consistent in their conclusion that the development of wind farms will not result in a reduction in tourist numbers, tourist experience or tourism revenue. Given the similarity between North Devon, Scotland and Mid Wales in tourism landscapes, visitor attractions and tourists themselves, it is quite likely that it will also be the case that the development of a wind farm at Garreg Lwyd Hill will induce no overall financial loss in tourism-related earnings.

3.5.27 It is possible that the development at Garreg Lwyd Hill could result in a small increase in visitor numbers and tourist-related expenditure if an appropriate visitor centre were developed although this would require a significant feasibility study.

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## **4. TOURISM POLICY CONTEXT OF GARREG LWYD HILL WIND FARM**

### **4.1 Introduction**

4.1.1 This section synthesises the evidence outlined and evaluated above to provide an informed judgement of the potential impact on tourism of the Garreg Lwyd Hill Wind Farm. This comparative assessment is set alongside an actual assessment of tourism in the Garreg Lwyd Hill area with this assessment undertaken through a combination of primary and secondary research comprising:

- Analysis of tourism policy at national, regional and county level
- Field visit to the Garreg Lwyd Hill area including visits to the proposed wind farm site, surrounding villages, and a sample of visitor attractions, accommodation and hospitality providers
- Review of literature and information on visitor attractions, visitor accommodation and tourism activities in the Garreg Lwyd Hill area

4.1.2 The evidence presented below takes three forms:

- Evaluation of tourism policy in Wales and, specifically, Mid Wales, including an assessment of any potential conflict between local tourism policy and renewable energy development
- Evaluation of the nature of tourism within the vicinity of Garreg Lwyd Hill, including an assessment of any potential conflict between local tourism and renewable energy development
- Assessment of the likely impact on specific visitor attractions and visitors of a wind farm development at Garreg Lwyd Hill

4.1.3 In presenting an evaluation of the likely impact of Garreg Lwyd Hill wind farm on specific visitor attractions and visitors, the assessment focuses in detail on the defined site development area and visitor attractions and tourist accommodation in the surrounding area. In the previous tourism impact study carried out in Llanbrynmair a detailed analysis was conducted of visitor accommodation and attractions within a 10 mile radius of the site. The area immediately surrounding Garreg Lwyd Hill has few accommodation providers and visitor attractions. The search area was therefore widened to 25 miles although even this enlarged search area has a low density of visitor accommodation and attractions. This assessment is contextualised within an evaluation of visitor attractions, tourist accommodation and tourism activities within the wider surrounding area covered by the Mid Wales Tourism Partnership. Cognisant of the guidance provided in section 3.3.4, which

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stressed the danger of exaggerating impact (which could be either positive or negative) by extrapolating data gathered in one specific location and applying the data to a wider regional context in some kind of cumulative or multiplier effect, this assessment focuses on the impact on tourism in the specific area in question. The absence of occupied settlements within the area covered by the proposed Garreg Lwyd Hill Wind Farm necessitates adopting either or both of the neighbouring villages of Llanbadarn Fynydd, 4km west-south-west of the actual hill of Garreg Lwyd or Felindre, 4km east-north-east as the central points for the surveys of visitor accommodation and visitor attractions. Llanbadarn Fynydd has been selected resulting in a wider range of tourist sites being incorporated in the analysis than if the radius of the search area were drawn from the central point of the wind farm site.

- 4.1.4 The nearest major settlements to Garreg Lwyd Hill are the towns of Newtown, located 8 miles to the north; Llandrindod Wells, located 7 miles to the south; and Knighton, located 9 miles to the south-east. It is noted that distances from the wind farm site to these towns is significantly further by road than the distances stated above. The area surrounding the site is very sparsely settled with the main farms and communities within 4 miles located clockwise at Felindre, Beguildy, Lloyney and Knucklas, Crug, Llanbister, Llananno and Llanbadarn Fynydd.

## 4.2 Tourism Policy in Wales

- 4.2.1 National and local government, together with national and regional tourist boards, have recently adopted tourism-related policies and practices designed to maximise the economic and social benefits of tourism whilst simultaneously minimising tourism's negative environmental impacts. This policy agenda is particularly important for those authorities and agencies with responsibility for developing tourism in rural and remote areas such as Mid Wales. To ensure the sustainable development of tourism attention has thus focussed on developing strategies that seek to promote *quality* of experience and level of tourist expenditure over *quantity* of tourists. *Achieving Our Potential: Tourism Strategy for Wales 2006-2013 Mid Term Review* (Welsh Assembly Government, 2009) and the *Sustainable Tourism Framework* (Welsh Assembly Government, 2007) set out the strategies for tourism and sustainable development across Wales.

- 4.2.2 The *Sustainable Tourism Framework* for Wales has been developed within the context of both the overarching national tourism strategy for Wales *Achieving Our*



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*Potential: Tourism Strategy for Wales 2006-2013* (Welsh Assembly Government, 2006) and wider national strategies that respond to the *Wales Spatial Plan: People, Places Futures* (Welsh Assembly Government, 2004a). These wider national strategies have been developed in relation to economic, social, cultural and environmental policy priorities identified by the Welsh Assembly Government and are outlined in the following policy documents addressing economic, social and environmental policy priorities:

- *Wales: A Vibrant Economy* (2005)
- *The Rural Development Plan for Wales Strategic Approach 2007-2013* (2005)
- *Well-being in Wales* (2002)
- *Health Challenges Wales* (2004c)
- *The Environment Strategy for Wales* (2006b)
- *Starting to Live Differently: Sustainable Development Strategy* (2004b)

4.2.3 Tourism, and the associated policy areas of culture, leisure and sport are addressed within a comprehensive set of strategy documents to emerge within the last decade and which seek to identify and promote mechanisms for utilising tourism as a vehicle to achieve the wider economic, social and environmental objectives outlined in the strategies above. In particular, the following current policy documents are of relevance to any analysis of tourism in the Garreg Lwyd area:

- *Cultural Tourism Strategy for Wales*
- *Coastal Tourism Strategy*
- *Creative Futures*
- *Climbing Higher: Sports Strategy for Wales*
- *Sport Tourism in Wales: A Framework for Action*
- *Catching the Wave: Wales Tourism Watersports Strategy*
- *Moving Up a Gear: A Cycling Tourism Strategy for Wales*
- *Best Foot Forward: A Walking Tourism Strategy for Wales*
- *Saddling Up For Success: A Riding Tourism Strategy for Wales*
- *Angling For Growth: A Fishing Tourism Strategy for Wales*
- *Time For Action: An Adventure Tourism Strategy for Wales*
- *WTB Activity Tourism Action Plan*
- *National Events Strategy*
- *Action Plan for the Countryside Experience*

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4.2.4 The policies and strategies adopted for tourism in Wales accord with the principal policies outlined in the *Good Practice Guide on Planning for Tourism* which identifies tourism, like renewable energy development, as a key element in:

- rural farm diversification
- an aid to the revitalisation of market towns and villages
- a support for important rural services and facilities
- and a means by which environmental schemes and improvements to the built and natural environment can be enhanced

(Department for Communities and Local Government, 2006: 20-21)

4.2.5 Current thinking related to the development of sustainable tourism, as stated in the 2006 *Good Practice Guide on Planning for Tourism*, fully recognises that tourism needs to be developed alongside local community needs for energy and other forms of industry in addition to the development of related forms of service sector provision (Department for Communities and Local Government, 2006).

4.2.6 As such, the proposal being considered here, to develop a wind farm at Garreg Lwyd Hill, is aligned with the policies and strategies adopted for tourism in Wales. The proposal is also in accord with the principles outlined in the Planning Policy Statement 7: *Sustainable Development in Rural Areas* which sets out national planning policies on the development of tourism and leisure in rural areas and is consistent with the *Good Practice Guide on Planning for Tourism* (Department for Communities and Local Government, 2006).

### **4.3 Tourism Policy in Mid Wales and Powys**

4.3.1 At regional level, policy priorities for tourism are developed by one of the four Regional Tourism Partnerships in Wales; Tourism Partnership Mid Wales (TPMW). Like the other three Regional Tourism Partnerships, TPMW is a public-private sector partnership funded by the Welsh Government to develop and promote tourism within one of the four regions. TPMW covers the counties of Powys, Ceredigion to the west and the Meirionnydd area of Gwynedd to the north. Although located within Powys, and close to the administrative centre of Powys at Llandrindod Wells, it is important to note that Garreg Lwyd Hill is in the east of the region and nearer to the border with England than the coast of Ceredigion in the west, the mountains of Snowdonia National Park in the north or the Brecon Beacons in the south. This location, and the relatively limited influence of some of

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the more iconic Welsh upland landscapes, has shaped the destination 'brand' of the area surrounding Garreg Lwyd Hill, the kinds of tourism provided in the area and the types of tourist who visit the area.

4.3.2 The Mid Wales Tourism Strategy (Tourism Partnership Mid Wales, 2011) recognises the extent and diversity of the Mid Wales Region. The document defines the Region as 'A Polyglot Area' and emphasises the impact of this lack of both homogeneity and clarity of identity for tourism policy, planning, development and marketing:

- Mid Wales extends over 80 miles (as the crow flies) from Porthmadog in the north to Crickhowell in the south and 50 miles from Aberaeron on the west coast to Presteigne on the English border
- It is not a homogenous physical area being made up of the Cardigan Bay coast (part), the Cambrian Mountains (part), Snowdonia (part), the more gentle rural areas of Montgomeryshire and Radnorshire and the wild, upland area of the Brecon Beacons
- This local geography suggests four natural tourism destinations across the Region i.e. Ceredigion, the Brecon Beacons, Snowdonia (part) and that part of Powys outside the National Park
- The individual destinations within the Region vary in physical and social terms and although there are some common products and themes, they differ in what they offer
- What the Region does have in common is a generally low population density living in a rural, but varied, landscape where agriculture dominates and there are common problems associated with the rural economy.

4.3.3 The challenges associated with the rural economy in Powys have been well documented and are evidenced in economic data in *Productivity in Powys 2004-2008* (Powys County Council, 2011a). Seven factors have been identified as constraining economic development in Mid Wales (Greaves and Morgan, 2011). Two of these factors relate to the structure of the economy and employment in rural areas and the other four factors represent particular concerns for the tourism industry:

- High levels of self employment (although entrepreneurship is an economic catalyst an over-reliance on self-employment prevents the formation of large and more profitable enterprises)
- Small size of business (the majority of tourism businesses are SMEs with most rural businesses usually employing fewer than 10 staff)

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- Slow broad band speed (tourism is increasingly reliant on digital technology for marketing, sales and the enhancement of the visitor experience)
  - Fewer hours worked per week (the casual and seasonal nature of tourism employment means that full-time and permanent jobs are low in number)
  - Lower wages (the casual and seasonal nature of tourism employment means that professional jobs and employment career tracks are available for only a few workers)

4.3.4 Tourism policy in Powys seeks to stimulate the rural economy and is contextualised within both the County Council's Corporate Plan *The Powys Change Plan* (2011b) and the *Powys Regeneration Strategy* (2011c) and specified within the *Mid Wales Tourism Strategy* (Tourism Partnership Mid Wales, 2011). Tourism forms one of nine 'key themes' in the *Powys Regeneration Strategy* and the *Mid Wales Tourism Strategy* highlights four objectives for sustainable tourism development in Mid Wales:

- To organise tourism resources in the most effective manner across the Region
- To provide the appropriate infrastructure and high quality, sustainable, distinctive destinations, facilities and services, that will encourage more visitors to visit throughout the year, thereby encouraging growth in the visitor economy
- To encourage more local people to follow and develop worthwhile careers in the tourism industry
- To maximise opportunities for tourism development with and between different agencies

(Tourism Partnership Mid Wales, 2011)

#### **4.4 The Volume and Value of Tourism in Mid Wales and Powys**

4.4.1 The volume and value of tourism is often difficult to determine in relation to specific regions and even more so in respect of local areas. Clarity of definitions is essential and, in this particular context, differentiating between business tourism and leisure tourism, overnight stays and day visits, and visits to Wales and within Wales present challenges to obtaining accurate economic data. Notwithstanding these difficulties, the Welsh Assembly Government, drawing on data from the Welsh Economy Research Unit (WERU) at Cardiff University, has placed the value of tourism to the Welsh economy at £1.8 billion for 2010, up from £1.1 billion in 2000. This figure is derived from almost 10 million visits including almost one

million international visitors. In addition, day visitor expenditure attributable to tourism is deemed to be approximately £1.5 billion.

4.4.2 The volume and value of tourism in Wales is unevenly spread. Various sources agree that visitor numbers and levels of expenditure (tourist volume and value) are lower in Mid Wales than other areas of Wales. For example, the Welsh Assembly Government (2011) estimated that in 2010 tourists to Mid Wales made slightly fewer trips (1.59 million) than tourists to either South West Wales (1.84 million) or North Wales (3.4 million). According to the same source, tourists to Mid Wales also stayed for fewer nights (6.53 compared to 7.29 in South West Wales) and contributed less to the tourism economy (£269 million compared to £330 million in South West Wales and £518 million in North Wales). Powys Country Council estimated the volume and value of tourism in 2010 at 3 million day visitors and 1.5 million overnight visitors with an average length of stay of 5.06 nights and an average combined visitor spend from day visitors and overnight visitors of £638.8 million (Greaves and Morgan, 2012). Tables 2 and 3 below illustrate figures for tourist numbers (tourism volume) and expenditure (tourism value) from 2005 to 2010 respectively (Powys County Council, 2011d). Of particular note is the decrease in visitor numbers year on year over a six year period from 4.9 million in 2005 to 4.4 million in 2010. There has been an increase in visitor spending from £595 million in 2005 to £639 million in 2010 although the 2010 figure is a significant drop from the six year high of £672 million in 2007; the last year before the current economic downturn.

Table 2. Powys tourism volume 2005-2010

<b>Tourist Numbers (thousands)</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Serviced Accommodation</b>	438	421	406	419	373	376
<b>Non-serviced Accommodation</b>	756	808	840	909	876	874
<b>SFR (Staying with Friends &amp; Relatives)</b>	202	203	202	204	205	203
<b>Day Visitors</b>	3,508	3,394	3,373	3,216	3,116	3,001
<b>TOTAL (rounded)</b>	<b>4,904</b>	<b>4,825</b>	<b>4,821</b>	<b>4,748</b>	<b>4,571</b>	<b>4,455</b>

Table 3. Powys tourism value 2005-2010

Revenue by Category of Visitor (£ million)	2005	2006	2007	2008	2009	2010
Serviced Accommodation	88.7	86.0	88.9	92.5	81.5	81.8
Non-serviced Accommodation	388.8	411.8	429.9	470.1	449.6	453.1
SFR (Staying with Friends & Relatives)	23.9	24.1	24.0	24.2	24.3	24.1
Day Visitors	93.2	90.1	89.6	85.5	82.9	79.8
<b>TOTAL (rounded)</b>	<b>594.6</b>	<b>611.9</b>	<b>632.4</b>	<b>672.3</b>	<b>638.3</b>	<b>638.8</b>

#### 4.5 The Nature of Tourism in Mid Wales and Powys

4.5.1 The Mid Wales Tourism Partnership area includes all of Powys and a stretch of the Cardigan Bay coast, which is a popular destination for family seaside holidays, and the southern part of Snowdonia National Park, which is popular with walkers and climbers. Within the county of Powys, Radnorshire forms the most southerly of the three established 'shires' that represent the former administrative counties. Garreg Lwyd is one of the most easterly areas of Radnorshire and very close to the boundary with Montgomeryshire just to the north. The proximity of the area to England means that the area is also close to the English counties of Shropshire to the north-east and Hereford to the south-east. The location of Garreg Lwyd, at the intersection of these different regions and landscapes, and within relatively easy access from the West Midlands, results in a destination that is attractive to different types of tourists, many of whom are attracted to the area because of its proximity to a range of visitor attractions: historical, natural and recreational.

4.5.2 The variety of tourism destinations around Garreg Lwyd Hill makes the area attractive to different types of tourists seeking different kinds of activities and experiences. These range from the established tourism market catering for family holidays, often in park accommodation, through to niche markets specialising in heritage tourism, nature tourism and active outdoor tourism, recreation and sport.

4.5.3 The Garreg Lwyd Hill area has a low density of visitor attractions and tourist accommodation relative to many other areas of Wales. Those day visitors and tourists who are attracted to the area are drawn by a range of features, most notably museums, castles and galleries; nature, wildlife and landscape; and outdoor and active recreation. The historic spa town of Llandrindod Wells has a number of four star hotels and is a popular stopping place for coach tours. The town also attracts both tourists interested in its history as a spa resort and visitors to its museums and galleries. Visitors more interested in natural history are drawn by the Red Kite Feeding Centre at nearby Rhayader which has become an established visitor attraction for those interested in bird life. For those interested in more active outdoor recreation Glyndŵr's Way provides a popular long distance route for walkers and those wishing to experience the Cambrian Mountains. Other forms of active countryside recreation include fishing in the River Ithon to the west and the River Teme to the north, horse riding and mountain biking.

4.5.4 It is these types of activities that both Visit Wales and Mid Wales Tourism Partnership have sought to market through their branding of the area as an attractive destination for outdoor activities and sustainable rural tourism. This 'brand', and the strategies required to develop sustainable rural tourism, are outlined in a number of national policy documents including *Sustainable Tourism: A Framework for Wales* (Welsh Assembly Government, 2007) and the *Action Plan for the Countryside* (Welsh Assembly Government and Wales Tourist Board, 2004). *Sustainable Tourism: A Framework for Wales* (2007) develops a vision for tourism, together with four key objectives to support the vision, where:

*Wales is recognised internationally as a leading sustainable tourism destination that promotes local economic prosperity, supports community well being and engagement, enhances its natural environment and culture and delivers a high quality experience to visitors.*

*There are four key objectives supporting the vision:*

- *Promoting local prosperity*
- *Supporting community well being and involvement*
- *Minimising tourism's environmental impact*
- *Protecting and giving value to natural heritage and culture*

(Welsh Assembly Government, 2007: 5)

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The 2004 Report of the Working Party on Countryside Tourism to the Welsh Assembly Government formed an 'Action Plan for the Countryside Experience' in which the vision for the countryside experience in Wales is:

*The destination of choice for visitors seeking a varied and quality countryside experience, whether this is as an activity enthusiast or the general visitor attracted by the quality environment, range of attractive accommodation, food and things to do.*

*The experience is delivered to visitors in an integrated manner by prosperous self-confident rural businesses and communities, who have taken responsibility for their own destiny. The experience is presented in a way that uses a distinctive Welsh sense of place that differentiates the experience from that offered by competitors, and provides economic benefits for the host communities whilst also supporting their local Welsh culture.*

(Welsh Assembly Government and Wales Tourist Board, 2004: 6)

4.5.6 At a regional level the priority, as in many rural tourism locations, is to enhance quality, diversify provision and develop tourism more evenly both temporally, by extending the season, and spatially, through leveraging and sustaining rural development. With an emphasis on tourism value over tourist volume tourism growth is focussed on niche markets in adventure tourism, cultural tourism, ecotourism, film tourism, food tourism, geotourism, golf tourism, heritage tourism, nature tourism, and sport tourism attracting more national and international tourists. In 2006, the national tourism body for Scotland, VisitScotland, identified six characteristics as essential for such growth:

- *Offering a wide product and experience base which is well marketed and offers discovery and experience as key themes*
- *Targeting growing interest in outdoor activities, cities, culture, well-being and business tourism*
- *using traditional culture and heritage to differentiate from other destinations, and using special events to boost profile and visitor numbers*
- *making heavy use of the internet to promote themselves*
- *Using private/public partnerships to deliver key roles*
- *depending on domestic tourism as well as the international market, convincing local people of benefits of tourism and tourist-friendly attitudes*



4.5.7 Moving from a national and regional to a local level, Powys County Council has reinforced the visions outlined above in a range of strategies recently encapsulated in the £2.6 million *Sustainable Tourism Powys* project which is designed to promote tourism. In an around Garreg Lwyd Hill tourism is largely concentrated on small family-run businesses. Even the large four star Metropole Hotel in Llandrindod Wells has been a family-run business since it opened in Victorian times. The nature of many of the local tourism businesses means that they are often reliant on repeat business from local people to sustain them and frequently diversify into providing businesses and services beyond those normally associated with tourism.

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## 5 TOURISM IMPACT OF GARREG LWYD HILL WIND FARM

### 5.1 Introduction

5.1.1 This section of the report examines the range of visitor attractions and tourist accommodation in the wider region surrounding Garreg Lwyd Hill. By mapping the tourism businesses in both the wider region and in the more immediate area it becomes possible to ascertain the extent of tourism businesses that might *perceive* a potential impact from the development of a wind farm at Garreg Lwyd Hill. Here it is important to differentiate between tourism businesses and tourists themselves. There is no known research of the potential impact on tourists in the Garreg Lwyd Hill area and there is no evidence from any research anywhere else in the UK that supports the view that wind farm developments impact negatively on tourist volume (visitor numbers), value (tourist expenditure) or experience (tourist satisfaction). There is, however, understandable concern among tourism businesses that such a development might impact negatively upon their business and thus the fewer the number of businesses in the vicinity of the wind farm site the easier it is to demonstrate that their concern is more likely to be based on fear than fact.

5.1.2 It is, however, important to note the potential impact of cumulative developments in this area of Mid Wales where Garreg Lwyd Hill is one of five wind farms currently in planning. There is, by way of comparison, increasing concern in Scotland that the development of wind farms could reach a 'tipping point' where the cumulative impact begins to impact negatively. Although there is no evidence to suggest such an impact exists at present there is concern in Scotland that the current number of wind farms in operation in 2012 (n=139) is more than equalled by the number already consented and under construction (n=146) and with a further 117 developments currently in planning. Given the spatial clustering of proposals it is important to consider cumulative impact.

5.1.3 In previous research undertaken by Aitchison in relation to the proposed Devon Wind Power development at Fullabrook in Devon, wind farms at Carno and Bryn Titli provided sites for conducting surveys of tourist attitudes. The results of the surveys accorded broadly with those evaluated in section 3 of this report; that is that the development of a wind farm would not impact negatively on tourism. Given the proximity of Bryn Titli wind farm to the Garreg Lwyd Hill site it is likely that the results from the survey of tourists conducted at and around Bryn Titli

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provides evidence to support the view that the impact of a wind farm at Garreg Lwyd Hill would have very limited impact if any on tourism. Notwithstanding this assertion it should be noted that the Bryn Titli research was conducted in 2004 and thus would take less account of cumulative impact.

- 5.1.4 Research demonstrates that there is a low concentration of tourism businesses in the vicinity of the Garreg Lwyd Hill site. This is to be expected given that upland areas with high wind speeds are favourable locations for wind farms but less favourable as locations for settlements. It should be noted, however, that such landscapes also provide attractive and appropriate environments for a number of rural recreation pursuits and tourism activities. Notwithstanding the attractiveness of the landscape in the Garreg Lwyd Hill area, it is notable that there is a lower concentration of tourism businesses and tourists than in many other areas of the UK with similar landscapes, including other areas of Mid Wales identified as potential sites for wind farm development. Field research undertaken over the course of a weekend in mid-September 2012 and when the weather was exceptionally good for the time of year encountered no tourists or people engaging in outdoor recreation in the Garreg Lwyd Hill area. Hotel and Guest House occupancy in the area at that time was very high although most visitors to the larger hotels were older people who were part of larger coach parties and who would be unlikely to visit the Garreg Lwyd Hill area.
- 5.1.5 The assessment made focuses on the predominant forms of tourism and tourism businesses in the area, namely visitor attractions, tourist accommodation and tourist activities. Visitor attractions comprising pay to enter and free admission were mapped with the mapping exercise indicating that there are few visitor attractions in the Garreg Lwyd Hill area. Tourist accommodation was similarly mapped and again the exercise illustrated a relatively low concentration of accommodation, although there is a notable concentration of high value accommodation such as hotels in Llandrindod Wells. The mapping of self-catering accommodation is not exhaustive although provides sufficient evidence of low concentrations of tourist accommodation within the vicinity of Garreg Lwyd relative to a number of other areas that have received consent for wind farm development.
- 5.1.6 There are also a number of other activities and attractions that encourage tourists and day visitors to visit the Garreg Lwyd Hill area albeit without visiting formal tourist attractions or staying in local tourist accommodation. Analysis of these

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activities enables account to be taken of the importance of day visits to this area of Wales, particularly for active sport and recreation.

## 5.2 Visitor Attractions

- 5.2.1 As previously stated, tourism in Wales is organised into four regions and the large Mid Wales Tourism Partnership region includes the area around Garreg Lwyd Hill. The Welsh Assembly Government (2012) report titled *Visits to Tourist Attractions in Wales 2011: Report for Visit Wales* lists 214 attractions in Wales with 44 or 20.5% located in the MWTP area. This figure suggests that the concentration of visitor attractions in the MWTP area is slightly lower than in the other three regions.
- 5.2.2 Of the 117 visitor attractions that charge an entry fee listed in the *Visits to Tourist Attractions in Wales 2011*, 31 (26%) are in Mid Wales (Welsh Assembly Government, 2012). A slightly lower proportion of free attractions are located in the MWTP area with 13 (13.4%) of the 97 attractions that are free to enter and listed in the 2012 report located in the MWTP area.
- 5.2.3 Of the top ten pay to enter visitor attractions in Wales in 2011 only one, Portmeirion, was defined by Visit Wales as being in 'Mid Wales' or the MWTP region. Located in Gwynedd, and approximately 70 miles and well over one hour's travel from Garreg Lwyd Hill, it is unlikely that many visitors to Portmeirion would also be visitors to the Garreg Lwyd Hill area.
- 5.2.4 Of the top ten free to enter attractions in Wales in 2011 none were in Mid Wales. The MWTP region does include a representative number of visitor attractions but these are not as popular as visitor attractions in other parts of Wales and none of the more popular visitor attractions are located in or near the Garreg Lwyd Hill area. The most popular 20 visitor attractions (pay to enter and free to enter) in Mid Wales in 2011 are listed in Table 4 below (Welsh Assembly Government, 2012). Of these, 11 attractions are pay to enter and nine are free. None of the 20 most popular visitor attractions in Mid Wales are within 20 miles of Garreg Lwyd Hill and the average is over 50 miles from Garreg Lwyd Hill.

Table 4. Top Twenty Visitor Attractions in Mid Wales (2011)

	Visitor Attraction (Pay to Enter)	Adult Entry Fee (£s)	Number of Visitors in 2011	% Change from 2010	Miles from Garreg Lwyd Hill
1	Portmeirion	£9.00	234,098	-3.0%	70
2	Elan Valley Visitor Centre	Free	134,614	-3.0%	22
3	Brecon Beacons Mountain Centre	Free	132,358	-7.3%	48
4	Bwlch Nant yr Arian Visitor Centre	Free	125,037	NA	41
5	Brecon Cathedral and Heritage Centre	Free	120,000	NA	42
6	Powys Castle and Garden	£11.80	116,464	8.3%	26
7	Harlech Castle	£3.80	92,404	0.1%	72
8	Talyllyn Railway	£13.00	46,934	NA	55
9	Aberystwyth Cliff Electric Railway	£3.50	45,259	NA	53
10	Vale of Rheidol Railway	£14.50	41,319	NA	53
11	Cantref Adventure Farm	£8.00	39,336	NA	44
12	King Arthur's Labyrinth	£7.90	38,583	NA	46
13	Devil's Bridge Waterfalls	£3.50	35,124	-7.0%	43
14	Centre for Alternative Technology	£8.50	34,603	NA	43
15	Ceredigion Museum	Free	31,371	NA	53
16	Uni Wales Aberystwyth Gallery/Museum	Free	27,000	NA	52
17	Museum of Modern Art	Free	22,317	12.6%	40
18	Welsh Wildlife Centre	Free	22,000	NA	93
19	Ynys Hir Reserve Information Centre	£3.00	21,857	NA	47
20	Bala Lake Railway	£9.50	20,420	15.6%	62

5.2.5 Other visitor attractions in the wider area surrounding Garreg Lwyd Hill can largely be grouped into three main categories: heritage tourism, nature tourism and active outdoor tourism and recreation.

5.2.6 Heritage tourism has been developed from the rich history of Mid Wales which has provided a resource for a number of visitor attractions. Dolforwyn Castle just to the north east of Newton, and over 10 miles from Garreg Lwyd Hill, is a 13<sup>th</sup> century castle that has been revealed through archaeological excavation. Dolforwyn Castle is free to enter and open all year from 10.00-16.00. There is a castle at Clun, approximately 10 miles to the east of the site and Offa's Dyke Heritage Centre is located in Knighton, approximately 20 miles to the south-east

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of Garreg Lwyd Hill. Powys Castle and Gardens near Welshpool is the 6<sup>th</sup> most popular pay to enter visitor attraction in Mid Wales and is approximately 26 miles from Garreg Lwyd Hill. Industrial heritage forms less of an attraction in this area of Powys than in the area further north-west. However, Bryntail Lead Mine just to the west of Llandiloes is an exception and is free to enter and open all year from 10.00-16.00. There are also small local museums and art galleries which are free to enter in Newton, Llandrindod Wells, Bleddfa, Rhayader and Llandiloes.

- 5.2.7 Nature tourism is also an attraction for visitors although there are relatively few visitor attractions to cater for this market. The Red Kite Feeding station at Gigrin Farm near Rhayader is perhaps the best known visitor attraction in the area although it is located approximately 20 miles from Garreg Lwyd Hill. Just north of Rhayader is Gilfach Farm Nature Reserve which incorporates a traditional farm and farm buildings with an education and visitor centre open from Friday to Monday between April and July and daily from mid-July to September. At Llanfihangel Rhydithon is the popular waterfall Water-break-its-neck which attracts walkers.
- 5.2.8 Walkers are the group of visitors that will come closest to the site at Garreg Lwyd Hill. This is because Glyndŵr's Way passes through the actual wind farm site and this form of recreation is discussed in section 5.4 below.
- 5.2.9 Around Garreg Lwyd Hill there are a number of small settlements with village pubs that are likely to be attractive to some passing tourists and walkers. Nearby, and in increasing distance from Garreg Lwyd Hill, these include: New Inn at Llanbadarn Fynydd; the Wharf Inn in Felindre; The Radnorshire Arms in Beguildy; The Anchor Inn and The Lion at Llanbister; The Dolfor Inn in Dolfor; The Horse and Jockey Inn, The Castle Inn and The Greyhound Pub in Llangunllo; The Lloyney Inn at Lloyney; The Castle Inn at Knucklas; The Happy Union Inn in Abbey-cwm-hir; The Herbert Arms and Kerry Lamb in Kerry; The Sarn Inn at Sarn; The Buck Inn, The Queen's Head, The Pheasant Inn, The Cambrian Vaults, The Railway Tavern, The Red Dragon, The Wheatsheaf Inn, The Cross Guns Inn, The Waggon and Horses, The Angel, The Victoria Vaults, Brady's and The Sportsman in Newton; The Builder's Arms in Crossgates; The Ridgebourne, The Laughing Dog, Jules Restaurant and Bar, and Gwystre Country Inn in Llandrindod Wells.

### 5.3 Visitor Accommodation

5.3.1 The visitor guide *Explore Mid Wales and the Brecon Beacons* (Powys County Council, 2012) lists 11 pages of visitor accommodation with most of the nearest providers to Garreg Lwyd Hill located at Newton or Llandrindod Wells. Further local research and internet search has revealed no hotels and only three guest house/bed and breakfasts and three self-catering properties within five miles of Garreg Lwyd Hill. A list of accommodation providers within 25 miles of Garreg Lwyd Hill is given in Table 5 below although it should be noted that some self catering properties may have been omitted as a result of the low level marketing or non-permanent use as a holiday lets.

Table 5. Visitor Accommodation: Hotels, Guest Houses and Bed and Breakfast

Visitor Accommodation Hotels, Guest Houses and Bed & Breakfast	Location	Miles from Garreg Lwyd Hill
<b>HOTELS</b>		
Royal Oak Hotel (24 bedrooms)	Llandrindod Wells	14
The Metropole Hotel (120 rooms)	Llandrindod Wells	14
Three Wells Hotel	Llandrindod Wells	16
Maesmawr Hotel (20 rooms)	Caersws	17
Milebrook House (10 rooms)	Knighton	21
Elan Valley Hotel (12 rooms)	Rhayader	21
The Unicorn Hotel (6 rooms)	Llandiloes	25
<b>GUEST HOUSES/BED &amp; BREAKFAST</b>		
Thistle House B&B (3 rooms)	Llanbister	4
Brandy House Farm (3 rooms)	Felindre	8
The Old Vicarage Dolfor (4 rooms)	Dolfor	8
Guidfa House (6 rooms)	Crossgates	11
Highbury Farm (2 rooms)	Llanyre	15
Dolberthog Farm (3 rooms)	Llandrindod Wells	15
The Bell Country Inn (10 rooms)	Llandrindod Wells	16
The Forest Country House (5 rooms)	Kerry	16
Acorn Court Country House (3 rooms)	Llandrindod Wells	17
Brynhir Farm (3 rooms)	Howey	17

Dolforwyn Hall (8 rooms)	Dolforwyn	17
Liverpool House (9 rooms)	Rhayader	19
The Horseshoe Guest House (5 rooms)	Rhayader	19
Nannerth Bed and Breakfast (1 room)	Rhayader	21
Riverside Lodge (7 rooms)	Glanrhydwen	21
The Lion (3 rooms)	Llandinam	19
Highgate Farmhouse (4 rooms)	Bettws Cedewain	19
Dyffryn Glyn Bed & Breakfast	Llandiloes	25
<b>SELF CATERING</b>		
Vronganllwyd	Llanbister	7
Mill Meadow Lodges	Llanbister	7
Heartsease Lodge	Llanbister	8
Bedw Barn	Newtown	12
Waunddu Farmhouse	Llandrindod Wells	14
Lane Cottage	Llanyre	15
Seven Stars Self Catering	Nantmel	15
Gwynfan	Llanyre	15
Forest Country Cottages	Kerry	16
Highgate Holiday Cottages (6 cottages)	Bettws Cedewain	16
Highgate Barn House	Bettws Cedewain	16
Garden Cottage	Llandinam	19
Trewythen Lodges	Llandinam	19
Mill Barn	Knighton	20
The Vulcan Lodge	Llanwrthwl	22
Hundred House	Llandrindod Wells	24
Cefn Cottage	Rhayader	25
Woodside Lodge, Bryn Thomas Farm	Llandrindod Wells	15

5.3.2 There are also 5 campsites and caravan parks providing a total of over 100 pitches within 15 miles of Garreg Lwyd and at least another six sites between Llandrindod Wells and Builth Wells and two in Rhayader. This area of Mid Wales is popular for caravanning and camping, the sites are generally of a high standard with good facilities and most are well-established family-owned and run businesses. Table 6 shows the location of caravan and camp sites and their distance from Garreg Lwyd Hill.



Table 6. Visitor Accommodation: Caravan Parks and Camp Sites

Caravan Parks and Campsites	Location
Smithy Park	Abermule, Newtown
Church house farm	Crossgates
The Park Motel Camp Site	Crossgates
Daisy Bank Tourism Park	Snead
Maesmawr Camping and Caravan Site	Caersws
Sunny View Holiday Home / Touring Park	Bwlch-y-Ffridd, Newton

#### 5.4 Active Outdoor Recreation in the Garreg Lwyd Hill Area

5.4.1 Sections 5.2 and 5.3 above have illustrated that there are few visitor attractions and a relatively small amount of visitor accommodation in the area immediately around Garreg Lwyd Hill. The lack of visitor attractions is not necessarily synonymous with a lack of tourists. There is an absence of primary research indicating actual visitor numbers to the Garreg Lwyd Hill area but it is clear that the area does receive visitors to the attractions already mentioned above and for purposes other than visiting formal visitor attractions. Walking, mountain biking, cycling, horse riding, fishing, and bird watching are forms of active recreation and sport tourism that attract tourists and day visitors to the area surrounding Garreg Lwyd Hill. Although few in number in this area of Mid Wales, sport and adventure tourism companies have brought additionality to the local tourism economy through their year-round activity. In an area where most visitor attractions close between October and March these companies offer attractions to visitors and a small amount of employment in the local hospitality trade in addition to the employment offered by the companies themselves.

5.4.2 The two most popular activities in the Garreg Lwyd area are walking and horse riding. Glyndŵr's Way is a 135 mile trail starts at Knighton just to the south-east of Garreg Lwyd Hill on the Welsh-English border and meanders west up to Machynlleth and then runs east through the area around Llanbrynmair and on to Welshpool. The national trail attracts walkers to the Garreg Lwyd Hill area and passes to the west and north of the proposed wind farm, crossing through the site between turbines 23 and 21 and on immediately to the east of turbine 22. Thus walkers on Glyndŵr's Way will walk through Garreg Lwyd Hill wind farm. This may not be problematic and RES have offered various mitigation measures to

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accommodate Glyndŵr's Way and a number of other rights of way. It is recognised that such measures have the potential to enhance the rights of way and encourage more visitors to the Garreg Lwyd Hill area. Of note too, is the current Countryside Council for Wales leaflet that publicises Glyndŵr's Way with a map and 18 images reflecting attractions along the route. The image just south of Felindre, which is immediately to the east of the proposed site, is of a horse rider and one of the images further along the is a wind turbine, representing the 18-turbine wind farm at Cemmaes operated by Cumbria Wind Farms and perhaps reflecting the potential integration of these different countryside uses and users (Countryside Council for Wales, 2012).

- 5.4.3 Offa's Dyke Path runs south to north some six miles east of the Garreg Lwyd site further indicating the popularity of walking in the area. There is also a recreational path to the west of the site and a route with public access that runs east to west through the site from Killowent in the east to Castle Tump in the west.
- 5.4.4 Horse riding is also a popular recreational and tourist activity in Mid Wales and sections of Glyndŵr's Way incorporate bridle paths used by horse riders. The Radnorshire Hills Network is a series of public rights of way, many of which are used by horse riders and mountain bikers as well as walkers. Four riding stables have been located in the local area. Your Horse Adventures at Felindre offers a range of activities including a five-day ride across Wales from the Welsh border to the west coast and this route is likely to cross through or near to Garreg Lwyd Hill. Heart of Wales Riding School at Penybont, Underhill Farm Riding School near Llandrindod Wells and Bradnant Equestrian Centre at Llanidloes also offer riding activities. This area of Mid Wales is recognised as having one of the most dense networks of paths and bridleways in Wales and many of these have also become used by mountain bikers.
- 5.4.5 Wales has 13 dedicated mountain bike centres and bases and mountain biking is increasingly identified as a reason for visiting Mid Wales. However, none of the centres or bases is located near to Garreg Lwyd Hill. There are, however, a few cycling companies and most notable are Elan Cyclery in Rhayader with the Clive Powell Mountain Bikes Weekends and Trans Cambrian Cycle Sportive. It is worth noting that previous research has indicated that mountain bikers to Wales spend less per head per visit than other types of tourists (Aitchison, 2004; Powell, Aitchison and Wragg, 2003). There is also evidence to demonstrate that the presence of wind farms in Mid Wales has not deterred mountain bikers from visiting those areas with wind farms (Aitchison, 2004).

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## **6 ECONOMIC IMPACT ON TOURISM OF GARREG LWYD HILL WIND FARM**

### **6.1 Introduction**

- 6.1.1 The economic value of tourism in the vicinity of Garreg Lwyd Hill is difficult to estimate because figures relating to visitor numbers and visitor spend are not gathered officially at such a local level. However, such data might not be required as there is no evidence from any previous research anywhere in the UK or internationally that demonstrates that wind farms result in a decrease in tourist numbers (volume) or tourism expenditure (value).
- 6.1.2 Visit Wales state that the annual value of tourism to Mid Wales is £269 million. Income is associated with those areas where there is a high density of visitor attractions and tourist accommodation, mostly in the south and the north of the Mid Wales Tourism Partnership region as these areas include the National Parks of Snowdonia and Brecon Beacons respectively. The data outlined in section 5 above demonstrate that there is a relatively low concentration of tourism-related activity in the Garreg Lwyd Hill area relative to other parts of Mid Wales. It can therefore be concluded that the economic impact of tourism in the Garreg Lwyd Hill area is less than in other areas of Mid Wales.
- 6.1.3 In an area where many of the visitor attractions are closed for almost half of the year occupancy rates in visitor accommodation will be lower than in areas with year-round visitor attractions. The negative economic impact of visitor attraction closure in the winter months will be slightly off-set by the year-round outdoor activities that take place in Mid Wales. However, in rural tourism areas dominated by self-catering, B&B and park accommodation, additional spending is low relative to that in coastal resorts with a greater density of visitor attractions, hotels, hospitality, catering and retail outlets. The larger hotels in the area are, to an extent, reliant in coach parties that do not tend to bring in high levels of income to either the hospitality sector or the local retail sector.
- 6.1.4 An accepted indicator of the level of tourist activity within an area is the number of Tourist Information Centres (TICs). Newton and Llandrindod Wells offer the nearest information services although during the research the centre at Llandrindod Wells was unopened even at a peak time on a Saturday when it was advertised as being open.

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6.1.5 The proposed location of the wind farm, at Garreg Lwyd Hill, is not a highly popular tourist area and, as has been demonstrated above, the vast majority of visitor attractions in Powys are not located near the proposed site. Indeed, Visit Wales emphasises the National Parks and coastline as the main attractions in Wales. In relation to Mid Wales, Visit Wales highlights the Brecon Beacons as the main attraction, pointing to the southern end of Mid Wales as the location of most visitor attractions.

## 6.2 Developing Sustainable and Integrated Rural Economies

6.3.1 It should be noted that there is nothing in the *Good Practice Guide on Planning for Tourism* (2006) that supports the refusal to grant planning permission on the grounds that such developments would impact adversely on tourism. In contrast, the *Guide* stresses the importance of sustaining rural communities through the development of viable local economies. Viable and sustainable economies are generally mixed economies able to withstand downturns in individual sectors of the economy. Thus a rural economy built on sustainable forms of tourism, alongside other equally sustainable forms of economic development such as renewable energy, is more likely to sustain its rural population, economic development and its environment in the long term. The development of a wind farm at Garreg Lwyd would therefore not detract from the objectives outlined in the *Mid Wales Tourism Strategy* (Mid Wales Tourism Partnership, 2011) or *Powys Regeneration Strategy* (Powys County Council, 2011c). Indeed, local business owners have recognised the need to diversify their businesses to remain viable.

## 6.3 Lack of Evidence of Negative Impact

6.4.1 Previous research from other areas of the UK has demonstrated that wind farms are very unlikely to have any adverse impact on tourist numbers (volume), tourist expenditure (value) or tourism experience (satisfaction) (Glasgow Caledonian University, 2008; Aitchison, 2004). Moreover, to date, there is no evidence to demonstrate that any wind farm development in the UK or overseas has resulted in any adverse impact on tourism.

6.4.2 The Inspector's Report into Middlemoor in Northumbria emphasised both the lack of general evidence relating to any detrimental impact to tourism as a result of wind farm development and the lack of any specific negative impact in the Northumberland area. He stated in paragraphs 478-480 '*There appears to be no evidence from other parts of the country or abroad to suggest that the presence*

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*of wind farms in open countryside has harmed the tourist industry. Both Cumbria and Cornwall have experienced a rise in tourist numbers since the first wind farms were installed. According to the presentation prepared by the British Wind Energy Association to the All-Party Parliamentary Group on Tourism, 24 May 2006, surveys and reports investigating wind energy and tourism demonstrate that the effect on tourism is negligible at worst, with many respondents taking a positive view of wind farms'. The inspector went on to find that the distance of Middlemoor from the major centres of tourist activity in Northumberland would mean that 'there would be no adverse cumulative effects on tourism, beyond consideration of visual impact' and that 'there is no reason to suppose that local businesses would be affected by the wind farm development' (The Planning Inspectorate, 2008).*

6.4.3 In circumstances very similar to those of Garreg Lwyd, the Inspector stated that *'In the case of the Middlemoor proposal, tourist provision, in terms of attractions and accommodation, appears to be concentrated in the coastal strip to the east; Rothbury and Coquetdale well to the south west of Alnwick; and the fringes of the national park to the west, including Wooler, Ford and Etal. Middlemoor lies between and relatively distant from these areas and this is one of the reasons North/South Charlton was assessed as a Broad Area of Least Constraint (BALC) in the RSS' (The Planning Inspectorate, 2008: 89).*

6.4.4 In summary, drawing on related evidence from studies in similar rural locations such as Scotland, Devon, Cornwall, Northumbria and Carmarthenshire, from the conclusions drawn from Inspectors' reports where tourism has been discussed in detail (Fullabrook in Devon and Middlemoor in Northumbria), and from the decision by Berwick-Upon-Tweed Borough Council not to contest the Wandylaw proposal on the grounds of tourism impact, it can be concluded that there is no evidence to support the assertion that the development of a wind farm at Garreg Lwyd Hill will have a detrimental economic impact on tourism in Powys.

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## 7. CONCLUSIONS

- 7.1 Although tourism research relating to wind farm developments is limited compared with that on policy, design, visual impact, ecology, ornithology, hydrology, acoustics and transport policy, it is increasingly evident that there is an emerging consensus within the research examining the actual and potential impact of wind farms on tourism. The clear consensus is that there has been no measurable economic impact, either positively or negatively, of wind farms on tourism. Similarly, there is now consensus among researchers of studies that have sought to predict the more specific potential economic impact of wind farms on tourism. Here, again, there is no evidence to support the assertion that wind farms are likely to have a negative economic impact on tourism.
- 7.2 The opposition to wind farms on tourism grounds appears to be informed more by fear than fact. The research conducted by GCU stated that 'Importantly, respondents that had seen a wind farm were less hostile than those who had not' (Glasgow Caledonian University, 2008a: 3). Starling's and Glasgow Caledonian University's findings therefore lend support to Young's (2003) research; namely, that opposition to wind farms tends to fall after construction.
- 7.3 There is no empirical research that demonstrates the impact of wind farms on tourism numbers (tourism volume), expenditure (tourism value) or experience (tourist satisfaction) in the specific area of Garreg Lwyd Hill or indeed in the wider surrounding area of Powys.
- 7.4 It is possible, however, to gauge the potential impact by drawing on evidence from a range of relevant sources. This analysis and extrapolation of data to reach legitimate conclusions must be undertaken with care and requires an understanding of and experience in research methodology and tourism impact analysis in rural areas.
- 7.5 A number of conditions must be borne in mind when determining the legitimacy of the findings of previous research that has sought to determine the impact of wind farms on tourism as the quality of the research is highly varied:
- The research should take the form of a survey of tourists rather than tourism businesses
  - The survey methodology and sampling frame must be rigorous, reliable and valid

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- The findings obtained from the survey should not be extrapolated across broad geographical areas that will not be impacted to the same degree by any wind farm development
  - The findings of all tourism research should be seen within the context of tourism as a growth industry and thus any limited negative impact is likely to be an impact on growth rather than on current levels of tourism
  - The research should acknowledge that the tourism business is dynamic and self-generating such that when a particular type of tourist ceases to visit an area they are frequently replaced by a different type of tourist thus continuing 'the tourist lifecycle' of destinations and resorts

7.6 National, regional and local policies of prioritising both the development of sustainable rural tourism and renewable energy form the political-economic context to this planning application. Within the local, regional and national context it is clear that the area surrounding Garreg Lwyd Hill receives low numbers of visitors and income from tourism relative to other areas in Mid Wales. This reflects the lower concentration of visitor attractions and tourist accommodation than seen in many other areas of Mid Wales.

7.7 Taking the above factors into account in a critical review of previous research, and contextualising such research in relation to both the tourism geography of the Garreg Lwyd Hill area and wider Mid Wales tourism policy, it can be concluded that:

- The development of Garreg Lwyd Hill wind farm is likely to have little or no impact on tourist numbers (volume), expenditure (value) or experience (satisfaction)
- Any impact is as likely to result in more tourist visitors as it is fewer tourists
- Although a very small number of current visitors might choose not to repeat their visit because of the presence of a wind farm this number is likely to be off-set by additional tourists who visit irrespective of the presence of a wind farm, return because of the wind farm or visit for the first time because of the wind farm
- Tourist numbers are likely to increase significantly if the wind farm is accompanied by a visitor attraction and the proximity of the site to centres of population in the West Midlands could make this a viable proposition.

7.8 In conclusion, the findings from the secondary research relating to the potential impact of Garreg Lwyd Hill Wind Farm indicate, as did those for Fullabrook in

North Devon, Moorsyde in Northumbria, Bryn Llywelyn in Carmarthenshire and Llanbrynmair in Powys that there is likely to be neither an overall decline in the number of tourists visiting the area nor any overall financial loss in tourism-related earnings as a result of the wind farm development. Indeed, with appropriate attention paid to cumulative impacts, it is likely that the conclusion of the Planning Inspector to the Fullabrook Down Public Inquiry will also hold true for Garreg Lwyd Hill: *that tourist numbers, as well as income, would be maintained.*' (The Planning Inspectorate, 2007: 147-149).



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