Chapter Thirteen

Wind Energy: Revisiting the Debate in Wales

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Introduction

In 1994, Merylyn McKenzie Hedger, in her article *Wind Energy: The Debate in Wales*, assessed the emerging controversy surrounding the exploitation of wind power. At the time, wind energy was still relatively novel but growing more rapidly in Wales than in other parts of the UK, and McKenzie Hedger charted how the concentration of development in the Welsh uplands was causing a range of concerns.

At the centre of her detailed and prescient account is an analysis of the actors supporting and opposing wind energy. Support for the technology brought together developers and manufacturers of wind technologies, as well as farmers, landowners and (some) rural communities, seeing economic advantages in wind for supporting fragile hill farming economies. Opposition included local residents living near potential wind farm sites along with statutory countryside and nature conservation agency, the Countryside Council for Wales (CCW), concerned with 'the industrialization in the hills' (McKenzie Hedger, 1994, p.7). Environmental NGOs were split on the issue, between those promoting wind energy as preferable to energy futures based on fossil fuels or nuclear power, such as FoECymru, and groups more concerned with landscape, such as the Campaign for the Protection of Rural Wales (CPRW).

More than two decades have elapsed since McKenzie Hedger's contribution, and it is timely to revisit her observations. Two points of 'then and now' comparison stand out. The

first is that although onshore wind energy has continued to expand in Wales, the rate of expansion has been slow, with the 'wind rush' presented by McKenzie Hedger as imminently engulfing rural Wales, not appearing in the way anticipated. Indeed, growth rates for wind energy in Wales have been slower than the majority of the UK. By 2013, England was leading the way with wind energy installation, onshore and offshore, at 5154 megawatts (MW), with Scotland on 4701MW, Northern Ireland on 579MW and Wales on 771MW (DECC, 2014). If the lower level of installation in Wales might be expected from a smaller territory, the slow rate of increase would not (see Figure 1). This slowness is all the more remarkable given the intensifying attention to climate change and renewable energy since 1994. Whereas McKenzie Hedger set her account against the then modest UK target of obtaining 1000 megawatts (MW) of new renewable energy capacity by 2000, targets embedded in the European Union Renewable Energy Directive (2009/28/EC) require the UK to obtain 15 per cent of its energy (and probably therefore 30 per cent of its electricity) from renewables by 2020. This is but a stepping-stone towards UK Government's target to reduce GHG emissions by 80 per cent by 2050, likely to require the complete decarbonisation of electricity generation.

[Insert Figure 1 here]

The second point of comparison may explain the first: the persistence of opposition to wind energy development. In one particularly spectacular protest, on 11th May 2011, 'mid-Wales came to Cardiff', as approximately 1500 people gathered on the steps of the National Assembly for Wales building, the Senedd, protesting against proposals to build numerous large wind farms and high voltage grid lines across tracts of rural Wales (Mason and Milbourne, 2014). It became a divisive electoral issue in mid-Wales, especially

Montgomeryshire, as anti-wind politicians – mainly from the Conservatives – unseated the incumbents at county council, Assembly and national government levels.

Importantly, McKenzie Hedger saw the institutional context as shaping and exacerbating the conflict: pointing to a system of financial support that encouraged the rapid exploitation of the windiest upland sites, and a planning system that exerted little purchase on a disorderly, 'unregulated' pattern of development (op. cit. p.139). It should be significant, therefore, that the institutional context has since changed remarkably, with the creation in 1998 of new elected government institutions for Wales: the National Assembly for Wales and the Welsh Government. What gives devolution further pertinence is that McKenzie Hedger concluded her article by reviewing potential solutions to the mounting controversy: the various calls for a more strategic planning approach to wind energy, and her own suggestion that further expansion should be preceded by a review of the wind energy development to date, and incorporate wide-ranging strategic environmental assessment of alternative future energy options. Welsh Governments have indeed intervened to impart strategic direction on wind energy development in Wales, allowing us to consider the effects.

In our chapter, we reflect on and update the analysis by McKenzie Hedger, but also pursue themes that bind renewable energy development conflicts more centrally to the focus of *Our Changing Land*. Although McKenzie Hedger delineated processes unfolding *in* Wales, she was largely agnostic about whether the Welshness of the social context had any distinctive effects on, or was specifically affected by the emerging wind farm conflict. This remains an under-examined issue and there is scope to explore how stances on the wind energy conflict intersect with the politics of place and civic dimensions of nationalism (Freeden, 1998).

We draw on a number of pieces of research conducted by one or other of us over the last ten years, as well as a relatively small but significant set of studies completed by others based on attitudes to wind energy in Wales (Woods, 2003; Haggett, 2008; Devine-Wright and Howes, 2010; Mason and Milbourne, 2014). Parkhill draws upon research projects where attitudes to wind have been a key focus (Parkhill, 2007; Butler et al., 2013; Demski et al., 2013a, 2013b; Parkhill et al., 2013). Cowell draws upon analyses of the emergence, effects and contestation of spatial planning guidance for onshore wind energy in Wales (Cowell 2007, 2010; Power and Cowell, 2012), and studies of the effects of devolution within the UK on the delivery of renewable energy (Cowell et al., 2015; Strachan et al., 2015).

In the next section, we examine how far devolution has changed the institutional arrangements for renewable energy development in Wales. Thereafter, we assess a body of research that has burgeoned since McKenzie Hedger was writing, on public attitudes to wind energy, onshore and offshore. We also use documentary data to examine how, in the light of ongoing wind farm conflicts, different organisations have reacted to the prospect of more energy-related powers beyond those devolved to the Welsh Government, and what that says about the evolution of Wales as a focus for civic identification. We end with reflections on the relevance of McKenzie Hedger's original conclusions.

Governing Wind Energy in Wales

At its creation in 1998, the Welsh Government inherited a situation surrounding wind energy widely seen as dysfunctional. High rates of planning application refusal had slowed development, prompting industry representatives to 'see no evidence of a welcome for renewable energy in Wales' (ENDS, 2002). By 2002, the proportion of electricity supplied from renewable sources in the UK had stumbled upwards to a mere 2.2 per cent, and the

Assembly Government was caught up in mounting political anxieties about delivering rising renewable energy targets as well as climate change commitments. The response reflected the new institution's desire to 'do things differently' from Westminster. Planning policy was an area of devolved responsibility, and the Welsh Government moved to review previous, pre-devolution policies. In the case of renewable energy, the review process initially was given a collaborative format (Stevenson, 2009): convening a working group with members from the energy industry, the conservation sector (state bodies and NGOs), and local government.

After three years of formulation, the result was new planning policy guidance for renewable energy in Wales - *Technical Advice Note 8: Renewable Energy* (WAG, 2005), or 'TAN8' for short - of which a key feature was the creation of new spatial planning guidance for onshore wind (Cowell, 2007). This sought to steer the development of larger wind farms (those over 25MW) to seven 'Strategic Search Areas' (see Figure 2). These areas had been identified as preferable in landscape terms - being free of specific constraints such as National Parks–while having sufficient wind resource. The Strategic Search Areas (SSAs) also gave effect to the Welsh Government's preference to concentrate wind farm development in certain areas of Wales rather than allowing turbines to scatter across the countryside. The advice of TAN8 is that planning authorities should give a presumption in favour of development to large wind farms within the SSAs, but TAN8 also allowed them to be more restrictive to wind farms outside them. TAN8 had an energy target dimension as well as a spatial dimension: each SSA was allocated a share of the Welsh Government's own target to install 800MW of new onshore wind energy in Wales by 2010, designed to ensure that Wales contributed proportionately to steadily rising UK targets for renewables.

[Insert Figure 2 here]

The creation of TAN8 can be read as a response to the demands, conveyed by McKenzie Hedger, for a more strategic approach to onshore wind energy development. As a governance device, it radiates a certain symbolic power: new Welsh governing institutions had produced the first 'all Wales view' of wind energy, invoking in its apparent cartographic comprehensiveness the sense that Welsh policy matters in determining where turbines will be acceptable. In TAN8, the Welsh Government might also have hoped that it had found a way of mediating the conflicting interests described by McKenzie Hedger; by steering the *locations* of wind farm development, the expansion of the sector could be reconciled with societal concerns about the impacts.

As of 2015, wind energy in Wales was still the subject of intense conflict and, moreover, the Welsh Government and its strategic approach had become the focus of much dispute. Why was this so? One line of explanation would point to 'classic' procedural weaknesses in government policy-making (Irwin, 2006). Although the Welsh Government began formulating TAN8 with the ambitions of using multi-stakeholder collaboration, in practice this proved fraught. There was consensus on some wind farm siting principles – that nationally-designed landscapes and European wildlife sites should be avoided – but not on others, such as the status of 'wild land'. Disagreements stymied progress, the multi-stakeholder approach was placed in abeyance, and the more detailed processes of policy formulation, including mapping the strategic search areas, was conducted by consultants working to the Welsh Government. Once completed, a draft policy was released for consultation. The draft policy attracted 1700 responses, many of them critical (Cowell, 2007), and the mode of policy formulation allowed TAN8 to readily be presented as a top-down

imposition of wind energy development, and one which emphasised onshore wind to the detriment of alternative energy pathways.

Such explanations imply that if only TAN8 had been formulated through a wider, more inclusive and comprehensive process it would have been more positively received. However, another explanation is that TAN8 reveals a chronic weakness in the capacity of states to govern across their territory and align the heterogeneous elements required to deliver certain outcomes. By dint of being constructed from the centre (Scott, 1998), the process of drawing up the zones emphasised the factors that were clearly and unambiguously mappable but could not 'see' the myriad, complex connections between different social communities, landscapes and the wider environment (Cowell, 2010), such as alternative economic activities within the SSAs, exploiting the 'relatively unspoiled landscape' for informal recreation and tourism (see, for example, the response to TAN8 from the Pentir Pumlumon Tourism Association, September 2004). As specific wind farm projects came forward, they encountered site-specific issues not included in the drawing up of the SSAs, such as risks from peat soil erosion, oxidisation and carbon release, at the upland Mynydd-y-Gwair in Glamorgan. It is questionable whether including more stakeholders in drawing up strategic plans could ever foreclose the complexity of siting (Nadai, 2007) and places (Devine-Wright, 2009).

Moreover, whatever its claims to offer an all-Wales spatial view, TAN8 could not – simply by guiding development locations – order and control all of the elements that needed to come together in making wind farms. On the technological-development side, various factors converged to rapidly up-scale the size of wind farm projects. Wind turbines increased in capacity and therefore height, from the 300-400 kilowatt machines in place as McKenzie

Hedger was writing, to a 1.5MW norm at the time TAN8 was being drawn up, with some schemes constructed during2015using 3MW turbines. The notionally supportive policy context of the SS Asstimulated developer interest and this, coupled with the larger turbines, encouraged the submission of bigger projects. The Pen-y-Cymoedd scheme in south Wales, to be commissioned in 2015, has a capacity of 228MW, ten times that of the largest Welsh wind farm in 1994. In effect, TAN8 precipitated the 'wind rush' heralded by McKenzie Hedger, but more than a decade later. The Welsh Government opportunistically embraced these trends, by raising its policy goals for onshore wind beyond the 800MW in TAN8 to levels that assumed 2000MW would come on stream by 2015-2017 (WAG, 2010). However, the larger turbines were to be much more visible, begging questions about the landscape judgements that had underpinned TAN8. This growth in scale also exposed weaknesses in how TAN8 had treated available grid capacity to export the energy.

If anything, the symbolic power of TAN8 further exposed the Welsh Government's limited actual powers in the energy sphere. Energy policy was not an area of devolved competence and, although the Welsh Government could control planning policy, it did not in fact hold the power to determine the largest wind energy applications. All applications for electricity generating stations over 50MW, in England and Wales, are determined by Westminster, where decision-makers are not bound to give pre-eminence to TAN8 in deciding whether applications are in acceptable locations (DECC, 2011). Many of the 'TAN8 wind farms' exceeded 50MW. Decisions on market support systems for encouraging renewable energy also lay with Westminster. This is important because the design of these systems affects the form of renewable energy development. The successor support system to the Non Fossil-Fuel Obligation (NFFO) was the Renewable Obligation, which supported renewables through the sale by renewable energy producers of certificates (Renewable

Obligation Certificates or ROCs) to energy suppliers who are obliged to source a certain percentage of supplies from renewable sources. Although more successful than NFFO in stimulating investment in renewable energy, the complexities and risks of the ROC system made it more readily adopted by larger, international companies (Woodman and Mitchell, 2011). Thus, while McKenzie Hedger describes an emerging trend of major engineering companies moving into wind energy development, this trend intensified, such that much of the capacity coming forward by 2014 was in the hands of major international utilities, with new entrants remaining marginal. Smaller-scale, community-centred energy projects had a place in Wales since the 1990s, such as projects led by the well-established Centre for Alternative Technology at Machynlleth, but expansion has proved slow, and it was not until June 2012 that Community Energy Wales was formed, to represent this part of the sector (Strachan et al., 2015).

Despite this complex dispersion of power, by 2014 many of the 'battle lines' drawn around wind energy in Wales were focused on the powers and actions of the Welsh Government. TAN8 has been consistently supported by successive Welsh Governments, and by key conservation bodies with an interest both in protecting special sites and fostering low-carbon forms of energy, such as CCW and the Royal Society for the Protection of Birds. The energy industry was initially hotly opposed because it regarded spatial zoning policies as restrictive, but became a grudging supporter: 'we've got so much invested with it now we have to support it'; if TAN8 is 'dumped', then 'nothing is going to happen'[1].To that extent, strategic policy has created some mutuality of interest. However, there remained much opposition to wind energy in Wales with much of the ire directed towards TAN8. A particularly galvanising factor has been the proposals by National Grid in 2011 for a new 400kV high voltage line through mid-Wales, to connect prospective wind energy output

coming from the SSAs. The grid projects both spread conflict to areas that previously might have felt themselves unaffected by the wind farms themselves, and intensified opposition. As in the early 1990s, opposition is constituted by residents and communities near SSAs and potential grid routes, along with other longer-standing groups, critical of wind power since early 1990s, like CPRW.

An important dynamic that has unfolded since 1994 is the way in which new opposition groups have formed and up-scaled, as illustrated by two groups in particular. In the mid-1990s, opposition to the local impacts of individual wind farm projects in mid-Wales led to the formation of opposition groups and an expansion of critique to the nature of financial support for the sector: for some, 'this was just a con; this was never going to save the world'[2]. These local groups coalesced into the wider Conservation of Upland Montgomeryshire but: 'after TAN8 when the (SSA) boundaries ... they crossed the old county boundaries, it became appropriate that the most sensible thing to do ... was to become an organisation for Powys'. Thus the Conservation of Upland Powys was formed. Much more recently, one of the proposed routes for the mid-Wales grid sparked the formation of a community-level group –Meifod Against Pylons – which expanded and coalesced to become Montgomeryshire Against Pylons, to present a more united front against all potential routes. As one of the founders explained, they had been little engaged by the preceding debates about wind energy, but they quickly shifted attention to TAN8 as the driver for the grid investment. In terms of strategy, both groups have acted in other arenas, individually and as part of wider anti-wind networks, to challenge UK renewable energy policy as it applies to wind, and acted on electoral processes in mid-Wales.

As of 2015, while there was a considerable volume of wind energy investment in Wales lodged in the planning system, outcomes were highly uncertain. Numerous applications had gone to public inquiry but decisions had yet to be issued. Schemes in the SSAs of south Wales had tended to receive consent, and constituted most of the new onshore capacity in Wales added since 2005. In mid-Wales, where the fate of wind farms was linked to new grid investments, development had been most intensely resisted. Moreover, opposition in mid-Wales was one element in a wider destabilisation of political support for onshore wind, making common cause with opposition in many parts of rural England. This had led to the 2010-2015 Conservative-dominated coalition government to begin scaling back financial support for onshore wind and, in England, legitimise local planning authorities in taking a more restrictive stance. The Conservatives (and UK Independence Party) went into the May 2015 General Election with policies to end financial support for onshore wind.

An important conclusion from policy developments in Wales is that not all social concerns about wind energy can be mediated by strategic spatial steering. Social science research on wind energy has shown that the choice of sites is an important factor shaping public responses, but public attitudes are also entangled with other things: with attitudes to the technology, feeling about the places and landscapes affected, and the trust felt in the developers and decision-making processes. We now proceed therefore to unpack some of the key issues that underlay public (un)acceptability in relation to wind energy.

Public Perspectives

As discussed in the Introduction, McKenzie Hedger gave great attention to outlining the key groups and stakeholders who were, at the time, either for or against onshore wind energy in Wales, and to delineating their concerns (as summarised in Table 1). Since 1994, research on

societal responses to wind energy has burgeoned, but most of this has been focused less on groups than on an antecedent issue – to investigate reasons for public opposition, primarily by examining attitudes and perceptions.

[Insert Table 1 here]

It is not difficult to understand why the academic gaze has turned to unpacking the drivers of contestation. In the UK as elsewhere in the world, opposition to wind energy has proven to be a major factor shaping developments rates, prompting significant attention to issues of 'social acceptability' (see, for example, Huber et al., 2012), and how changes to decision-making processes or the costs and benefits of wind power projects might improve local responses. Researchers have been animated by an apparent 'social gap' (Bell et al., 2005) between what survey research reveals as generally positive attitudes towards wind and increasing local contestation often characterised as being Not In My Back Yard (although we note that subsequent research has begun to regard this 'social gap' not as an expression of NIMBYism – in which people generally support wind power but then resist it in their local backyard – but in part a methodological artefact (see Batel and Devine-Wright, 2014). McKenzie Hedger draws on early surveys in Wales, showing a majority of respondents displaying positive attitudes (CCW, 1994), and most subsequent survey research has charted continuing public support for renewable energy (including onshore wind) at the UK national level (see Demski et al., 2013a).

When drilling down into national survey data pertaining to Wales, it is clear that wind energy (onshore and offshore) is still seen in terms that are 'very' or 'mainly favourable' to significant proportion of respondents (68 per cent), but offshore wind is deemed more likely

to engender support than onshore (78 and 57 per cent respectively – see Demski et al., 2013b). When asked how likely they were to support or oppose the building of a new wind farm in their area, attitudes become more split, but overall there was still more support than opposition: 51 per cent strongly or tend to support; 20 per cent neither support nor oppose; 28 per cent strongly or tend to oppose (see Demski et al., 2013b).Whilst respondents were more positive towards other renewable energies (see Table 2) than wind, it is still the case that wind has significant support at the Welsh national level and for new developments in people's local areas.

[Insert Table 2 here]

Local Public Perspectives - Onshore Wind

Warren et al. (2005) notes that supporters of onshore wind characterise the technology as being clean, renewable, helping with a shift away from fossil fuels, an inherently good thing facilitating global altruism, and a sustainable energy source that will help current generations meet their needs whilst safeguarding the needs of future generation. As McKenzie Hedger found, other work indicates that onshore wind is symbolically represented as society being in sync with nature (see Woods, 2003; Parkhill, 2007). Other positives include that the wind farm may add to what is perceived as a desolate landscape and help such areas to become more productive spaces (see Woods, 2003; Parkhill, 2007; Butler et al., 2013).

In contrast, those against onshore developments characterise it as, for example, spoiling the visual amenity, damaging tourism, causing negative environmental impacts, inhibiting sustainable development through damage to local landscapes, being noisy, causing tensions between rural and urban dwellers (due to most developments being in rural areas yet

the energy produced being perceived as needed in urban areas), being developed in such a way where local communities are not engaged, and leading to the industrialisation of rural spaces (see Woods, 2003; Warren et al., 2005; Parkhill, 2007). However, it has been observed that 'much of this opposition is aesthetic in character. It is grounded in a rather sharp separation between nature and technology, expressed in the thought that wind turbines and solar panels in the landscape are ugly' (Brittan, 2001 cited in Woods, 2003, p. 277).

Woods's (2003) analysis of opposition to the Cefn Croes project on the Cambrian Mountains, in mid-Wales focuses on how the landscape and nature were socially constructed by opponents to the wind farm. Opponents were found to socially construct the area as natural (particularly due to the absence of man-made features) unspoilt, peaceful, and beautiful. The Cambrian Mountains were believed to be 'a rare surviving example of nature as wilderness', where visual contemplation was imbued with affective dimensions (Woods 2003, p. 280). Nature was at once immense and powerful, whilst simultaneously being fragile, with wind turbines being constructed as unnatural entities, due in part to their size and scale. As such, for opponents, wind turbines would be 'incompatible' or 'out of place' in this area (Cresswell, 1996; Butler et al., 2013).

The work of Woods was pivotal in recognising that opposition complaints about the unsightliness of a wind farm are far more powerful and layered than superficial assessments of the visual amenity. Social constructions and symbolism of landscape and nature were shown to be integral to the informal regulation of rural spaces (also see Parkhill, 2007). Indeed Woods (2003, p. 287) concluded that such social constructions of nature could be the 'tripping stone of the regulation of rural space, and its alluring power yet coy ambiguity will form the fissures of many conflict as the quest for a sustainable countryside continues'.

More recent work by Butler et al. (2013) indicates that the perceived proliferation of onshore wind energy in Wales is indicative to some of the continued marginalisation of the Welsh people by the English. Connecting with the earlier sections of this chapter on the governance of energy in Wales, this research suggests that '[a] key source of contention for participants in both Scotland and Wales is that many of the policy decisions appear to be taken by Westminster, rather than their devolved governments' (Butler et al., 2013, p. 36). The authors note that not only do such concerns connect with issues of environmental and social (in)justice, they may also have significant implications for the policy development and implementation of policies related to energy and onshore wind farms. As such the authors conclude that the devolved governments of Scotland and Wales perhaps 'need to do more to distinguish whether or not they support policies flowing out of Westminster, including delineating how they envision such policies might benefit their constituents' (Butler et al., 2013, p. 36). At the same time, the authors suggest that the UK government needs to 'make clearer how their energy strategy incorporates concerns of citizens living in devolved administrations' (Butler et al., 2013, p. 36).

Mason and Milbourne (2014), in their study examining public support and opposition of the Nant y Moch proposal in Ceredigion, take landscape as their organising concept, tying it with constructions of justice. Their analysis of the views of opponents to the wind farm, similarly to Woods (2003), shows that opponents' discourses evoke 'a heady mix of values and affect in favour of the present [wind farm-free] landscape' (Mason and Milbourne, 2014, p. 109). The values associated with a wind farm-free landscape include 'beauty, peace, harmony, unity with nature…freedom, independence, choosing own goals…social order, sense of belonging, and tradition' (Mason and Milbourne, 2014, p. 109). Affective aspects 'arise primarily from the solitude and tranquillity afforded by landscape' (ibid.). However,

proponents characterise the same landscape as 'ugly and intimidating' (Mason and Milbourne, 2014, p. 110). Contrasting with their perceptions of a wind farm-free landscape, opponents construct 'a wind farm landscape as ugly, noisy and not protecting the environment' (Mason and Milbourne, 2014, p. 109). Proponents point to TAN 8 as exacerbating some of these negative perceptions of a wind farm-landscape, citing the exemption of national parks as reifying the notion that wind farms devalue the landscape.

In relation to justice, opponents view the proposal as representing spatial injustice, in numerous dimensions: local landscape being sacrificed for national interests; Wales being exploited by England under the mask of UK national interests; the needs of urban areas being prioritised above rural areas; rural values and lay knowledges being usurped by urban values and knowledges. Mason and Milbourne (2014) delve further into issues of (in)justice in relation to opponents' discourses, a key conclusion being that discourses of local injustice are embedded in opponents' narratives. This is juxtaposed with proponents' discourses that are imbued with notions of global justice, through for example, 'exploiting local landscape resources to protect the global environment' (Mason and Milbourne, 2014, p. 113). Mason and Milbourne (2104, p. 114) conclude that '[t]he development of wind energy…demands a new ethic…[which] must be mediated locally and have landscape/dwelling here and there in space and time at its heart'.

The body of work reviewed here is part of a much wider set of research that has sought to unpack the reasons underpinning attitudes (positive and negative) towards onshore wind. However, the insights highlighted here, clearly show how research based on Welsh case studies has built upon the intuitions McKenzie Hedger outlines in her original article. Yet the story of wind does not end here; over the past two decades offshore wind has

emerged as a potentially integral source of low carbon energy. We now turn our attention to attitudes towards offshore wind.

Local Public Perspectives - Offshore Wind

Although a relatively new and emergent sector compared to onshore wind, the UK has been a world leader in offshore wind since 2008, 'with as much capacity installed as the rest of the world combined' (RenewableUK, 2015). Such claims translate into an installed capacity of 4049 MW (RenewableUK, 2015), with a further 12.7GW either under construction or consented (RenewableUK, 2015). Additionally, 'many experts view this sector as the most likely vehicle for meeting climate change policy targets to reduce greenhouse gas emissions from electricity generation' (Devine-Wright and Howes, 2010, p. 271). In Wales there are currently three offshore wind projects, all located in the north of the country: Gwynt y Môr (160 turbines, under construction, 576MW capacity), North Hoyle (30 turbines, operational, 60MW capacity), and Rhyl Flats (25 turbines, operational, 90MW capacity).

Systematic research into public attitudes towards marine renewable energies, including offshore wind, has lagged behind analysis of onshore developments (Wiersma and Devine-Wright 2014). However, the work of Haggett (2008) and Devine-Wright and Howes (2010) are notable exceptions, who, in separate studies, examined attitudes towards Gwynt y Môr. However, before focussing on this case study, it is worth summarising what is known from the offshore wind farm literature more widely.

Evidence from attitudinal research indicates that many of the perceived advantages of offshore wind are similar to those for onshore wind (and indeed renewables more generally). This includes that the public perceives offshore wind as being clean, renewable, green and

facilitating a shift from a perceived over reliance on fossil fuels (see Parkhill et al., 2013). There is also preliminary evidence that publics perceive offshore wind, and marine renewables more widely, as representing an opportunity to boost the economy of Wales and UK through developing a turbine-manufacturing base within the UK (Butler et al., 2013).

Haggett (2008) in her critical comparative review of the onshore and offshore literature, also notes that many perceive offshore wind as a 'fix' to the numerous issues onshore wind is believed to have. However, she found that 'many of the issues that are relevant to siting turbines onshore are just as relevant offshore and that they merely manifest in slightly different ways' (Haggett, 2008, p. 290). Notable here is Haggett's (2008) findings that: public opposition to offshore wind certainly does exist; there remains a fractious relationship between distant global benefits and local risks; and, offshore wind will likely be competing with different users of the space, for example, tourists and fishermen. Indeed, Haggett found that rather than being 'out of sight' and therefore 'out of mind', many offshore wind farms are near shore and as such are often visible to fairly large coastal populations.

Haggett uses a preliminary analysis of research carried out in and around Gwynt y Môr to further unpack public opinion. As with onshore wind, issues of ownership and control of the wind farm were key issues in that most people felt they had none, and efforts by the developer to engage local residents were perceived as vapid public relations exercises. Indeed, local people felt excluded from decision-making and that their concerns were being ignored, risking an erosion of social trust between the public and developer and thus exacerbating opposition (Haggett, 2008; also see Devine-Wright and Howes, 2010).

In Haggett's work, a key concern raised by residents against Gwynt y Môr was the

importance of tourism to the local economy, particularly in the famed Victorian resort of Llandudno, with fears of potential negative effects on tourism arising from the development. Protestors asserted that 'the developer's application takes no account of the unique status and character and of the outstanding natural beauty of Llandudno and its bay' (cited in Haggett, 2008, p. 297). Devine-Wright and Howes (2010) in their study exploring attitudes towards Gwynt y Môr, also found that the symbolic meanings associated with the wind farm were integral to whether or not the wind farm was deemed to 'fit' with the place. In quantitative work, they found that Llandudno was predominantly associated with positive visual aesthetics, with residents emphasising 'the place's scenic beauty linked to its coastal situation and environmental features, which provide distinctive qualities as a tourist resort' (Devine-Wright and Howes, 2010, p. 275).

Gwynt y Môr would also be visible to Colwyn Bay but, in contrast, Colwyn Bay residents represented their area as being run down, 'emphasising its former beauty linked to its coastal situation and its decline in part due to the influx of undesirable outsiders' (Devine-Wright and Howes, 2010, p. 275). These associations with place were found to be integral to how the wind farm was perceived. Both Llandudno and Colwyn Bay participants emphasised the 'gigantic' size of the 'numerous' turbines '[g]oing everywhere round the coast' (ibid. 275). However, the perceived outcomes differed markedly. Llandudno participants characterised the wind farm proposal as industrial and presenting 'a significant threat to the town'. Colwyn Bay participants also saw the proposal as industry, but saw this as potentially being a positive: 'boosting employment and prosperity locally' (Devine-Wright and Howes, 2010, p.276).

Llandudno residents were seen to have a higher 'place attachment' (a positive

emotional bond between individuals and/or groups and their local area) than Colwyn Bay residents. Devine-Wright and Howes (2010) conclude that there are links between place attachment and the responses of those who oppose such developments. Clearly, then, the socio-cultural context, social constructions of place and the turbines, are just as critical for perceptions of offshore wind as they are for onshore developments (also see Haggett, 2008; 2011) and as such, specific offshore wind developments can be just as contentious as their onshore cousins, in Wales and elsewhere.

In explaining social responses to wind energy, then, social constructions of place emerge more strongly than attachments, attitudes or identities based on notions of Welshness: McKenzie Hedger was justified in treating this issue with agnosticism in her account. Place also offers avenues for explaining divergent attitudes to wind energy and the implementation of TAN8.The vociferous opposition in mid-Wales can be seen as an escalation of concerns identified by Woods (2003) about the Cefn Croes project, with protection of unspoilt upland countryside as the key driver. While wind farm schemes have attracted opposition in south Wales, many of the wind farms proposed for SSAs are situated within areas of industrial forestry from which local populations feel relatively alienated (Milbourne et al., 2008), and sustained organised opposition is harder to find. Issues of political allegiance warrant further exploration: would opponents to wind farms in the traditional Labour heartlands of the Welsh coalfields be as happy to offer expedient support to anti-wind Conservative politicians as we have seen with wind farm opponents in mid-Wales? Ongoing wind farm conflicts thus shine an interesting light on social attitudes to Welsh-level governing institutions as the ‘right level’ at which to mediate these disputes.

Renewable Energy and Welsh Civic Identity

In this section we examine how the wind energy debate has affected civic identification with Welsh institutions and devolution. This is an important issue, given the thinner majority support among the public for devolution in Wales compared to Scotland. Conflict around onshore wind in Wales regularly led Assembly politicians to argue that it would be better – for reasons of public accountability, institutional simplicity, and more effective delivery – if the Welsh Government acquired more powers to determine energy projects within its territory. Westminster consistently rebuffed any such requests. However, the fact that Westminster rather than the Welsh Government issued consents for the largest energy projects, including the largest wind farms, became a key subject in two major inquiries: the 2011-2012 National Assembly Environment and Sustainability Committee inquiry into Energy Policy and Planning in Wales (a process itself arising from growing political opposition to TAN8); the Commission on Devolution in Wales (often referred to as the Silk Commission).

The Silk Commission conducted its own opinion poll (Commission on Devolution in Wales, 2014), which found that 70 per cent of respondents were in favour of the National Assembly having control of renewable energy: in terms of consenting powers, 55 per cent supported the National Assembly dealing with large wind farms, 21 per cent by local authorities, and 16 per cent the UK government. As we have noted above, however, opinion polls can give simplistic views about what it is that publics feel (Ellis et al., 2007). Other forms of data, such as the written consultation responses and transcripts of evidence-gathering sessions across the two inquiries, provide illuminating insights into the state of social attitudes towards the prospect of further devolution in the energy field.

The Welsh Government itself has been a major advocate for the devolution of consenting powers, and support has also come from major conservation bodies – statutory and non-governmental – who see devolution as offering better scope for territorially cohesive policy-making around energy. With the Welsh Government in control, wind farm proposals outside SSAs might be better regulated. The responses of major energy companies are remarkable for their apparent agnosticism to the allocation of powers, but they were firm and consistent on the qualities that governance processes should display. West Coast Energy (para 2.1) captures a widely shared view: 'the decision making tier ... is possibly secondary to the issue of positive and consistent policy making'. The industry were critical of the 'slow and unpredictable' progress with wind energy in Wales, but held out a positive challenge for devolution: '(s)hould energy consenting powers be devolved to the Welsh Government, we believe that this should be viewed as an opportunity for the Welsh Government to demonstrate its commitment to delivering renewable energy in Wales' (Scottish Power para 9). The main political parties in Wales and organisations like the TUC also supported the devolution of consenting powers.

For many community groups, getting TAN8 reviewed was the main objective for participating in these inquiries, though some raised concerns about institutional arrangements between Cardiff and Westminster. Many used the inquiries to invoke narratives of environmental injustice discussed earlier: that 'the natural resources of Wales will be exploited once more by the Nation with the benefits of this investment being most realised in the distant manufacturing and wealthier economic centres' (Llanfechain Community Council; see also Volunteers for Abergorlech, Llansawel and Rhydcymerau; Montgomeryshire Against Pylons). However, for mid-Wales groups, wind power represented this exploitation, for other environmental groups it was focused differently: devolution of consenting powers

offered an opportunity to resist fossil energy developments encouraged by Westminster, and promote greener energy futures in Wales (FoECymru; see also Montgomeryshire Wildlife Trust, Eco Cymru).

Many organisations, especially those resisting development in mid-Wales, did recognise institutional and procedural problems in the governance of energy, but rarely did this translate into a neat, linear case for greater Welsh autonomy. For some, since the energy systems of England and Wales were integrated, what was required was 'common planned policies ... on the basis of partnership, rather than master servant' (Volunteers for Abergorlech, Llansawel and Rhydcymerau). Groups like Montgomeryshire Against Pylons were critical of the current split of responsibilities, allowing '(t)he excuses of Westminster blaming Cardiff and *vice versa*' (see also Llansanffraid Action Group), causing 'despondency and cynicism amongst local constituents', yet had:

> *'no position on where these decisions should be made but it is essential that the voices of local people are heard with regard to the future of their own communities'.*

For others, devolving the issues to the Welsh Government served the pragmatic purpose of ensuring that the review of TAN8 would 'ensure coordination and confidence to the electorate that all matters are considered comprehensively' (Montgomeryshire Local Council Forum), but a greater role for local democracy was more central to the cure (op cit.; Llandrinio and Arddleen Community Council; Llandysilio Community Council). In many respects, then, the bruising experiences of TAN8 and its stumbling implementation had shaped their views of devolution. This is equally true of people in the wind energy industry, many from Wales, for whom any personal preferences for devolution were matched with

doubts that the Welsh Government would drive forward the delivery of their wind energy projects.

The Silk Commission recommended that the powers of the Welsh Government be extended, to grant it the executive authority to determine power station consents up to 350MW: an awkward compromise, reflective perhaps of how energy developments remain torn between strategic, national goals and accountability to the localities in which they are developed. It was in the manifestos of all main parties going in to the May 2015 election that Silk be implemented; whatever the future implications, this may do little to change the balance of power over large wind farm projects already stuck in the planning system.

Conclusion

When McKenzie Hedger wrote *Wind Energy: The Debate in Wales*, the wind industry was an emerging sector in Wales and the UK more widely. Offshore wind was largely absent from public and policy discourses. What is startling from that original paper is the breadth of issues McKenzie Hedger prophetically outlines. What has emerged since then, is a plethora of work focused on many different aspects of wind energy ranging from the technical, through to governance and public attitudes. This contemporary research, particularly that reviewed here, has sought to unpack the complexities underpinning the many dimensions of the debate about wind energy in Wales, which were perhaps only hinted at by McKenzie Hedger. In this final section, we wish to outline the key insights from our chapter, how they differ and/or build upon those by McKenzie Hedger, and finally, consider where next for the debate on wind in Wales.

McKenzie Hedger (1994, p.132) prophetically stated that 'it is unlikely that a consensus viewpoint will emerge [on wind] in the short term'. Indeed, the stakes have increased in the intervening years and consensus over wind energy development seems as distant a prospect as ever. Arguably, the interventions that we have analysed in this chapter such as TAN8 fall short of the comprehensive, inclusive ideals alluded to in the early 1990s, though they have served to bring many more actors into the debate and for arguments to be refined. Moreover, they remind us that technical procedures (and emollient discourses like sustainable development) rarely straightforwardly engender consensus when the underlying issues are difficult to bridge. Such issues include divergent views on the appropriate future for landscapes, but also tensions around the scale and power relations of governance, both between the Welsh Government and UK Government but also between places and future, national energy pathways. Such tensions, clearly manifest in empirical research on public attitudes to wind energy in Wales, also connect with a wider academic focus on aspects of environmental and social justice.

In our analysis, it is clear that the rural landscapes and perceptions of nature and rurality, are as Woods (2003) suggested, key tripping points for the regulation of space, and that devolution has altered the arenas but not wholly shifted the arguments. Our discussion of attitudes towards offshore wind suggested that abandoning onshore projects in favour of developing wind in marine environments would not wholly resolve the issue and would, for some sites at least, transpose the contestation to a new arena. With the coming on stream of the 228MW Pen-y-Cymoedd wind farm in 2015, and the 576MW Gwynt y Môr in 2016, we will see a doubling of wind capacity in Wales, transforming Figure 1. However, it is significant that most major new developments of wind are located outside mid-Wales, avoiding areas where contestation has been particularly vociferous.

In the aftermath of the May 2015 General Election, the future of wind energy in Wales, and indeed the UK, is clouded in uncertainty. The Conservative Party was elected into government, and quickly announced their intentions to end new public subsidy for onshore wind farms; threatening the flow of financial support to wind farms in Wales. In Party political terms, we see Welsh Government strategic policy, as represented by TAN8 and Welsh Government energy strategies, supported by successive Labour-led Welsh Governments and the Liberal Democrats, undermined by actions in Westminster that have been advocated *inter alia* by opposition action groups in mid-Wales, acting through politicians and the Conservative Party at multiple levels of government. If wind energy is testimony to the enduring nature of land use-development conflicts, it also shows the uncertain status of devolved government in Wales as an arena of conflict resolution.

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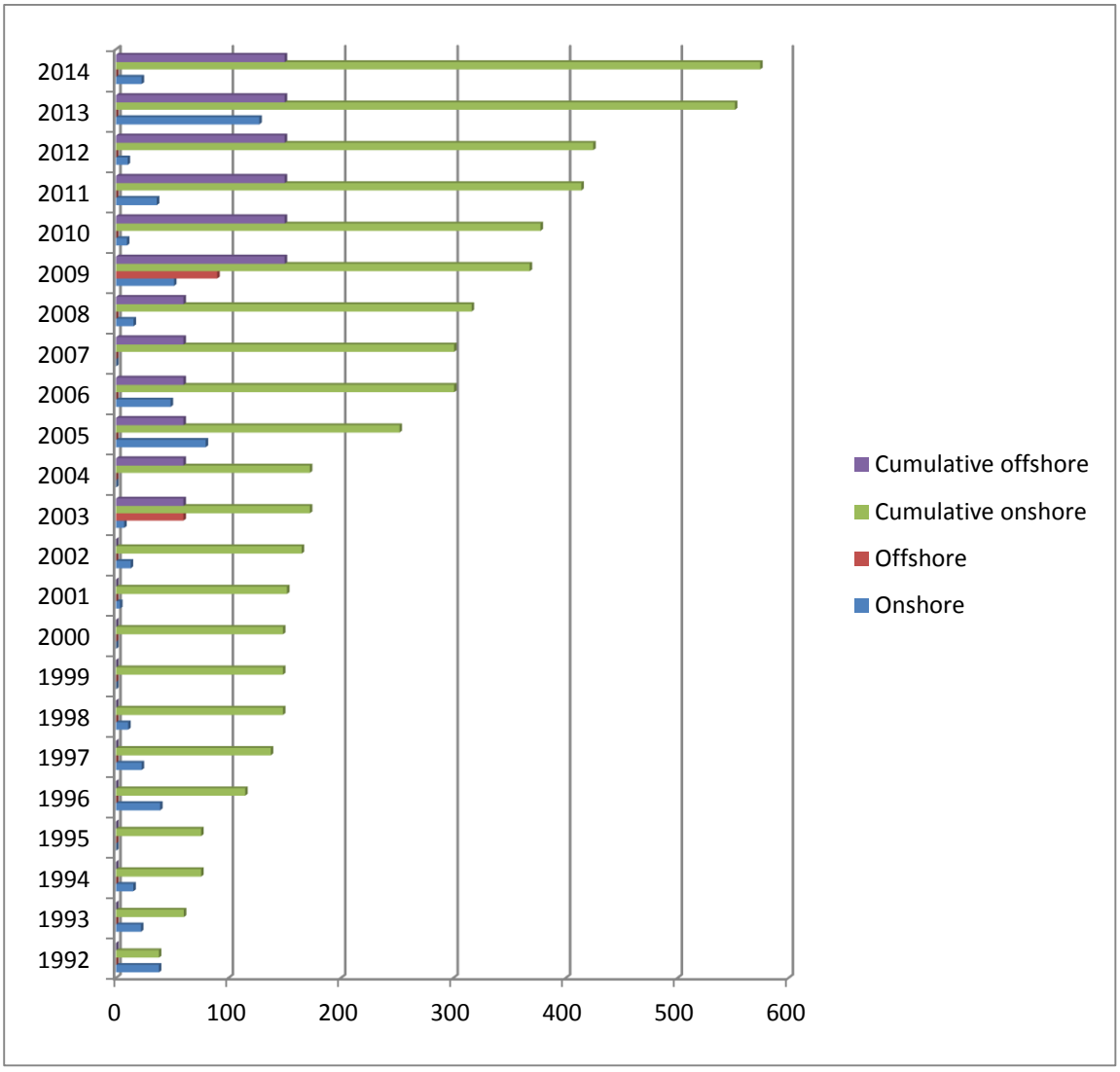
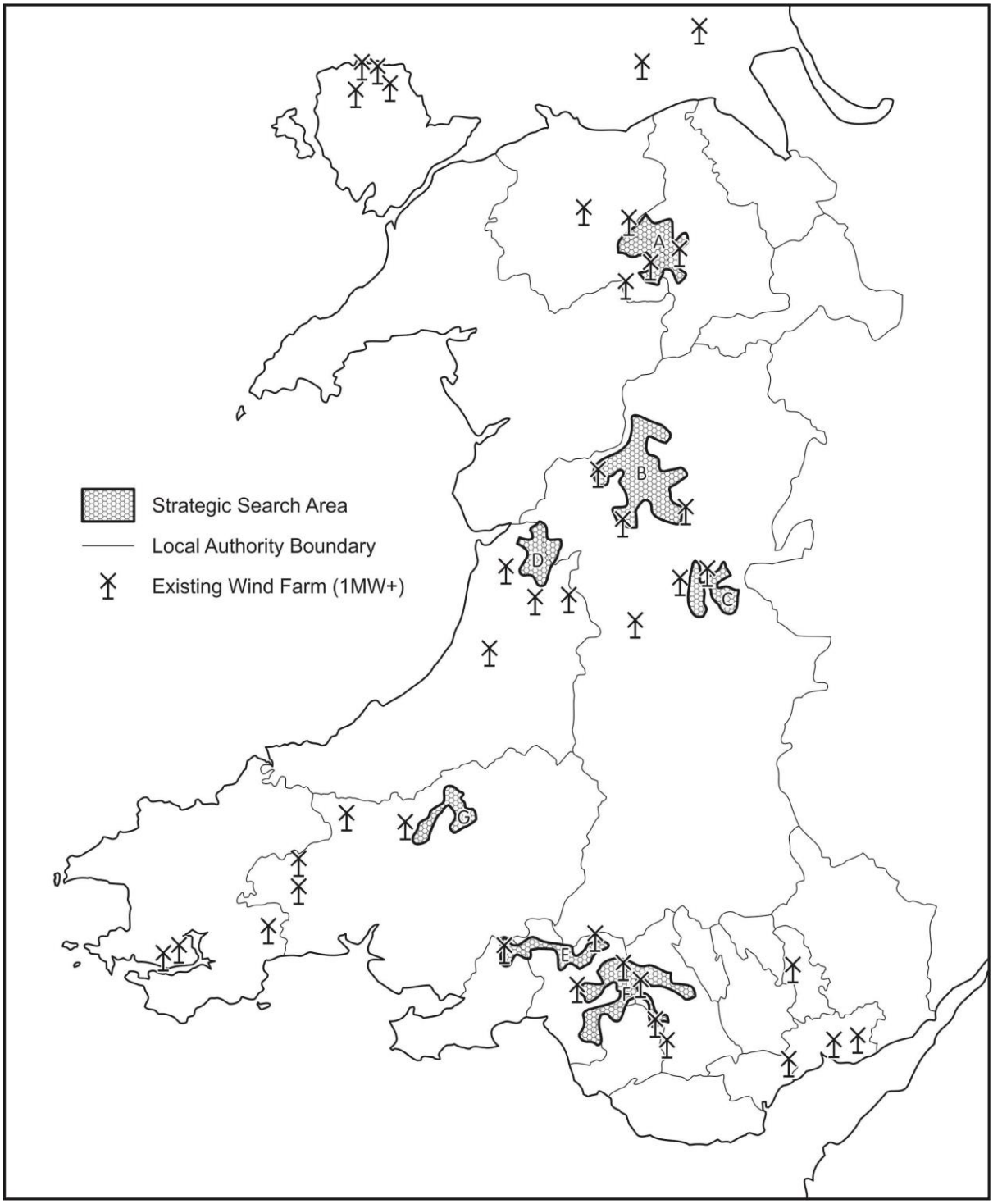
Figure 1: Annual rates of wind farm development in Wales (volumes in Megawatts, MW)



Source:http://www.renewableuk.com/en/renewable-energy/wind-energy/uk-wind-energy-database/ accessed 19th May 2015, with Bristow et al.(2012) to ensure annual additions to capacity reflected net additional capacity of repowering.

Figure 2: Strategic Search Areas for Large-scale Onshore wind development



Source: after WAG 2005, depicting operational wind farms of at least 1MW installed capacity, as of 30th April 2015.

Table 2: Participant responses to the question 'How favourable or unfavourable are your overall opinions or impressions of the following energy sources for producing electricity currently?'

	Very favourable %	Mainly favourable %	Neither favourable nor unfavourable %	Mainly unfavourable %	Very unfavourable %	Never heard of %
Biomass,thatis wood, energy crops, and human and animal waste	20	38	29	7	1	5
Goal	5	15	38	29	12	*
Gas	7	31	39	18	4	*
Hydroelectric power	41	35	16	2	*	5
Nuclear power	10	20	27	23	20	1
Oil	4	15	41	29	11	1
Sun/Solar power	47	41	10	2	1	0
Wind power	29	39	17	8	6	*
Marine power (tidal and wave power)	43	36	15	1	1	4

These results stem from a sub-analysis of Welsh only responses (n=507) to a survey that was carried-out online with Ipsos MORI panellist's aged 18+ years old living in Great Britain (total n=2441). Source: Demski et al., 2013b.

Table 1: Summary of the reasons for support and opposition outlined in McKenzie Hedger (1994)

Support	Opposition
Symbols of environmental awareness	Industrialisation of the hills
Positive economic benefits (e.g. ecotourism), particularly in economically depressed areas.	Irreversible effects to the landscape
Landowner earnings	No economic benefit perceived
Little disruption to lives once completed	Negative impact on house prices
Not an eyesore	Noise from turbines
Flexibility	Disruption during construction
Cleaner (than fossil fuels)	Protectionist stance – need to protect unspoilt countryside
Does not emit effluence	(Negative) Landscape impacts outweigh the benefits of wind
	Not in my backyard.

Source: Adapted from McKenzie Hedger (1994).

Notes

[1]Interviews, 22/09/2011, 28/09/11.

[2] Interview 12/09/2012.