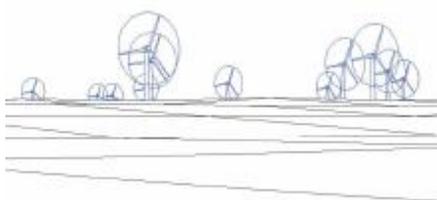


Berwick-upon-Tweed Borough Council

Moorsyde Wind Farm

Addendum: Issue Report

August 2007



Revision Schedule

Moorsyde Addendum Report August 2007

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1 Introduction

1.1 Background

In November 2006 Scott Wilson acquired the firm of Ferguson McIlveen LLP and inherited its extant consultancy contracts. This included an appointment by Berwick-upon-Tweed Council to provide an independent assessment of a series of planning applications for wind farms within the Borough. Prior to the Scott Wilson acquisition, Ferguson McIlveen LLP had commenced a review of the proposed Moorsyde Wind Farm and submitted its report to the Borough Council.

In the cross-flow of information that occurs today through many media (e.g. reports, e-mails, letters of representation, internet websites, etc.) there has occasionally been reference by other commentators to the 'Fermac' report. Unless otherwise indicated, it should be taken that such reference is to the report by Ferguson McIlveen LLP on the proposed Moorsyde Wind Farm.

1.2 The Need for Cumulative Assessment

As the Moorsyde application had been the first in that part of the Borough to be submitted, it was not subject to a need for cumulative assessment. The Ferguson McIlveen LLP report, whilst endorsing the principle of a wind farm at Moorsyde did, however, identify a need for additional work to fully appraise the position.

At the further request of the Borough Council, the subsequent audit by Scott Wilson of three other proposals sited in the locations of Barmoor, Toft Hill and Wandylaw, and the ensuing reports on those schemes, took stock of possible cumulative impacts. By virtue of those reviews, and in particular the proposals for wind farms at Barmoor and Toft Hill, the potential cumulative impact of Moorsyde with those other schemes was brought into focus.

Meanwhile, in October 2006 the North East Regional Assembly (NEA) had commissioned Ove Arup & Partners Ltd (Arup) to undertake a separate exercise - namely a 'wind farm development and landscape capacity study', to assess the potential of the North / South Charlton and South and West Berwick wind resource areas to accommodate this type of development.

Of relevance to the Moorsyde proposal is the Arup report for that NEA commission, published on 29 May 2007. A summary of the relevant findings is set out in section 2 below.

1.3 Implications of Cumulative Assessment for Moorsyde Wind Farm

As a result of the Arup report and Scott Wilson further reviews and assessments, the recommendations in respect of the proposed Moorsyde Wind Farm have been amended. Although approval in principle is still recommended, it is considered that when read together with either Toft Hill or Barmoor there is a need to reduce the number of turbines by omitting Nos. 3, 4 and 6. The reasoning behind this approach is set out in section 3 below.

2 The Ove Arup & Partners Ltd Report

2.1 Wind Farm Development and Landscape Capacity Studies: South and West Berwick-upon-Tweed

Since the applicant's submission, further studies of Northumberland and its potential to accommodate wind farm developments have been undertaken by Ove Arup & Partners Ltd on behalf of the North East Assembly (NEA). One such report, 'Wind Farm Development and Landscape Capacity Studies: South and West Berwick-upon-Tweed', has been completed for the area which includes the application sites for Moorsyde, Barmoor and Toft Hill.

It should be noted that the Arup report does not constitute formal planning policy. Nonetheless it will be a material planning consideration in the determination of any wind farm application within the relevant area.

The study reviews energy and planning policy and provides an appraisal of the landscape and visual impacts of wind farms. It presents several cumulative impact assessment scenarios and goes on to give recommendations for the area. The report provides an objective technical assessment of the area and is intended to '*help guide*' decision makers to develop a considered response to wind farm applications in the area.

The area for the Arup study has been derived from the North East Regional Spatial Strategy (RSS). The RSS defined a broad 'W' area of least constraint; a radius of 10km from the centre of the W symbol was used for the NEA study. Technical and environmental constraints then reduced this 10km radius to a study area of 'least constraint'. This study area was then split into seventeen small zones using landscape character area designations given by Government Office North East, Ordnance Survey data and fieldwork.

The landscape assessment of the Arup study concluded that ten of the seventeen zones could accommodate small or small-medium wind farm development. However, it recommended that, owing to their landscape characteristics, zones 1, 6, 7, 8, 11, 12 and 17 should be excluded from wind farm development.

Following on from the landscape assessment further work was carried out on visual impact of potential wind farms in the area. The visual impact was assessed from various receptors including dwellings, designated landscapes such as National Parks and Areas of Outstanding Natural Beauty (AONB), and roads. The study does not take tree cover and its screening abilities into account; the results can therefore be read as a worst case scenario.

Taking into account the results from both the landscape and visual impact assessments the Arup study defined several areas of least impact and then advanced several scenarios which were assessed cumulatively.

No zone performs well but zones 3, 5, 6, 16 and 17 perform better than the rest. The areas of least impact within the study fell into two blocks. One covered zones 3, 5 and part of zone 2; the other area to the south included parts of zones 15 and 16. The Moorsyde proposal lies within zone 5. However, the study does state that developing the whole of these areas of least impact would be unacceptable due to the high number of nearby settlements. Accordingly, the report evolved four development scenarios.

Scenario A included three groups of turbines which loosely follow the three live applications; Barmoor to the south, Toft Hill to the west and centrally placed Moorsyde..

Scenario B included a reduced Barmoor development and a much reduced Moorsyde development.

Scenario C included a Toft Hill development and the same reduced Moorsyde grouping.

Scenario D indicated a Toft Hill development and a reduced Barmoor development.

None of the scenarios would fully meet the RSS target for the W.

Scenario A was considered unacceptable with scenario C performing slightly better than B & D.

It should be noted that only landscape and visual effects had been assessed in order to derive the study's conclusions; other issues, such as cultural heritage and ecological impacts, would be material considerations that could influence the policy making and decision-making processes.

The overall study findings concluded (section 7.1) that *"the area (south and west Berwick-upon-Tweed) is not capable of accommodating a level of wind turbine development as envisaged in the Draft RSS and the County Structure Plan, i.e. up to 25 turbines, without a significant change in landscape character and some very significant effects upon the even spread of settlement throughout the area."*

Consequently, the Arup study recommended a maximum level of development of 10-15 turbines or around 30-40MW installed capacity output which could be distributed within the study area in at least three different ways (scenarios B, C or D). Smaller "clusters" were to be favoured as these would allow short and long distance views through turbines and would sit better with the scale of the settled landscape.

Importantly, the Arup study had *"considered the potential for a single recommended scenario but the difference in environmental (largely landscape and visual) performance is too marginal between scenarios B, C and D."*

It is worth noting that the study also observed that given the nature of the settled, relatively low-lying landscape at Berwick, the series of wind farm typologies developed by Arup to inform their assessment of landscape sensitivity / capacity should also include *'small-medium small - Between 7.5 - 18MW or 6 turbines approximately'*.

The rationale for this additional category was *"because the medium-small category as previously defined could/would theoretically permit up to nine turbines of unrestricted height in a single proposal (and) this would be too large for this landscape."*

The implication of this finding is that the current live applications would need to be modified to be considered acceptable.

2.1.1 Requested Modifications to Draft Revision RSS

Following the ARUP study and the Secretary of State's Proposed Changes to the Draft Revision RSS, both Berwick-upon-Tweed Borough Council and NEA are seeking a

modification to Policy 42 of RSS 'Onshore Wind Energy Development', deleting reference to the south and west Berwick-upon-Tweed areas having the potential for medium scale development.

NEA's proposed change reads:

"A capacity study has been completed for the broad area of least constraint in South and West of Berwick-upon-Tweed. This report highlights that the area cannot accommodate wind energy development to the level expected by RSS, but that it is capable of taking up to 15 turbines. It is therefore recommended that this 'W' is revised to reflect this."

3 Moorsyde Wind Farm and Cumulative Impacts

3.1 Prologue

This section draws from the other Scott Wilson reports on Toft Hill and Barmoor, to identify potential cumulative visual impacts and cumulative impacts on landscape character deriving from a combination of either two of the schemes, or all three read together.

3.2 Moorsyde and Toft Hill

3.2.1 Review of Predicted Cumulative Landscape Effects

Scott Wilson concurs with the premise derived from the Entec ES for the Toft Hill Wind Farm (para 6.7.43) that “...*should all three wind farms, and indeed two wind farms (Moorsyde, Barmoor and Toft Hill) be approved then it would result in the creation of a distinct landscape character sub-type, ‘Cheviot Fringe with Wind Farms’.*” It is also agreed that these wind farm developments, in relatively close proximity to each other, would amount to a ‘high’ magnitude of change and a ‘medium’ landscape effect within the Local Character Area (LCA).

Whilst a single wind farm of a comparable scale to the proposed scheme can be accommodated in this Local Character Area without unduly influencing or dominating the landscape, the effect of these two wind farms in such close proximity would substantially disrupt the local farmland character and also dominate the area as a wind farm zone in its own right.

3.2.2 Review of Predicted Cumulative Visual Effects

Scott Wilson also acknowledge the findings of the Entec ES (para. 6.9.16) that “*there is potential for significant sequential and static cumulative effect between Toft Hill and Moorsyde Wind Farms within 2km radius of Toft Hill where both wind farms would be viewed in the landscape.*” The sequential cumulative effect would be most significant in the area of, and from residences in, the open rolling farmland between, Grindon, Grindonrigg and Felkington. There would also be substantial sequential effects upon road users of the A698. For the avoidance of doubt we also consider that the assertion in the ES for the Toft Hill Wind Farm (para.6.9.17) that ‘...*these effects are unlikely to be adverse, due to the scale of the host landscape*’ is not accurate. The cumulative effect of both wind farms in close proximity within this open rolling farmland will have an adverse visual effect upon receptors and the character of the local landscape.

3.2.3 Summary of Significant Cumulative Landscape Effects

There is a close relationship between Toft Hill, Moorsyde and Barmoor wind farms and Scott Wilson agrees with the Entec ES (para. 6.7.43) prediction that ‘*a sub-landscape character area could emerge should all three sites be constructed*’. This is described as “Cheviot Fringe with Wind Farm”, a description with which Scott Wilson concurs. There is a high risk that this sub-landscape character would result from the development of both Toft Hill and

Moorsyde Wind Farms, but that would not be the case if one of those two and Barmoor Wind farm were constructed.

3.2.4 Summary of Significant Cumulative Visual Effects

Scott Wilson conclude that no significant static and sequential cumulative visual effects would result from existing or currently consented wind farms.

However, there is a high potential for significant sequential and static cumulative effects occurring if Toft Hill and Moorsyde Wind Farms were to be constructed.

3.3 Moorsyde and Barmoor

The Scott Wilson review considered the cumulative visual effects of both wind farms upon the landscape resource within a range of radii. The most critical aspect, understandably because of the presence within this settled landscape of a number of residential properties, was the analysis and conclusions regarding the cumulative visual effects within 2.5km radii of Moorsyde and Barmoor.

3.3.1 Cumulative Visual Effects within 2.5km Radii of Moorsyde and Barmoor Wind Farms

The visual effects within this area are considered significant in respect of construction and operation of the wind farms to a temporary period of up to 25 years. There are numerous locations where both wind farms would be viewed together within the landscape. However, there are few locations where all of the turbines of both wind farms are visible at the same time. Moorsyde Wind Farm is the more exposed site of the two as local topography and woodland provide a greater degree of screening at the Barmoor Wind Farm site. Rising ground south-west of Barmoor along the River Till provides a degree of screening from this direction for both wind farms.

Crucially, and as highlighted in the text below, the effects of scale are important within the 2.5km area as there will be occasions when proximity to individual wind farms will dominate perception of the landscape. This situation will particularly affect those receptors with properties located within 1km of the wind farm sites.

3.3.1.1 Static Cumulative Visual Effects

Both wind farms and partial sections of each wind farm would be seen from the following static locations and areas within the 2.5km radius of each wind farm:

- Moorsyde to Barmoor Wind Farm site - blade tips would generally be visible
- Barmoor to Moorsyde Wind Farm site - the view is screened by rising ground from Brackenside to Low Wood
- Properties located directly between Moorsyde and Barmoor Wind Farms have open views of Moorsyde Wind Farm along rising ground from Low Wood. There are also views of Moorsyde and the turbines of Barmoor would be visible from

elevated locations around High Wood. The scale of the turbines in close proximity to receptors would dominate the local landscape

- Lowick, Bowsden and the surrounding farmland - there would be open views of Barmoor as well as most of the turbines, and all of the blade tips, at Moorsyde
- Ford, Etal and rising ground to escarpment above River Till - this area is partially screened from view of both wind farms, although some blade tips of both developments would be visible
- Farmland around Grindon, Shoreswood and Allerdean - there would be open views of Moorsyde and the blade tips of Barmoor Wind Farm
- Farmland north of Moorsyde Wind Farm - there would be open views of Moorsyde Wind Farm turbines, although no views of Barmoor Wind Farm.

3.3.1.2 Sequential Cumulative Visual Effects

Road and lane users within the area would experience frequent single and multiple views of both wind farms. Rising ground north, west and south-west of Barmoor Wind Farm serves to screen views for receptors of both wind farms. Sequential views would be most frequent to the east of the wind farm sites around Lowick, Bowsden and Berrington, where open and low lying farmland permits long distance views. Receptors travelling through the area would not experience a wind farm 'cluster' effect, although close proximity to wind farm sites would emphasise the sense of scale and coverage. Receptors travelling north to south would experience an overlap of both sites creating a combined wind farm view. Users of the National Cycle Network (NCN) Route 68 would be significantly affected and the developments would change the experience for users of this route.

3.3.1.3 Summary

It is considered that cumulative views within 2.5km of the two wind farms would be of 'Adverse' – 'Substantial' significance. The greatest impacts would be experienced by receptors in the farms and private dwellings within this area, along with the hamlets of Lowick and Bowsden.

3.4 Cumulative Effects of all Three Proposed Wind Farms

3.4.1 Cumulative Impact on Landscape Character

Scott Wilson not only concur with the prediction that a 'sub-landscape character area' could emerge should all three sites be constructed, but also conclude that the probability of this developing is judged as considerable, incurring the potential loss of the existing local landscape character.

3.4.2 Cumulative Visual Impact

Scott Wilson's analysis confirms the findings of the Entec ES for Toft Hill Wind Farm (paras. 6.9.19-20) that significant cumulative visual effects of all three sites are unlikely within the wider landscape (radius 10-35km), whilst wind farm sites over 20km away are considered unlikely to have any significant cumulative effect.

Scott Wilson also conclude that potential significant sequential cumulative visual effects would exist for road users in the area. Toft Hill and Moorsyde would appear as a cluster when viewed progressively along the B6354, inducing a 'high' magnitude of change. Moreover, with regard to National Cycle Route No 68 along the eastern boundary of the three wind farm sites, it is noted that the potential cumulative visual effect would be 'substantial' and 'significant' and would therefore considerably influence the experience of cyclists using this cycle route.

4 Summary, Conclusions and Recommendation

4.1 Summary

Since the original review by Ferguson McIlveen LLP of the proposed Moorsyde Wind Farm two key events have taken place. One is the emergence of the high level study by Arup of the area south and west of Berwick, with a view to establishing its capacity to accommodate wind turbines; the second (recommended in the Fermac Report) is the more detailed analysis by Scott Wilson of the cumulative visual impacts and impacts upon landscape character of the subsequently emerging applications at Barmoor and Toft Hill, read together with the Moorsyde scheme.

The Arup study concluded that *“the area (south and west Berwick-upon-Tweed) is not capable of accommodating a level of wind turbine development as envisaged in the Draft RSS and the County Structure Plan, ie. up to 25 turbines, without a significant change in landscape character and some very significant effects upon the even spread of settlement throughout the area. The study suggests a maximum level of development of 10-15 turbines or around 30-40MW installed capacity output.”*

The Scott Wilson analyses concluded that, in keeping with the findings of the Entec ES, there is a close relationship between Toft Hill, Moorsyde and Barmoor wind farms and that *‘it is predicted that a sub-landscape character area could emerge should all three sites be constructed’*. This is described as “Cheviot Fringe with Wind Farm”, and the Scott Wilson conclusions are that there is a high risk of the creation of this sub-landscape character in the event that Toft Hill and Moorsyde Wind Farms were constructed, but that would not be the case if one of those two and Barmoor Wind farm were constructed.

4.2 Conclusions

There is an imperative within the Arup report to:

- reduce the overall combination of turbines in terms of numbers / impact;
- minimise the risk of the occupiers of residential properties feeling as though they were living within a wind farm landscape,

The Arup study recommended a level of development of 10-15 turbines or around 30-40MW installed capacity output which could be distributed within the study area in at least three different ways. Importantly, the study noted that the current live applications would need to be modified to be considered acceptable.

The Scott Wilson analyses point to a negative recommendation for the Toft Hill application, but also a prospect that the individual schemes for Moorsyde with Barmoor could be accommodated within the landscape. Nonetheless cumulative impacts for Moorsyde and Barmoor are identified that are ‘adverse and substantial’.

Accordingly, if the two wind farms at Moorsyde and Barmoor are to proceed, it follows that some reduction in the current combined total of 19 turbines (generating 54.5MW) should be sought.

A simplistic approach would be to delete some turbines from each scheme at the points where they are geographically closest (i.e. the southern end of the Moorsyde layout and the northern end of the Barmoor configuration). However, given the tight cluster (comprising turbines 8 - 14) at the southern end of the Moorsyde scheme, we consider little would be achieved in impact reduction by the deletion of, for example, turbines 13 and 14. Instead, focus should be on the 'curtain' effect of the scheme as it fans out from a tight, north-south cluster, to an extended east-west line, and where the western-most turbines (3, 4 and 6) sit visibly and equidistant between Shoreswood and Felkington. In this context, deletion of turbines 3, 4 and 6 would not only reduce this extended 'curtain' effect, but would also help minimise the perceived impacts for residents at Shoreswood, Felkington and Grievestead.

There is a further consideration in the justification for minimising the Moorsyde scheme at its northern/western extremities rather than the southern part of the layout. Shoresdean will be directly in view of the main wind farm cluster and the retention of turbines 3, 4 and 6 would effectively ensure that there would be no turbine-free views looking south and south-west from that village.

4.3 Recommendation

In the light of the above deliberations we recommend that turbines 3, 4 and 6 be deleted from the Moorsyde scheme and, subject to such amendment, that the proposed wind farm application be granted planning permission with appropriate conditions.

This would acknowledge and accord with the findings of both the high level study undertaken by Arup and the more detailed analysis given to cumulative impacts of Moorsyde read together with other live applications in the area.