



West Haddlesey Bridge.



# 5 Socio Economic Impact

**STOP WOODLANE WIND FARM ACTION GROUP  
OBJECTION DOCUMENT**

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**SECTION 5  
SOCIO-ECONOMIC IMPACT  
OF THE PROPOSED DEVELOPMENT**

- 5.1 In writing this section we have looked at various planning issues as set out in:
- ? PPS 22
  - ? Yorkshire and Humber Plan Policies Y1, E1, E7
  - ? Selby Renaissance Plan
- 5.2 These are key documents in relation to the need for the generation of renewable energy, the need for economic growth in the Selby area, matters relating to the Rural Economy and Selby District Council's vision of how to achieve these objectives.
- 5.3 PPS22 recognises the need for renewable energy and categorises this into:
- ? Bio-mass
  - ? Energy from Waste (Anaerobic and Pyrolysis)
  - ? Landfill and Sewage (Gas)
  - ? Small Scale Hydro
  - ? Passive Solar Design
  - ? Solar Electric and Thermal
  - ? Wind
- 5.4 PPS22 states that Local Authorities should include policies for technologies most appropriate to the local area. PPS22 also states that *"The wider environmental and economic benefits of all proposals for renewable energy, whatever their scale, are material considerations that should be given significant weight in determining whether the proposal should be granted planning permission"*.
- 5.5 In the Yorkshire and Humber Plan Policy Y1, the need to deliver economic growth at Selby is recognised. In Policy E7 the importance of the rural economy is recognised. Over three-quarters of the land in the Region is rural with the vast majority being used for agriculture and the majority of the land being prime agricultural land. Policy E7 stresses the importance of safeguarding distinctive rural character and supports rural diversification only when it brings economic, social and environmental benefits to the area.
- 5.6 The Selby Renaissance Plan stresses the importance of power generation to the area. The Selby area provides approximately 10% of the UK's generating capacity and in doing so employs 900 people (approximately 3% of the total jobs in 2006). Selby has considerable experience in power generation using heat / steam generation.
- 5.7 The section Embracing Energy Futures in the Selby Renaissance Plan combines the policies relating to climate change and the need for job creation. The keys to this as set out in the plan are the use of the land and expertise to produce bio-mass and electricity through bio-fuel co-powering at the existing power station sites and other such similar methods of power generation.

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- 5.8 Thus the Selby area plan, with its focus on steam / heat electricity production, fits perfectly into the requirements of PPS22 that the local authority should include policies for technologies most appropriate to the local area. Selby has the capacity to produce bio-mass locally and does so at the site near Eggborough which is used as part of the co-firing at Drax power station. It also has the expertise to turn this into power using its proficiency in steam-powered electricity. The entire infrastructure to enable this to be a success is already in the area and is providing real economic benefits to the region. The use of the co-firing bio-mass at Drax power station has already ensured that Selby has met its 2010 targets for renewable energy production.
- 5.9 Also in accordance with the Selby Renaissance Plan, planning permission has been given for the Selby Renewable Energy Park. This £20 million project will create 120 new jobs in the Selby area, generating 8MW of electricity. This plant will treat 165,000 tonnes of food waste per annum which would otherwise have gone to landfill. In addition the by-product from the plant is bio-fertiliser and 152,000 tonnes of this will be produced. Thus this project fits in with the Renaissance Plan and also has the benefit of producing fertilisers which can be used by local landowners to produce crops such as food and bio-mass for the co-firing already underway at Drax and the proposed new bio-mass power plant at Drax.
- 5.10 All of these developments fit hand and glove with PPS22, Y1, E1, E7 and the Selby Renaissance Plan.
- 5.11 The only mention of wind power in any of these documents relates to the already granted turbines at Rusholme, and Selby would like these to be community-owned. Thus Selby has acted in accordance with PPS22 and has already met its 2010 targets by the Rusholme development and the co-firing of Drax power station.
- 5.12 At the current time Drax has submitted a planning application for a 300MW (installed capacity) bio-fuel plant which fulfils the requirements of the Renaissance Plan to bring employment to the area, and complies with PPS22. Thus Selby has 6 developments with regard to renewable energy, one running (co-firing at Drax) two approved (Rusholme and Energy Park) and three in planning (Drax bio-mass plant and two wind farms at Bishopwood and Woodlane).
- 5.13 We set out below a table of various matters of socio-economic importance such as construction jobs, full-time positions and electricity produced. We have excluded the Bishopwood wind farm from our table.

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Description	Drax	Drax Co-firing	Energy Park	Rusholme	Woodlane
Construction jobs/period	850 / 36 months	Not known	Not known	Not known	Not known / 10 months
Full-time positions	150	Not known	120	E2	2
CO2 savings (tonnes)	1,800,000	2,500,000	28,000	28,000	40,000
Installed capacity (MW)	300.00	500.00	8	24	35
Projected output	290.00	485.00	8.00	7.44	10.85
Visual Impact	Nil	Nil	Minor	Significant	Significant

Table 5.1 Socio-Economic Impact of Renewable Energy Proposals

- 5.14 The figures for the co-firing CO2 savings and installed capacity are based on a document from Nigel Burnett of Drax Power Ltd and are based on the achievement of the 12.5% target of bio-mass to be mixed with coal by 2010. The Rusholme figures are based on the number of turbines and a 31% load factor.

### **Conclusion**

- 5.15 The table shows that the Woodlane proposal does comply with the local plan to meet targets for renewable energy using the skills of local people (steam-based power and farming) and it would therefore be in breach of the PPS22 guidance that Local Authorities should include policies for technologies most appropriate to the local area. The proposal does not deliver economic growth at Selby (Yorkshire and Humber Plan Y1, Section B3); it does not allow for the essential development for agriculture or forestry purposes in the countryside; it does not bring economic or social benefits; nor does it support and protect an attractive and high quality rural environment (E7).
- 5.16 This contrasts sharply with the Drax co-firing and bio-mass proposals and the Energy Park, all of which meet the criteria laid out in the relevant plans and documents.
- 5.17 Note that with the co-firing at Drax, the Energy Park and the Rusholme development, Selby has significantly exceeded its 2021 targets of having 32MW of installed renewable capacity. If the Drax bio-mass proposal is approved and the co-firing station produces the results it is aiming for (it is believed that currently 5% of the fuel is bio-mass with the target of 12.5% by 2010), Selby will have installed capacity approaching 822MW and will have exceeded its 2021 target by over 2500 per cent. Indeed if the only addition to the planning permission already granted is the Drax bio-mass plant, Selby alone will have exceeded the North Yorkshire target

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for 2021 by 92 per cent. Thus through careful consideration Selby is already on its way to exceeding all of the North Yorkshire targets by use of its local skills in heat and steam production of electricity whilst bringing many local jobs to the area.

- 5.18 The application should therefore be rejected on the basis that it does not meet the criteria of PPS22 or the relevant regional and local plans to generate local employment. Given the skills already in Selby, the proposal will not add anything to the local economy whilst causing visual impairment out of line with any benefits.

## The Woodlane Proposal

### **Creation of Local Jobs - Construction**

- 5.19 The Applicant states that the company's "approach is to require as much of the construction work to be given to local firms as possible, subject to normal tendering process". The document fails to state how many jobs would be available locally.

- 5.20 It is recognised that the turbines etc will not be manufactured in the UK and that specialists will be needed to erect and commission these. It is likely that these specialists will not be from the local area. Thus it would appear that the main local jobs will relate to the groundworks, the supply of aggregates, haulage and plant hire. Even then all of this will be subject to competitive tendering. It would not appear that there will be many jobs for the local community over the 10 months of the project.

- 5.21 The Applicant is based in Germany and to prepare the application used a consultant who is based in Northumberland (with a satellite office in Sheffield). In the preparation of the planning document and supporting material this consultant utilised the services of many experts who are detailed below along with the location of the firm from the information contained in the planning application:

<b>Name</b>	<b>Specialism</b>	<b>Location of Firm</b>
B T Bell	Civils and track design	Hexham
R Collett	Transport consultant	Halifax
Consense	Community participation	Ipswich
Econnect	Grid connection	Hexham
Entec	Hydrology	Newcastle upon Tyne
Field Archaeology	Archaeology	York
Hayes McKenzie	Acoustics	Salisbury
Pager Power	Aviation	Suffolk
Stephenson Haliday	Landscape and visual assessment	Cumbria
Wessex Archaeology	Archaeology survey	Salisbury
Wild Frontier Ecology	Ecological assessment	Norfolk

Table 5.2

- 5.22 Thus, of the potential jobs undertaken so far in the project, only one has been from the surrounding area and two from Yorkshire. The process of tendering for the work undertaken so far is not known but it could be read from the consultants used so far in the process that, if the pattern of the construction phase follows that of the application, there will be few local jobs created if the development is approved.

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### ***Creation of Permanent Local Jobs***

- 5.23 There is mention in the application that the long-term maintenance of the wind farm will require one or two personnel, and this work is likely to be awarded to a local engineering or electrical contractor subject to tender.
- 5.24 It is not known how this estimate of the number of jobs created was made. Research using the Yelvertoft wind farm information for 8 turbines suggests that they believe that part-time operational and maintenance engineers are required and that this typically involves visiting a site once per week on average. Thus the estimate of the number of jobs seems to be overstated based on other information from other applicants. The loss of arable farmland will inevitably result in a loss of work to local farming contractors or labourers, which will probably exceed the jobs created by the maintenance of the turbines.
- 5.25 Contrast this with the proposed bio-mass plant at Drax which will create 150 full-time posts (not including ancillary employment) and the Energy Park where total jobs estimated are 120.
- 5.26 The New Economic Foundation research referred to at 19.7 of Volume 2 of the Applicant's Environmental Statement says that for every pound spent by the council in Northumberland this resulted in three extra pounds of expenditure being generated in the local economy. Assuming the Applicant's postulations about local job creation to be correct (and that no jobs are lost in farming) and an average disposable income to be spent in the area of £5,000 per annum per person, this will generate an extra £30,000 for the local economy. Contrast this with the bio-mass proposal and the Energy Park which, using the same base net disposable funds for 270 employees, will create an extra £4,050,000 in the Selby area using the same principles.
- 5.27 Thus the proposed development does not provide any major economic or social benefits and does not fit in with Policy E7 part 4 where rural diversification schemes should be supported only if they bring economic and social benefits. The development also seems to contradict E7 part 6 as it does not support or protect an attractive and high quality rural environment.

### ***Other Potential Economic Issues***

- 5.28 The villages of Gateforth, West Haddlesey, Birkin and Hillam are some of the more expensive housing localities in the Selby area. There are a number of professional and self-employed entrepreneurs who both spend their income in the area and generate a number of local jobs, from directly operating their business in the Selby area, to cleaners and other home assistants.
- 5.29 Many of these people have chosen to live in the area due to its quiet and tranquil nature and Selby Council recognises that a significant percentage of these villages are commuter villages where the people work outside the area. Due to the good road network many of the people living in the villages work in Leeds.
- 5.30 There is undisputed local opposition to the turbines and the consequences of their construction could mean that a significant number of local business people and professionals will decide to relocate to other areas in and around the city of Leeds or York (where no turbines are proposed). This will have a dramatic potential effect on the local economy. It is recognised that many professionals and entrepreneurs enjoy living in the countryside and the loss of these people would lead to a significant loss of money in the local economy and the possible movement of

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businesses out of the Selby area. The likelihood of other people of this calibre buying houses in these villages if the development were to be given permission would be slim, as the villages will lose their appeal to high net worth individuals who can just as easily commute from Bramhope or Wetherby.

- 5.31 Assuming that an average professional spends £20,000 in the area and that the people moving into the area have only £5,000 disposable income, and only 5 people left per village, this, using the New Economic Foundation research would result in a loss to the area of £900,000.00 (£15,000 loss of disposable income x 5 households x 4 villages x 3 [factor]). This compares to a potential maximum of £180,000 projected benefit from the proposal. Thus there is a potential loss to the local economy of £720,000.00 net.
- 5.32 Thus even a small movement of people out of the area would cause severe harm to the local community and to the Selby area. The potential of the loss of the professional people and entrepreneurs from Selby goes against the district's objectives as set out in the Renaissance Plan, of attracting investment and entrepreneurs to the area.

### ***Effect on Local Stables***

- 5.33 There are few bridleways in the area yet a significant number of businesses and individuals who have horses are based around the proposed development. These include a livery yard just off Hillam Common Lane, two livery yards in Birkin and a number of private horse owners in the local community. In the villages affected by the application there are probably over 100 horses. These riders have to use the local roads and often ride around the proposed development. This generates significant income for the local landowners (livery yards) and also to Hillam Feeds which specialises in providing to the needs of the local horse owners. Many of the livery owners are not resident in the surrounding villages and come from many of the nearby towns.
- 5.34 It is recognised by the wind industry and the British Horse Society that wind turbines can cause issues for horses and their owners. An average livery is about £50 per week. Many horses react to shadows and do not like movement. Changes such as a plastic bag flapping in the breeze when it was not there the last time the rider took the horse down the route can cause issues for horse riders. The turbines will be moving objects and will change position on a daily (and indeed hourly) basis as they move to turn into the wind or change the yaw on the blades to adjust to wind speed. All of this means that every time riders go out they will be battling with constantly changing views for their horse. There are a number of other livery yards in the surrounding area where there will not be any turbines. Thus the people who are not resident in the area have the choice to move to other livery yards. It is highly unlikely without heavy discounting on the price that any other people could be persuaded to replace this livery. Based on a conservative estimate of a loss of even 10 liveries this would be a direct loss of £26,000 per annum. Using the New Economic Foundation research would result in a loss to the Selby area of £78,000. This is without taking into account any spending at Hillam Feeds which could add up to as much again and which could mean the difference between the continuation of this business or its ceasing to trade.

### ***Local Pubs***

- 5.35 There are three main local pubs which could be affected by the proposed development. They are the Cross Keys at Hillam, the George and Dragon at West

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Haddlesey and the Hungry Fox in Beal. All three of these pubs rely on the sale of food, and especially the Sunday lunch market. Many of the people who take meals at these pubs are not local but combine a trip out to the country with a meal in a local pub. There is no doubt that the open aspects of the landscape attract these customers as well as the quality of the food. If visitors no longer enjoyed the country drive due to the industrialisation of the landscape then this could result in a significant loss of local revenue. It is generally acknowledged that pubs face a challenging business environment at the moment and the loss of even a small amount of income could result in the closure of a village pub and thus deprive the local population of an amenity as well as cause a loss of jobs and income for the area.

### ***House Prices***

- 5.36 It is recognised by the wind industry that the planning approval and building of wind turbines has an impact on the prices of local houses (although they purport that there is no lasting effect). There have been only two studies in the UK on this matter and in neither case were the turbines as close to so many houses as the proposed development.
- 5.37 Local estate agents have estimated that the loss of value of the homes would be between 15% and 20% of the current value. In the villages affected by the proposal there have been two occasions where prospective purchasers have withdrawn their offer when they found out about the planning application. In addition, one resident is reported to have dropped the already discounted value (due to the credit crunch) by 20% and the property is still on the market.
- 5.38 A conservative estimate of the potential loss of value of properties in the area affected by the proposal has been made at £10,000,000. Any loss of value of a property can have an effect on people in their spending habits as they feel poorer.
- 5.39 A loss of 15% of value in the current market can put people in a negative equity situation and they could therefore lose their home or decide to redirect locally spent income to putting them back in a position where they have some equity in their property by making further repayments of their mortgage.

### ***Income Paid to Farmers***

- 5.40 Nine of the proposed turbines belong to an absentee farmer (not based in the area). It is estimated that the other 5 will produce a pre-tax income of £15,000 per turbine and a post-tax income of £10,000. This could, on the basis of the New Economic Foundation research, generate £150,000 for the area if all of this post-tax income was spent by the farmers in the local community.

### ***Conclusion***

- 5.41 The proposal by the Applicant brings negligible benefits to the local economy (estimated at £180,000 per annum) and has a very real risk of depriving the local economy which is estimated at potentially over £1,000,000.00 if house prices are excluded. This estimate increases to over £11,000,000.00 if house prices are included.

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### **Other Socio-Economic Considerations**

#### ***Cost of Wind Energy to Consumers***

- 5.42 When producing power the turbines sell their electricity into the grid at the market rate. Using the Applicant's information, the project will produce 98GWH of electricity per annum. At a cost of 3.6 pence per kilowatt-hour this produces an income of £3,528,000 per annum. In addition to this the developer is paid for the renewable obligation certificates (ROCs). Energy companies are obliged to purchase the ROCs and to fund this purchase they have to pass on the costs to the customers. These ROCs are currently worth approximately 4.5 pence per kilowatt-hour and thus the owner of the wind farm receives approximately a further £4,410,000 per annum. Thus over the 25 years' life of the turbines they will, at current levels, produce income of £198.5 million, all of which will be paid by the UK customers for their electricity in one way or another.
- 5.43 The turbines cost approximately £3-4 million each to build. Assuming an average of £3.5 million the build costs will be in the region of £49,000,000. In addition fees are paid to landowners and, assuming £15,000 per turbine per year, this totals £5.25 million for the 25 year period.
- 5.44 Figures from a study in Denmark state that for old model turbines the running costs are about 3 percent per year. They do state that modern turbines may have costs lower than this. Using 3 percent of the total amount paid for electricity production and ROC this gives a figure of nearly £6,000,000. Thus the profit (before taxation and interest) for the developer, based on current figures, would be £136,000,000 or nearly £5,500,000 per year. This is before any other costs such as interest which, based on an interest rate of 6 per cent, would be in the region of £3 million per annum. It is impossible to estimate what further costs will be incurred.
- 5.45 In the case of this development it would appear that any profits would go direct to a German company and would not have any benefits to the UK economy, let alone the regional economy.
- 5.46 Compare this with the bio-mass proposal at Drax. This is a FTSE-listed business whose shares will be held by pension funds, institutional investors, individual investors and staff of the company. Profits are generally distributed by way of dividends and a successful company has an increase in its share prices. The dividends and rise in share price benefits local people (e.g. employees who own shares) and people across the whole of the UK who invest in the stock market whether directly or indirectly (such as pension funds). Community-owned wind turbines (as laid out in the Selby Renaissance Plan) would at least generate these profits back into the local community.
- 5.47 If the proposal goes ahead there will be massive losses of money to the local community and to the UK as a whole.

#### **CO2 Savings**

- 5.48 The Applicant claims that the CO2 savings of the proposal are between 40,860 and 51,038 tonnes of CO2. This is calculated on the assumption that every unit of electricity produced displaces a unit of electricity produced by a coal- or gas-powered method of generation.

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- 5.49 Wind speed is acknowledged as highly variable over short periods of time. The speed of the wind can alter from minute to minute and its direction can change on a regular basis. This is not true of coal- or gas-produced electricity. In order to ensure a continuation of supply the grid has to have shadow power to be able to replace the wind at a moment's notice. Thus fuel still needs to be burned by coal power stations as it is impossible to ramp up the production of electricity at short notice. So although it is true that the power station will not be producing electricity when the wind blows, it will still be needing to burn fuel even if this fuel is not used to produce power. Thus to calculate the CO<sub>2</sub> savings without taking into consideration the fact that fuel is being burned but not producing electricity does not show the true CO<sub>2</sub> savings (even if it is in accordance with guidance for the calculation of CO<sub>2</sub> savings approved by DEFRA and BWEA).
- 5.50 Numerous papers are available publicly on this matter written by engineers and scientists. Some of these have calculated that the actual CO<sub>2</sub> saving is approximately 5-10 per cent of the approved figures which would give a CO<sub>2</sub> saving of 4086 to 5103 tonnes per annum. This equates to the average CO<sub>2</sub> produced by 330 to 411 average households.
- 5.51 This is supported by statements made by Flemming Nissen (Head of Development at Danish generating company ELSAM) who is quoted as saying that "*wind farms do not reduce carbon dioxide omissions*". Denmark has a wind capacity of approximately 20% of its power needs and reports state that it has yet to close a single fossil fuel plant, and that CO<sub>2</sub> omissions have actually risen (36% in 2006).

### **Contribution to Renewable Energy Targets**

- 5.52 As can be seen in Table 5.1 above, Selby has already beaten its 2010 and 2021 targets by the use of its skill base to generate power from steam and heat. If the Drax bio-mass plant is approved it could, by 2015, have a capacity of 822MW renewable energy against a target of 32MW (nearly 2600% over its target). This will be in excess of the target for North Yorkshire, and Selby will have more than contributed to Yorkshire's and the country's targets.

### **Food Security**

- 5.53 Much has been said in the press recently about issues with UK food security. To give over good quality arable land to the turbines would help to accentuate this problem.

### **Wind Speed in the Selby Area**

- 5.54 The BWEA's own map of the UK shows that the average wind speed in the area at 25 m is between 5 and 6 metres per second. This is the second lowest classification on the map. This map shows that there is very little of the UK that falls into the lowest category (below 5) and that a significant part of the UK is in a category where the wind speed is in excess of the proposed development. Thus for the Selby area wind turbines are a poor choice for renewable energy.
- 5.55 The on-shore UK average for 2007 is 27.3% (BERR). However, existing wind turbines in the Tees Valley (which is not too distant from the proposed site) have very poor load factors, for example High Volts (Elwick) 21.4%, Hare Hill 21.9%, Holmside 16.7%. Clearly, they are a poor choice for the Selby area. They are unreliable and insufficient producers of electricity.

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## **Overall Conclusion**

- 5.56 PSS22 states that Local Authorities should include policies for renewable technologies most appropriate to the needs for economic growth. Selby has complied with this in their Renaissance document with a bias towards steam and heat turbines. The proposal fails to meet the Council's objectives in accordance with PPS22.**
- 5.57 The proposal fails with regard to the need for economic growth and is not a scheme which brings economic or social benefits to the area (Yorkshire and Humber Plan Y1, E1, and E7).**
- 5.58 The proposal would bring very few if any local jobs.**
- 5.59 The proposal is likely to cause economic loss to the area estimated at over £750,000.00.**
- 5.60 If the Drax bio-mass planning proposal is approved, Selby has potentially exceeded its 2021 target by 2500 per cent and could, on its own, have achieved the 2021 North Yorkshire target for renewable energy using steam and heat generation power plants, all of which bring economic benefit to the area, and potentially over 270 new jobs.**