

**DELEGATED**

**AGENDA NO  
PLANNING COMMITTEE**

**DATE 2 August 2006**

**REPORT OF CORPORATE DIRECTOR OF  
DEVELOPMENT AND NEIGHBOURHOOD  
SERVICES**

**05/3275/REV**

**BISHOPSGARTH SCHOOL, HARROWGATE LANE, STOCKTON-ON-TEES  
REVISED APPLICATION FOR THE INSTALLATION OF A THREE BLADED WIND TURBINE  
WITH MAXIMUM TIP HEIGHT OF 47.5M IN SOUTH WEST CORNER OF SCHOOL GROUNDS  
AND ERECTION OF 3M HIGH PERIMETER FENCE.**

**Expiry date: 20<sup>th</sup> January 2006**

### **SUMMARY**

Planning permission is sought for the erection of a wind turbine having a maximum height of 47.5m, on land to the west of Bishopsgarth School on Harrowgate Lane. The turbine would provide electricity to the school and is intended to be sited for a period of 15 years after which time the turbine would be either decommissioned or an application would be submitted for another installation.

A total of eight letters of objection from surrounding residents have been received in respect to the proposal with the objections focussing on the potential noise of the turbine and its visual impact within the landscape.

Objections have been raised by T mobile in respect to interference with a nearby telecommunications tower and by Durham Tees Valley Airport in relation to possible disruption to radar, although the Airport have advised the objection could be reduced subject to mitigation. The agent for the application has had assessments of the impacts on these two operators. Neither objector has given a technically supported objection or advised of what precise mitigation would be required. As such, it is considered that the mitigation of the impacts cannot be addressed.

The Civil Aviation Authority have advised that the development would appear on the Durham Tees Valley Airport radar as general clutter and advised that the airport are the experts on the precise affects of this, advising that their views are key. The Civil Aviation Authority further advised that based on the size of the turbine, it being a single turbine and its distance from the airport that the impacts of the turbine could be assessed sympathetically.

National Air Traffic Services (NATS) have raised no objection to the proposed development.

The application has been supported by noise assessments carried out. Based on these, it is considered that the estimated noise levels generated by the proposed turbine would not detrimentally affect the surrounding properties or indeed the operation of the school.

The impact on the landscape has been considered by the Councils Landscape Officer following the submission of a photomontage. Based on this no objection has been raised.

In view of all of the above, it is considered that the proposed development would not have a significant detrimental impact on residential amenity or on the wider landscape character in general. Furthermore, it is considered the two objections received from Durham Tees Valley Airport and T Mobile have not been supported technically and no mitigation recommendations have been forthcoming. As such, it is considered the Local Planning Authority is not in a position to refuse the

proposal based on these objections. As such, it is considered the proposed development accords with policies GP1, EN41, EN42 and REC1 of the Borough Local Plan.

## **RECOMMENDATION**

**Planning application 05/3275/REV be approved subject to the following conditions;**

- 1. The development hereby approved shall be carried out only in accordance with the submitted application, the following document(s): plan SBC001, Environmental Report: Bishopsgarth Secondary School Wind Turbine November 2005 and its associated appendices and the aviation chapter  
Reason: To ensure that the development is carried out in accordance with the approved documents.**
- 2. This consent is granted for a temporary period of 15 years from the date hereof when, unless the renewal of consent has been sought and granted previously, the turbines and their ancillary development hereby approved shall be removed and the land reinstated to its former condition in accordance with details to be submitted to and approved in writing by the Local Planning Authority. Reinstatement works shall be undertaken within a 6 month period immediately following the expiry of this permission.  
Reason: The development is such that it could not be approved for permanent development.**
- 3. Before the turbines condensers associated with the development hereby approved are brought into use a noise attenuation scheme shall be carried out and submitted to and approved in writing by the Local Planning Authority. The scheme should detail mitigation measures to attenuate the noise that will be emitted from the turbine, showing existing ambient noise level in broad-band and spectral near the noise sensitive premises and compare with the noise levels that would exist following installation of the turbines. The development shall be carried out in accordance with the approved scheme.  
Reason: In the interests of preventing noise pollution**
- 4. The development hereby approved shall not be brought into use until a scheme of means of enclosure has been submitted to and approved in writing with the Local Planning Authority which indicates the precise location, style and height of enclosures. The scheme shall be carried out in accordance with the proposed details.  
Reason: In the interests of visual amenity and to accord with Policy GP1 of the Stockton on Tees Local Plan.**
- 5. No development shall take place until a report detailing a scheme for the investigation and alleviation of any electromagnetic interference to TV reception, which may be caused by the operation of the wind turbines hereby approved, has been submitted to and approved in writing by the Local Planning Authority. The recommendations stated in the report shall be followed and, where necessary, any upgrading works implemented throughout the period during which the turbine is operational.  
Reason: In the interests of safeguarding the amenity of nearby residents.**
- 6. Prior to the commencement of the development full details of the surface treatment and construction of all hard surfaced areas associated with the development shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall be carried out in accordance with the approved details.**

**Reason: To enable the Local Planning Authority to control details of the development in the interests of visual amenity, and to comply with Policy GP1 of the Stockton on Tees Local Plan.**

- 7. Notwithstanding the submitted plans and prior to the commencement of the development, details of the exact model and specification of the turbine including colour finish and noise generation shall be submitted and approved in writing by the Local Planning Authority:**

**Reason: To enable the Local Planning Authority to control details of the development in the interests of visual and residential amenity, and to comply with Policy GP1 of the Stockton on Tees Local Plan.**

- 8. Prior to commencement on site the Ministry of Defence and Durham Tees Valley Airport shall be informed in writing of the following;**

**Construction start date**

**Construction end date**

**The maximum height of equipment**

**If the turbines will be lit and the precise grid reference of the turbine**

**Should any details change during the phase of the development then the Ministry of Defence and Durham Tees Valley Airport shall be informed in writing immediately.**

**Reason: In the interests of safety**

- 9. Notwithstanding details hereby approved, the turbine shall be located a minimum distance of maximum turbine height + 20m away from the line of the adjoining overhead power lines.**

**Reason: In the interests of safety.**

- 10. Notwithstanding details hereby approved, the turbine shall be fitted with equipment which can detect any imbalance of the rotor blades which might be caused by the icing of the blades and which would prevent the rotors from turning in such conditions. The turbine will be maintained in a manner to ensure this safety feature is always operational.**

**Reason: In the interests of the safety**

### **THE PROPOSAL**

Planning consent is sought for the erection of a single wind turbine over a period of fifteen years at the Bishopsgarth School site on the northwestern edge of Stockton on Tees. The precise siting of the turbine is on the school fields approximately 185m to the west of the school buildings on the western side of Harrowgate lane. The turbine is specified as having a maximum height to blade tip of 47.5m and an installed capacity of 132kw although the precise turbine has not yet been selected.

The lifespan of the turbine is anticipated as being 15 years after which period it would be intended to either decommission the site or re power it with the necessary consents.

The turbine would be connected to the schools electricity supply via the on site sub station located in one of the school buildings.

The objectives of the turbine are;

- Allow the school to be more self sufficient in terms of their electricity supply;
- To generate clean, renewable energy thereby reducing gas emissions;
- To provide an on site educational resource allowing pupils to gain first hand experience of renewable energy;
- To produce a small return to Bishopsgarth School though the possible sale of electricity to the national electricity market,
- To support expanding renewable energy based industries in the northeast region.

It is proposed to erect 2.5m high fencing around the base of the turbine.

## **CONSULTATIONS**

The following Consultations were notified and any comments they made are below: \_

### **Councillor F G Salt**

### **Councillor R Cook**

#### **Environmental Health Unit**

Mike Chicken, Environmental Projects manager

Supports the application on the basis that it supports the delivery of 10% renewable energy generation target within the Borough by 2010, although suggests the comments made by Steve Smith are taken into account in respect to noise.

#### **Environmental Health Unit**

I have no objection in principle to the development, however, I do have concerns regarding the following environmental issues and would recommend the conditions as detailed be imposed on the development should it be approved.

Noise disturbance from wind turbines affecting adjacent premises

Before the turbines condensers are brought into use a noise consultants report should be submitted to the Local Planning Authority detailing mitigation measures to attenuate the noise that will be emitted. The survey should show the existing ambient noise level in broadband and spectral near the noise sensitive premises and compare with the noise levels that would exist following installation of the turbines.

#### **Landscape Officer**

I refer to additional information received from the applicant on 5 May 2006, concerning the above, and comment as follows:

I have no objection to the revised location of the turbine.

#### **Service Stockton**

No adverse comments

#### **Development Plans Officer**

In principle the Local Plans team have no objection to the erection of a single wind turbine or the associated fence providing the applicant can demonstrate to the satisfaction of the council that the policy criterion of relevant policies has been met. It is understood there is an objection from Durham Tees Valley Airport and unless this objection can be resolved then the application does not meet criterion ii of Policy EN2 of the Structure Plan.

#### **Engineers And Transportation**

I have no adverse comments to make regarding this application

#### **Care For Your Area**

I would like to confirm that Service Stockton do not have any adverse comments to make in regard to the application mentioned above.

#### **Corporate Director Children, Education And Social Care**

#### **Parks And Countryside Officer**

#### **Development And Regeneration**

#### **The Environment Agency**

The Agency has no objections to the proposed development as submitted.

**Durham And Tees Valley Airport**

Object as the scheme may degrade primary radar returns which could affect aircraft safety. Should a solution be found the grounds for objection would no longer exist.

We still have the same concerns over the turbine in that it will affect our radar picture, however if the developer is willing to accept that if any remedial work is required on the radar system that could reduce or eliminate returns from the turbine, we could reduce our objection.

I have passed on your previous e-mail to our MD and am awaiting a reply.

**Ministry Of Defence**

The MOD does not have any concerns providing that the application is for a single turbine and does not exceed 47.5m. The MOD request that if the application is approved that they are advised situation so that this can be plotted on their flying charts.

**Newcastle Airport**

Given the distance from the airport and the height of the turbine we have no objection to the proposed development.

**Civil Aviation Authority**

Have made various comments about the need to consult with Durham Tees Valley Airport and the implications of a wind turbine in respect to 'radar clutter'. It is advised that the proposed development needs to be considered against other proposals within the vicinity of DTVA and the cumulative affect. The CAA concludes that they would hope that given the nature of this proposal, the impact of this turbine could be assessed sympathetically.

**National Air Traffic Services (NATS)**

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS has no safeguarding objection to the proposal.

**RSPB****Tees Valley Wildlife Trust****English Nature**

No substantive comments

**Spectrum Planning Group BBC**

I have a note that I replied to you by email on 23 February but just to confirm that we have no objection to the slightly revised location

**NTL Broadcast****NEDL**

No objections

**Sport England**

Summarised:

Sport England does not wish to raise objection to this proposal as the proposed development affects only land incapable of forming or forming part of a playing pitch and does not result in the loss of or inability to make use of any playing pitch.

**Northumbrian Water Limited**

No objections or comments

**The Ramblers Association**

We have no comments.

**Highways Agency**

No objection in principle although indicate the authorities Highways Authority should be consulted.

**Thus Plc**

No response received

**Hutchinson**

This proposal will not affect any of our links

**T-Mobile UK**

I have reduced the fresnel zone calculations and while they don't quite correlate they aren't too far away. The concerns we have are based on the accuracy of the GPS Co-ordinate. But which advice from Peter Smith (Head of UK Transmission strategy) we can reluctantly accept this proposal from a transmission perspective.

For any cell planning objections please continue to lease with Mark Eden.

**National Grid Wireless**

National Grid wireless is responsible for the BBC's transmission network and RBL's in certain areas. The proposed wind farm is in an area for which we have responsibility. Having considered the impact of the proposal we have no objections.

**BBC**

Advise the development is likely to affect television reception to 235 homes.

**Spectrum Planning Group BBC****Radio Communications Agency****OFFCOM**

Have advised that 4 operators may be affected and that contact should be made with each.

**Orange Plc**

No objections

**Cable and Wireless**

No objections

**National Grid**

The National Grid has no objection in principle to the proposed wind farm at this site. It is advised however that the turbine be located to achieve sufficient falling distance away from the overhead line and should be a minimum of 20m in excess of the overall tip height of the structure.

**Northern Electric**

No objections

**BT**

The proposed development should not interfere

**Joint Radio Company (on behalf of UK fuel and Power)**

Do not foresee any problems

**Neighbours were notified and the comments received are below: -**

A total of eight letters of objection were received from residents of Harrowgate Lane, Marske Lane, Bothal Walk, Whinfield Close and Letch Lane Carlton. Objections are summarised as follows;

- The traffic on the lane is already non-stop and the development will cause more traffic and pollution.

- Change and loss of view and noise pollution,
- Objection on the grounds of noise, visual pollution, devaluation of property, distraction of road users and subsequent risk to highway safety. It is suggested that there have been traffic related fatalities linked to distraction as a result of wind farms. The proposal would therefore be contrary to the Local Plan in that it would result in pollution and hazard.
- Furthermore, interference to television and radio is considered to be unacceptable.
- We were told the site was a greenfield site and as such expected our views to be unaffected. Approving one turbine will give a green light to others and we disapprove of this development.
- The proposal will ruin the outlook from the property and suggests an alternative location away from people's homes is found.
- The pylons already spoil the view and we do not want any further eyesores. This is way too obtrusive. The noise generated by the turbine motor would be equally disturbing. Such an installation would be better sited on an industrial estate.

### **PLANNING POLICY CONSIDERATION**

Where an adopted or approved development plan contains relevant policies, section 54A of the Town and Country planning Act requires that an application for planning permission shall be determined in accordance with the Plan, unless material planning considerations indicate otherwise.

The relevant development plan in this case is the adopted Stockton on Tees Local Plan.

#### **Policy GP1**

Proposals for development will be assessed in relation to the policies of the Cleveland Structure Plan and the following criteria as appropriate:

- (i) The external appearance of the development and its relationship with the surrounding area;
- (ii) The effect on the amenities of the occupiers of nearby properties;
- (iii) The provision of satisfactory access and parking arrangements;
- (iv) The contribution of existing trees and landscape features;
- (v) The need for a high standard of landscaping;
- (vi) The desire to reduce opportunities for crime;
- (vii) The intention to make development as accessible as possible to everyone;
- (viii) The quality, character and sensitivity of existing landscapes and buildings;
- (ix) The effect upon wildlife habitats;
- (x) The effect upon the public rights of way network.

#### **Policy REC1**

Development which would result in the permanent loss of playing space will not be permitted unless:

- (i) Sports and recreation facilities can best be retained and enhanced through the redevelopment of a small part of the site, or
- (ii) Alternative provision of equivalent community benefit is made available, or
- (iii) The land is not required to satisfy known local needs.

#### **Policy EN11**

The planting of trees, of locally appropriate species, will be encouraged within the area indicated on the proposals map as community forest. In considering applications for planning permission in the community forest area, the Local Planning Authority will give weight to the degree to which the applicant has demonstrated that full account has been taken of existing trees on site, together with an appraisal of the possibilities of creating new woodland or undertaking additional tree planting. In the light of the appraisal the Local Planning Authority will require a landscaping scheme to be agreed which makes a contribution to the community forest.

### **Regional Spatial Strategy**

#### **Policy 40 – Renewable energy generation**

Strategies, plans and programmes should:

- a) facilitate the generation of at least 10% of the region's consumption of electricity from renewable sources within the region by 2010 (454 MW minimum installed capacity);
- b) aspire to further increase renewable electricity generation to achieve 20% of regional consumption by 2020;
- c) require new developments, particularly major retail, commercial and residential, to have embedded within them a minimum of 10% energy supply from renewable sources; and
- d) facilitate the achievement of the following minimum sub regional targets to 2010:
  - Northumberland 212MW
  - Durham 82MW
  - Tyne & Wear 22MW
  - Tees Valley 138MW

#### **Policy 41- Planning for renewables**

Strategies, plans and programmes should support and encourage renewable energy proposals and identify renewable resource areas. In assessing proposals for renewable energy development the following criteria should be considered:

- a) wider environmental, economic and social benefits;
- b) anticipated effects resulting from development construction and operation such as air quality, atmospheric emissions, noise, odour, water pollution and the disposal of waste;
- c) acceptability of the location and the scale of the proposal and its visual impact in relation to the character and sensitivity of the surrounding landscape;
- d) effect on the region's World Heritage Sites and other national and internationally designated sites, areas or their settings;
- e) effect of development on nature conservation features, biodiversity and geodiversity, including sites, habitats and species;
- f) maintenance of the openness of the region's Green Belt;
- g) accessibility by road and public transport;
- h) effect on agriculture and other land based industries;
- i) visual impact of new grid connection lines;
- j) cumulative impact of the development in relation to other similar developments; and
- k) proximity to the renewable fuel source such as wood-fuel biomass processing plants within or close to the region's major woodlands and forests.

#### **Policy 42 – Onshore Wind Development**

Strategies, plans and programmes should provide a positive policy framework to facilitate onshore wind development within the following broad areas of least constraint for wind energy developments:

- a) Kielder Forest has the potential to become a Strategic Renewables Resource Area, including large scale wind energy development;
- b) the following areas have potential for medium scale development:
  - South and West Berwick upon Tweed
  - North/ South Charlton
  - Knowesgate
  - Harwood Forest
  - Northern Coalfield south of Druridge Bay
  - Kiln Pit Hill
  - North Durham Upland Coalfield
  - South Durham Upland Coalfield
  - Tees Plain
  - Teesside/ Tees Estuary

Small wind farms in urban areas and on the urban rural fringe should also be supported, particularly within the following areas:

- Sunderland;
- South Tyneside; and
- Tees Valley.

The broad locations of these areas should be identified within Local Development



Frameworks. Other areas will be judged subject to assessments of local impact.

## **Tees Valley Structure Plan**

### **Policy EN2**

Renewable energy projects will generally be supported provided the implications of the following criteria are taken fully into account:

- i) impact on the landscape, visual amenity and areas of ecological or historic importance;
- ii) impact on local communities and existing and proposed developments;
- iii) traffic implications, and proximity to roads, railways and airports;
- iv) noise implications;
- v) effect on the best and most versatile agricultural land;
- vi) the extent to which the proposal helps to achieve wider environmental benefits such as reducing harmful emissions in the atmosphere;
- vii) the way in which the proposal assists in achieving national targets of new electricity generating capacity from renewable energy sources; and
- viii) the environmental impact of any additional transmission requirements.

### **Policy EN2a**

Borough Councils will take a proactive approach to encouraging small-scale renewable energy generation and domestic energy saving through their local plans, supplementary planning guidance and other activities.

## **SITE AND ITS SURROUNDINGS**

The site is immediately adjoining the open countryside in a position where there are overhead pylons to the west and a telecommunications tower to the north. Housing lies to the south and to the eastern side of Harrowgate Lane. There is a pocket of woodland to the north of the site and various field boundaries and tree cover within the locality generally. The largest structures within the area are the adjacent pylons to the west, the telecommunications tower to the north and North Tees hospital to the east (77m, 205m and 930m in height respectively).

## **PLANNING CONSIDERATIONS**

The consideration of wind turbine proposals is a balance between Government Policy and commitment to the development of renewable energy resources, with a general aim of reducing carbon dioxide emissions in line with international agreements, and the protection of the environment and residential amenity of any neighbouring occupiers. In assessing the application careful consideration was given to the responses from specialist consultees, interested parties and local residents. It is considered that the key issues in this case are:

- Whether the development is in accordance with National and Local Policy
- Landscape and Visual Impact
- Impact of noise on residential amenity
- Impact on Nature Conservation
- Safeguarding issues
- Health, Safety and other issues

## **NATIONAL AND LOCAL POLICY**

Achieving the commitments as contained within PPS22 and the Energy White Paper will require at least 40% of electricity to be generated from renewable sources by 2060. In the shorter term the Government is committed to the achievement of 10% renewable electricity by 2010 and is aiming for 20% by 2020. The Regional Spatial Strategy for the northeast has a sub regional target for Tees Valley for the provision of 138MW generation by 2010 of which this proposal would provide for approximately 0.96%.

This guidance states that renewable energy development should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic and social impacts can be satisfactorily addressed. There is an acceptance that turbine siting will always be a compromise between maximising energy capture and minimising visual impact.

The Regional Spatial Strategy includes a plan, which identifies the broad areas of least constraint for onshore and off shore wind resource areas, which is intended as a guide to appropriate turbine locations. These generally fall along the east coast, having a medium resource area being identified between Hartlepool and Stockton. The application site lies to the south of the identified area. The RSS states however that this does not remove the need to consider the potential for onshore wind developments in other parts of the region. Proposals for onshore wind development within and outside these broad areas should be assessed against the criteria contained within policy 41 of the RSS.

Policy 41 of the Regional Spatial Strategy lists criteria against which such proposals should be considered which are replicated within Policy 2A of the Tees Valley Structure Plan, although also indicates the need to consider the cumulative impact of such proposals.

The adopted Tees Valley Structure Plan contains policies, which relate to the provision of renewable energy projects. Policies EN2 and EN2a of the plan indicate that renewable energy projects will generally be supported provided;

- the implications of the impact on landscape, local communities, traffic, noise, agricultural land,
  - the extent to which the proposal helps to achieve wider environmental benefits,
  - the way in which the proposal assists in achieving national targets of new electricity generating capacity from renewable sources and
  - the environmental impact of any additional transmission requirements;
- are fully taken into account.

Policy 2a requires Borough Councils to take a proactive approach to encouraging small-scale renewable energy generation and domestic energy saving through their local plans, supplementary planning guidance and other activities.

As the proposal relates to only a single turbine, for the purposes of the Tees Valley Structure Plan and the Regional Spatial Strategy, the proposed development would be classed as a small-scale proposal.

### **Landscape and visual impact**

Wind turbines, by their very nature, have a significant visual impact but the visual impact will affect each resident differently, having individual perceptions as to whether they are a positive addition to the landscape or merely a blot on the landscape.

Clearly, the turbines are going to be visible over a wide area, however this does not necessarily mean that they are visually harmful. The interruption of a view is going to be, although sometimes regrettable, inevitable if wind turbines are to be constructed within the region. Therefore the issue is whether the turbines would have an oppressive and overbearing impact on residential properties and the amenity of the surrounding area.

With larger turbine schemes it is commonplace for wire frame modelling and photomontages to be undertaken from surrounding areas in order to assess the impact on the wider landscape. In the assessment of this proposal the Councils Landscape Officer considered a photomontage was required in order to fully assess the proposal. The agent has submitted a photomontage of the proposed turbine as viewed from Harrowgate Lane. This is effectively the nearest vantage point from the turbine, being approx 330m away. Other surrounding properties and vantage points are distanced from the turbine as follows (distances are given as approximate);

Nearest residential property on Harrowgate Lane (East of site)	330m
Residential properties to the south of the site	700m
Properties on Letch Lane (north of site)	800m & 1000m
Carlton Village	1600m

The agent considers that in view of existing pylons within the landscape setting (which are stated as being of a similar height), the overall height of the proposed turbine and the distance from the surrounding houses, the turbine would not dominate the views of residents.

The visibility of the turbine will not be determined by topography alone as other elements in the landscape act as screens such as buildings and woodland. This is particularly important in relatively flat terrain. It is clear that the turbine will be visible from Harrowgate Lane; however, the views from greater distances will become more intermittent or completely screened.

Between the proposed turbine and the nearest residential properties on Harrowgate Lane there are hedgerow trees and the school building which will break up the views of the turbine, although, due to the relatively flat nature of ground here the turbine will be clearly visible.

As viewed by properties to the south, the turbine becomes more distant and more intermittent as a result of greater tree cover on the north side of Darlington Back Lane.

It is considered that as a result of the overall height of the turbine and the intervening distances between the turbine and residential properties that the proposed development would not have a significant impact on the visual amenity of the area, being in accordance with Policy EN42 of the Borough Local Plan.

In terms of the cumulative impact of wind turbines on the landscape there are no other approvals or applications within this particular area of Stockton for turbines of a similar or greater magnitude. The turbine will however have a cumulative impact with the existing pylons to the west of the site. However, these are very different structures, one being static and an existing long-standing feature of the landscape and the other being a modern development with moving blades. As such, given the scale of the proposed development, it is considered that this proposal would not have an undue cumulative impact.

### **Noise**

A background noise survey was undertaken in November 2005 over daytime and nighttime periods, which is used for comparative purposes against the predicted levels of noise from the wind turbine. The noise survey was carried out at the caretakers office located approximately 40m from the entrance to the school. The survey was conducted outside approximately 1m above ground level.

The location of the proposed turbine is approximately 330m from the nearest residential property on Harrowgate Lane. The Environmental Report advises that the predicted noise levels from the turbine likely to be experienced at the closest property have been calculated to be La90 33.8dB at a wind speed of 8m per second. Comparison is taken from the background noise level survey, which established a nighttime La90 reading of between 38.2dB to 42.1dB in wind speeds of less than 5m per second. The predicted noise level of the turbine is therefore approximately 5 dB(A) lower than that of the existing background noise levels. In addition, the background noise level readings were taken at a wind speed of 5m/s as against the 8m/s used to calculate the estimated turbine noise level. As such, the background noise levels would be likely to be greater than those recorded during the wind speed of that used to calculate the turbine noise levels and the predicted difference between the two would be greater.

The table below indicates the predicted noise generated by the proposed wind turbine against other well-known noise sources in order to help give an understanding of the likely level of noise:

#### Source / Activity

Indicative noise level db(A)

- Threshold of pain = 140
- Jet aircraft at 250m = 105
- Pneumatic drill at 7m = 95

- Truck at 30mph at 100m = 65
- Busy general office = 60
- Car at 40mph at 100m = 55
- Quiet bedroom = 35
- **Wind farm at nearest residential property on Harrowgate lane (330m) = 33.8**
- Rural night-time background = 20 - 40
- Threshold of hearing = 0

Source: TNEI Services - reproduced from PPS22 Companion Guide

With regard to the noise level inside classrooms associated with the school, the environmental statement advises that the noise levels experienced outside the closest school building (approx 185m distance) would be 42dB(A), which would equate to a 27dB(A) internal reading. It is advised that the World Health Organisation provide a guideline value for noise inside a classroom as 35dB(A).

The environmental report concludes that the predictions have shown the level of operational noise likely to be experienced at the closest residential property and inside the school building are within the recommended guideline limits.

The Councils Environmental Health Officer has assessed the report and has raised no objection or concern in respect to the proposed development. The predicted wind speed dependent noise levels at the properties nearest the site are generally lower than the existing background noise levels at the same wind speed and it is considered that noise from the wind farm would not be detrimental to the amenity of local residents.

### **Impact on nature conservation**

The site is located on an open field away from any areas of nature conservation interest and should not result in the destruction of any designated habitat. English Nature was consulted on the proposed development prior to its submission in May 2005. They responded as having no substantive comments to make.

### **Air Traffic Safety**

The application has been supported by an aviation study carried out by PagerPower in respect to the proposed developments impact on Durham Tees Valley Airport. The study takes into account the airports primary radar, its location, height, the radar type and the nature of the service, which it provides. It is indicated that Durham Tees Valley Airport provides an Air Traffic Control service to traffic arriving at and departing from the airport and a 24hr lower airspace radar service (LARS) to a distance of 40 nautical miles. It is further advised that the radar display equipment normally presents information to the controller from both primary and secondary radar. The secondary radar is indicated as coming from the National Air traffic en-route radar at Great Dun Fell.

National Air Traffic Services have advised that they have considered the proposed development from a technical safeguarding aspect and do not conflict with their criteria. Accordingly NATS have no safeguarding objection to the proposal.

Durham Tees Valley Airport (DTVA) have raised an objection to the proposed development, indicating that they are concerned that the turbine will affect their radar picture although advise that if the developer is willing to accept remedial works on the radar system then the objection could be reduced. The airport have been specifically asked to support this objection with technical information based on the Aviation report submitted by the applicant and to advise what mitigation is required. The airport has submitted no such information and the Local Planning Authority are therefore unable to consider the detail of the objection.

The Civil Aviation Authority were also consulted on the proposed development and specifically on the report carried out by PagerPower, which assesses the potential impact of the turbine on the nearby Durham Tees Valley Airport. The CAA advise that the credibility of the PagerPower report depends at least in part upon the verification of its conclusions by the Airport, and that this is a planning matter and it is for the Local Planning Authority to make the final decision although

stresses the view of the airport in such cases as they are the local experts and are responsible for the safeguarding of the airport. The CAA does advise however that they are keen to ensure that such planning applications are considered in a consistent way reflecting valid aeronautical concerns.

The CAA has assessed the PagerPower report and in general agrees with the comments made, advising that:

'there is no debate as to whether or not the turbine would be visible to the radar which is inevitable given the clear line of sight and location just over 5 miles from the airfield. As it is a single turbine the degree of radar clutter generated will not be particularly significant if assessed in isolation. Furthermore, as a single turbine it will not generate the particularly distracting effects to controllers which multiple turbine developments create. It is also unlikely that given the size of the clutter generated, which lies within airspace managed by Durham Tees Valley, that an unknown aircraft would be obscured; particularly as the location of the turbine lies some distance from the boundary of the Class D airspace which protects DTVA'.

'whilst on the face of it clutter from a single turbine may not be significant, it needs to be assessed in the light of its impact on the actual operation, particularly in relation to the radar vectoring of traffic. Furthermore, it will need to be assessed in relation to proliferation of wind turbine developments within the vicinity of DTVA and the cumulative effects they create. Because of this it is essential that the view of DTVA in relation to this report is obtained. I would hope however, that given the nature of this proposal, the impact of this turbine could be assessed sympathetically'.

Taking the response of the civil Aviation Authority into account and the lack of supported objection of Durham Tees Valley Airport it is considered that the proposed turbine would not significantly affect Durham Tees Valley Airport radar whilst its impact could be mitigated against. However, without specified mitigation measures been recommended by the Airport following a specific request it is considered this approval could not adequately condition mitigation requirements.

Newcastle International Airport and the Ministry of Defence have raised no objection to the proposed scheme.

### **TV Interference**

Although technological advances in transmission are taking place, which should eventually eliminate problems of interference with wind turbines and similar structures, wind turbines can cause interference to television reception. Having consulted with the BBC on this proposal, they have advised that 235 homes could be affected for which there is no alternative off air service. In such circumstances transmission interference could be mitigated against through the provision of a more sensitive receiver for householders, moving antenna to receive from a different source transmitter, a local rebroadcast facility could be provided or an alternative means of transmission such as satellite or cable could be used by affected households.

Due to the nature of the proposal it is impossible to accurately predict the precise impact on television reception and should planning permission be granted a suitable condition is suggested that would require any television interference problems to be rectified by the developer through an agreed mitigation scheme.

National Grid, Mobile Operators and other links

The National Grid have raised no objection subject to the proposed turbine being a minimum distance of the maximum turbine height + 20m away from the adjacent power lines in order to safeguard in the event of the turbines collapse. The environmental report submitted advises that the pylons are 77m away, which achieves this distance. A condition has been attached to ensure this.

T mobile initially objected to the scheme as a result of the proximity of the turbine to one of their fixed links. This objection has been withdrawn following further detailed consideration.

In view of the above and as a result of their comments received from other link operators within the area it is considered the proposed development would not have any detrimental impact on operators within the area.

### **Other Matters**

#### **Shadow Flicker**

Shadow flicker occurs when the turbine rotor is positioned between the sun and a receptor, in particular a narrow opening such as a window of a nearby residence. The probability of this occurring and the extent of such an effect depends on a number of factors including the orientation of the dwelling relative to the turbine, distance from the turbine, turbine hub height, rotor diameter, time of year and the proportion of daylight hours when the turbine operates.

The environmental report advises that it is accepted that shadow flicker does not occur at distances greater than the equivalent of ten times the rotor diameter, which in this case would be 200m. In view of the nearest property on Harrowgate Lane being 330m away it is considered shadow flicker would not be an issue.

#### **Wind Turbine Icing**

Wind turbine icing occurs when a turbine has been in operation for a period of time and ice forms on the rotor blades. Once the rotor blades commence turning the ice can come detached and fall to the ground. With regard to icing the companion guide to Planning Policy Statement 22 states:

'The build up of ice on turbine blades is unlikely to present problems on the majority of sites in England. For ice to build up on wind turbines particular weather conditions are required, that in England occur for less than one day per year. (See Wind Energy Production in Cold Climates (WECO) (ETSUW/11/00452/00/REP). In those areas where icing of the blades does occur, fragments of ice might be released from the blades when the machine is started. Most wind turbines are fitted with vibration sensors which can detect any imbalance which might be caused by icing of the blades, in which case operation of machines with iced blades could be inhibited'.

This is relatively reassuring although the turbine is located adjacent to the school fields. Although it would be unlikely that the school fields would be in active use during the periods when the air temperature is cold enough for ice to form, it never the less raises safety issues. As such, in order to mitigate against such issues a condition has been attached which requires the turbine to be fitted with a suitable device.

#### **Property Prices**

This is an issue that it is impossible to address as house prices are influenced by many factors. As such this issue cannot be treated as a material planning consideration when assessing the planning application.

### **CONCLUSION**

The proposed development, due to the scale of the turbine, would undoubtedly have an impact on the landscape and visual amenity of the area. Given the detailed Environmental Report and the content of the representation received it is considered that the proposed development would not be overbearing or detrimental to any residential amenity and that there would be minimal impact on the ecology of the area or on the residential amenity of any nearby occupiers in terms of noise or shadow flicker.

The impacts on surrounding operators within the area are not considered to be significant to a degree, which would require the refusal of planning permission.

The application has been fully assessed on its individual merits and within the context of national, regional and local planning policies. It is considered that the environmental benefits of the proposal outweigh its visual impact on the surrounding landscape.

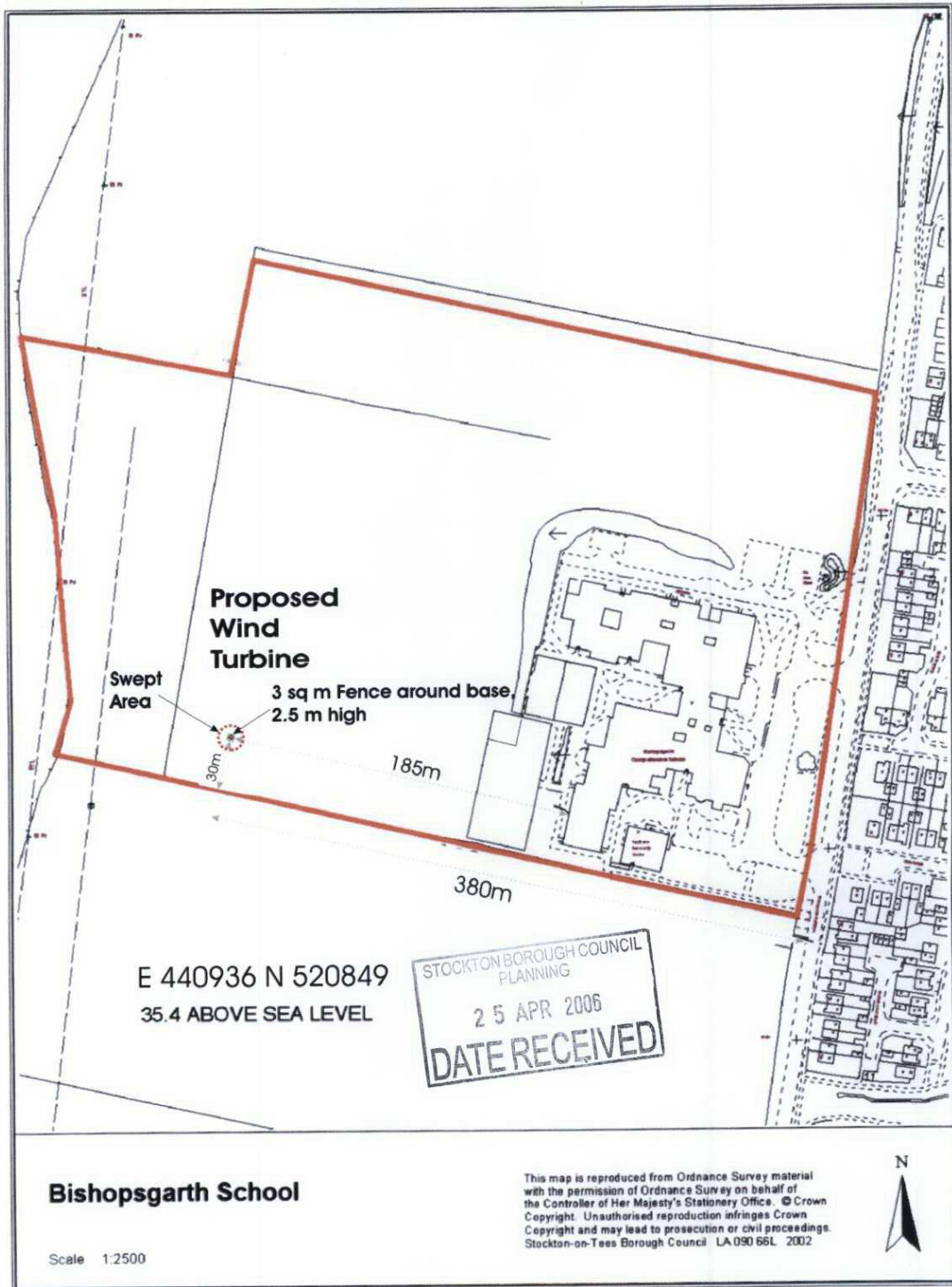
### **Human Rights Implications**

**The provisions of the European Convention of Human Rights 1950 have been taken into account in the preparation of this report**

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<b>Ward</b>	<b>Bishopsgarth And Elm Tree</b>
<b>Ward Councillor</b>	<b>Councillor Mrs S. Fletcher</b>
<b>Ward Councillor</b>	<b>Councillor J M Roberts</b>

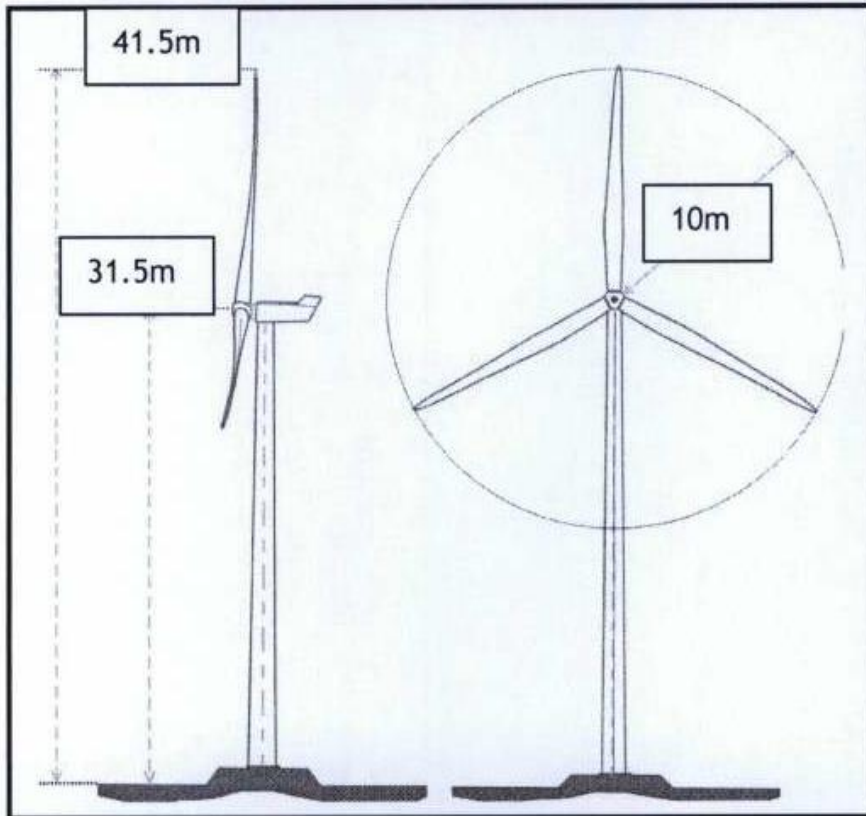
**Appendix ref. 1  
Site Location Plan  
05/3275/REV  
Bishopsgarth School, Harrowgate Lane, Stockton on Tees**



**Appendix ref. 2**  
**Indicative turbine detail**  
**05/3275/REV**  
**Bishopsgarth School, Harrowgate Lane, Stockton on Tees**



Figure 3: Seewind 132kW turbine dimensions



Appendix ref. 3  
Photo Montage  
05/3275/REV

Bishopgarth School, Harrowgate Lane, Stockton on Tees

