DARLINGTON BOROUGH COUNCIL

PLANNING APPLICATIONS COMMITTEE

COMMITTEE DATE: 10 November 2010 Page

APPLICATION REF. NO:	**09/00741/FUL**
STATUTORY DECISION DATE:	**20/01/10**
WARD/PARISH:	**Sadberge and Whessoe**
LOCATION:	**Moor House, Barmpton , Darlington**
DESCRIPTION:	**Erection of 10 wind turbines, one anemometer mast plus associated access tracks, crane pad and control building.**
APPLICANT:	**Banks Developments Ltd**

THE APPLICATION

This planning application relates to the erection of ten wind turbines in a rural location to the north of Darlington, midway between the villages of Barmpton and Great Stainton.

In summary, the proposal entails:

Ten wind turbine generators with a maximum height of 110 metres. Some will be 100 metres high to ensure the apparent heights are similar due to ground level undulations.

A control building measuring 16m x 6m (5m high) including electricity sub-station

Temporary laydown area and construction compound area

Construction of a new access to Bishopton Lane

Construction of 5 km of new access tracks

Construction of crane pads adjacent to each turbine

Underground electrical cabling

One “lattice type” anemometer mast with a maximum height of 80m

In detail the proposals will contain the following elements :

Turbines

Each of the 10 turbines proposed for the site will begin generating power at wind speeds of around 3-5 metres per second (m/s) and would shut down at wind speeds around 25 m/s. The applicants state that they will generate power for approximately 85% of the time.

Foundations

The turbine base would typically be an 18 metres x 18 metres square of concrete around 3.5 metres deep. Following construction, the layer of topsoil and turf originally excavated from the foundation area would be reinstated.

Wind Monitoring Mast

A new anemometer mast is required to monitor the performance of the wind turbines by gathering data on wind speeds and direction. The mast will be of a free standing steel lattice design and will be a maximum of 80 metres in height.

Access Tracks

To access and service the wind turbines, approximately 5 km of new access tracks will be constructed to link the turbines to the public road network. The tracks will typically be five metres wide and constructed from crushed stone.

Compound & Traffic

A temporary compound will be needed during the construction phase for the storage of plant and materials. Traffic travelling to and from the site will use an agreed route. The preferred access route for turbine delivery is from the A66 south of the site, onto Bishopton Lane for the latter part of the journey.

Cabling & the Grid Connection

Underground cables linking the turbines will generally be laid alongside the access tracks. A control building will be built in a compound area from which the electricity generated by the turbines will be fed into the local grid. The electrical output of the proposal is such that the grid connection will be routed a short distance to the North West of the site to join the national grid. If above ground this would be on wooden poles.

SITE DESCRIPTION

The application site consists of approximately 276 hectares of arable land of which 2.5 hectares will be occupied by the wind turbines and their associated infrastructure. There are some agricultural barns located within the site currently used for storage purposes. The area is gently undulating and includes a number of hedgerows of varying degrees of quality together with a scattering of individual trees. There is a small plantation of woodland on the eastern side of the site and a small SSSI beyond the northern boundary of the site.

The site is not subject to any landscape, ecological or cultural heritage designations which is one of the reasons the applicants have chosen this location. Within their Non Technical Summary the applicants give other reasons why Moor House has been chosen as follows:

A landscape assessment carried out on behalf of the North East Assembly demonstrated that this part of Darlington had 'some potential' for a wind farm in this location. Emerging planning policy in Darlington also identifies this part of the district as the area where turbines will have the least landscape and visual impact. In addition, the environmental statement demonstrates that the site has suitable highway access and is a sufficient distance from residential properties to protect residents from unacceptable noise or shadow flicker effects.
A detailed mapping exercise undertaken by Banks Developments has highlighted that there are few suitable sites for commercial wind energy development in Darlington. Once the various constraints to development were combined onto one map only seven areas in the borough area were identified. We have looked at each of these areas in more detail and in our opinion the Moor House site is considered to be the best site to accommodate a commercially viable wind farm development.

The features of the site area will be highlighted in more detail later in this report when the various impacts of the development are considered individually.

PLANNING HISTORY

There have been no previous planning applications on the land subject to this planning application.

PLANNING POLICY BACKGROUND

There are a number of planning policies that are relevant to wind turbine development and these are highlighted below where they relate to the Moor House proposals.

National Guidance.

Planning Policy Statement 1: Delivering Sustainable Development PPS1 sets out the Governments overarching planning policies on the delivery of sustainable development through the planning System. In addition there is a supplement entitled Planning and Climate Change which sets out how planning should contribute to reducing emissions and stabilising climate change.

Planning Policy Statement 7 Sustainable Development in Rural Areas (PPS7) sets out the Government's planning policies for rural areas, including country towns and villages and the wider, largely undeveloped countryside up to the fringes of larger urban areas.

Planning Policy Statement 9 Biodiversity and Geological Conservation (PPS9) sets out planning policies on protection of biodiversity and geological conservation through the planning system.

Planning Policy Statement 5 – Planning for the Historic Environment (PPS 5) sets out the Governement's policy on heritage protection including archaeological remains on land, and how they should be preserved or recorded both in an urban setting and in the countryside.

Planning Policy Statement 22 – Renewable Energy (PPS22) sets out the Government's policies for renewable energy, which planning authorities should have regard to when preparing local development documents and when taking planning decisions. Also the Companion Guide: Planning for Renewable Energy.

Planning Policy Guidance 24 – Planning and Noise (PPG24) guides local authorities in England on the use of their planning powers to minimise the adverse impact of noise. It outlines the considerations to be taken into account in determining planning applications both for noise-sensitive developments and for those activities which generate noise.

Regional Guidance

Members will be aware of the Government's decision to abolish Regional Spatial Strategies, including the North East RSS. Local Planning Authorities have therefore been instructed to disregard the documents when deliberating over planning applications and rely on existing and emerging local planning policies. Suffice to note here however that the North East RSS included targets for renewable energy generation within the Tees Valley sub region, and it was evident that it would fall well short of its target for 2010 and 2020 without a considerable increase in capacity.

The Local Development Plan

The Borough of Darlington Local Plan was prepared in the context of national planning guidance from the late 1990s. Adopted in 1997, it remains the development plan for the Borough with most of the policies 'saved' until replaced by new Local Development Framework policies. As such planning policy comments will relate to those relevant 'saved' policies but in the context of more up to date national and local planning guidance where it does not conflict with the 'saved' Local Plan policies. Government guidance recognises that in the interim period before the development plan is updated to reflect the policies in PPS1 Supplement, it is essential that the proposed development is consistent with government guidance.

Local Wind Farm Development Guidance:

Landscape Appraisal for Onshore Wind Development (GONE 2003).

Landscape Capacity Study for the East Durham Limestone area and the Tees Plain (North East Assembly and ARUP 2008 plus addendum).

RESULTS OF CONSULTATION AND PUBLICITY

This planning application has attracted a large amount of interest.

There have been many letters of objection to the proposals and these have taken the form of individual letters and pre written letters available online to print off and sign. There are a number of different versions of the pre written letters highlighting different issues.
There has also been a measure of support for the proposals and this have taken the form of template letters which are completed by members of the public and petitions signed by the public. A small number of individual letters of support were also received.

Objections

45 individual letters objecting to the proposal have been submitted raising the following issues:

- Loss of character to Bishopton Conservation Area from numerous schemes proposed.
- Arup report suggests 5km separation between wind farms – this and others nearby will be closer.
- Roads to the site not suitable for large scale development.
- Arup report says maximum number of turbine clusters should be 4 – 6.
- Cumulative effect of this and nearby proposals will exceed Arup's recommendations.
- Wind turbines are not efficient
- Noise impact both audible and low frequency will affect nearby properties.
- Property values will fall.
- Visual impact will be considerable – lower the height.
- Possible interference with TV and mobile phones.
- Impact on Sadberge – noise and visual – will be considerable.
- Danger to aircraft using nearby airport.
- Arup report indicates impact on Sadberge would be "severe".
- Aerodynamic Modulation noise possibly affecting nearby properties – noise report does not address this problem.
- Ketton will be severely affected – some turbines only 700 metres away.
- Loss of residential enjoyment due to "wind farm landscape" being created nearby. Gardens will become unusable.
- Detrimental impact on health from sleep depravation and shadow flicker.
- Impact on bats and other wildlife.
- Subsidies for wind power make other renewable options less attractive.
- Benefits of proposals should be ploughed back into local community.
- There will be an unacceptable increase in traffic on local roads.
- Wind turbines are inefficient – often not operating for extended periods.
- There are alternative renewable generation options which are less visually intrusive.
- Offshore options are less harmful to the landscape.
- All local villages will be affected by the cumulative impact of this and other proposals.
- Numerous proposals in the locality should be considered strategically not on a piecemeal basis.
- Ice may fall off blades in winter causing danger to the public.
- Loss of agricultural land.
- Wind farm should be located in less sensitive industrial areas.

- Why should these developments get approved in rural areas when other industrial proposals do not?
- Nuclear power should be supported more.
- Walkers and horse riders will be affected by the visual impact of the wind turbines.
- Detrimental impact on local rural businesses such as tourism and walking etc.

The local ward Member has stated his support for the objectors.

There were seven different types of pre written letters of objection submitted. A total of 203 of these letters were received and the issues raised therein reflect those listed above.

Letters / petitions of support.

The applicants have conducted two community consultation exercises during the course of processing the application. One in the Cornmill Centre the other as a door to door survey of dwellings in Darlington closest to the proposed development.

In the first they received 163 pre written letters within which reasons for support were given – see below. In the second they received 58 pre written letters of support and 26 signatures on a petition.

The reasons given for supporting the proposed development were:

- Green and cheap renewable energy to be supported.
- Not unattractive visually
- Helps slow down climate change – less pollution – better than coal and nuclear
- Electricity supplied by the UK
- Support providing they are not near houses.
- Helps meet renewable energy targets
- Promotes new jobs locally and nationally
- Better than power stations
- Need to catch up with other countries
- Better for wildlife
- Prevents fuel poverty

In addition five individual letters of support were received by Officers stating the following reasons:

- Turbines would make a valuable contribution to reducing carbon emissions.
- Most dwellings well away from noise impacts.
- Preferable to pylons everywhere.
- Many people like the look of wind turbines.
- Renewable energy needs outweigh impact on local landscape.
- Rural diversification.
- UK is the windiest place in Europe

A number of **Parish Councils** were consulted and the following objected to the proposed development:

- East and West Newbiggin
- Bishopton
- Great Stainton
- Little Stainton
- Sadberge
- Morden

In addition the Seven Parishes Action Group objects to the proposals. This group represents East and West Newbiggin, Bishopton, Great Stainton, Little Stainton ,Sadberge, Great Burdon and Redmarshall.

This Group commissioned a critique of the Environment Statement submitted by the applicants. Many of the comments relate to the location of the viewpoints in the photo montages, the standoff distances for dwellings, and the Environmental Statement methodology.

Both the applicants and Durham County Council Landscape section have studied the critique and conclude that the contents of the Environment Statement are acceptable in methodological terms and are content that the Statement gives a fair representation of the issues it covers.

Issues raised not already highlighted above include:

- Cumulative impact of a number of wind farms in this area will be visually overpowering.
- Proposals are contrary to the Local Plan Policy E26.
- Contrary to the guidance within the Arup report (see objections above).
- Proposals should be deferred until the Local Development framework is finalised.
- Noise assessment procedures are out of date and ineffective.
- Aerodynamic modulation has not been addressed fully as a potential problem.
- Distance of turbines from dwellings insufficient.
- CO2 emission savings are negligible bearing in mind production costs etc.

Barmpton Parish Council does not object to the application but have not given any reasons in support.

<u>Other Consultees.</u>

Durham Tees Valley Airport – No objections subject to the imposition of conditions relating to radar enhancement.

Natural England – No objections to the proposals now that additional details and assurances have been received with regard to landscape impact/hedgerow removal, rights of way, agricultural/soil resource protection, protected species (Badgers, Birds, Great Crested Newts, Bats and Otters/Water Voles. Conditions to be imposed relating to the above.

CPRE – Object as the proposal will affect nearby Skerningham walk in “Walk the Darlington Way” publication. Also supports landscape and residential issues as raised by objectors above.

Northumbrian Water – No objections.

Ministry of Defence – No objections.

Ramblers Association – Objects on grounds of visual impact on users of nearby rights of way.

Northern Gas – No objections.

English Heritage – No objections.

CE Electric – No objections.

Highway Engineer – No objections provided a number of conditions are imposed relating to access route to the site at construction time, site access improvements, on site infrastructure and delivery protocols.

Highways Agency – No objections providing a condition is imposed relating to the agreed abnormal loads plan.

The BBC – they were consulted in relation to possible impacts on television reception. No objections were raised to this proposal; a condition is proposed to ensure any reception problems are mitigated.

Environment Agency – No objections.

Durham Bat Group – Concerns over impact on local bat populations – (but see Natural England comments above).

Durham County Archaeologist – No objections subject to conditions.

Environmental Health Officer – Is content to impose conditions relating to potential noise generating issues in line with advice supplied by Parsons Brinckerhoff who reviewed information supplied on noise issues by the applicants. This includes amplitude modulation issues.

Durham County Council Landscape Section were consulted as they have much experience in studying the impacts of numerous wind turbine proposals in County Durham and beyond and for this reason extracts of their comments are included below in some detail to assist Members in their deliberations over this application.

Landscape Appraisal for Onshore Wind Development

The Landscape Appraisal identifies the application area as belonging to the 'Lowland Plain' landscape type which it assesses as being of 'medium' sensitivity to wind energy development. Its findings in relation to location and typology in the area were as follows:-

- *Opportunities to locate wind energy development within the Lowland Plain are limited in parts of the LCT by the generally strong enclosure pattern of hedgerows and woodlands and traditional clustered settlements present.*
- *Where this pattern is weaker or at the transition with industrial Teesside, there may be potential for locating limited medium scale wind energy development.*

The Appraisal uses the terms small, medium and large to refer to turbines heights of 80m, 110m and 140m respectively rather than turbine numbers. The 100m and 110m turbines proposed are within the 'medium scale' range. The site doesn't lie in an area with particularly weak patterns of enclosure or woodland, although this depends in part on the viewpoint. Some views of the site are across open country with large scale amalgamated arable fields. Other views are across more intact field systems of a smaller scale. Some views of the site have an urban fringe or semi-rural quality due to the presence of development or overhead services, the majority are strongly rural in character. While I wouldn't see the site as being explicitly in the kind of landscape the Appraisal identifies as having potential for medium scale development, on the Tees Plain this is generally a matter of degree and I wouldn't therefore see it as being fundamentally inconsistent with the Appraisal's findings.

Wind Farm Development and Landscape Capacity Studies: East Durham Limestone and Tees Plain (NEA / ARUP 2008) and Addendum (ANEC / ARUP October 2009)

The landscape capacity study subdivides the area into landscape zones which it assesses in terms of sensitivity and appropriate wind farm typology. The site lies within Zone 23 which it describes as:

"A gently undulating farmed landscape. Field boundaries are generally formed by hedges with quite frequent hedgerow trees. Pockets of deciduous woodland are scattered throughout the zone, often associated with watercourses. Settlement is generally comprised of scattered farms with the villages of Great Stainton with its church tower, Little Stainton and Brafferton located towards the periphery of the zone. The zone is crossed by overhead power lines". (Table 2, P 41)

The sensitivity of the zone is assessed as 'medium' and the largest wind farm typology potentially acceptable is assessed as being 'Small-Medium small' or 'between 7.5-18MW or 4-6 turbines approx' due to the scale and grain of the land-cover and settlement pattern. In terms of capacity, Zone 23 is identified as having 'some' capacity and specifically:

"In principle the landscape could have the capacity to accommodate more than one medium small-small development (i.e. 4-6 turbines per development)". (Table 8, P59).

The site therefore lies within an area identified as having some suitability for development. The typology proposed (10 turbines or 20-25 MW) is larger than that assessed as being the largest appropriate for a single development (6 turbines or <18 MW) but less than the potential maximum split between two sites (12 turbines or < 36 MW) considered potentially acceptable in this relatively small zone.

The Addendum refers to this disparity as follows.

> *Overall the level of development proposed in this location exceeds the capacity of the landscape identified in the main study. However, the extent to which a development of the scale proposed would exceed the capacity of the local landscape, and the significance of that in the context of the policy environment at the time the application is determined, can only be fully resolved through a detailed investigation of the landscape and visual impacts of the individual scheme which is beyond the scope of this study. (p.9)*

Physical Impacts

The direct physical impacts of the proposals on the fabric of the landscape – the development of access tracks, operational areas, and the removal of short sections of hedgerow vegetation - would be relatively low. From what I've seen of the draft 'Agriculture Management Plan' these impacts would be more than offset by the proposed hedgerow and tree planting and the buffering of ponds.

Landscape Impacts.

Within around 2 km of the site impacts would generally be high. The turbines would be prominent or dominant features in typical views. With the exception of the localised screening effects of hedges and undulating terrain, together with some scattered plantations, the turbines would be fairly consistently visible. Views would be largely from isolated properties, the edges of villages and the minor roads and public rights of way connecting them. The local landscape has some characteristics that make it less sensitive to, or provide a rationale for, wind development: the broad scale and simplicity of the landform and land-cover in some views, for example. This is, however, a very rural landscape in which the development of very tall structures would radically transform its existing character and become a dominant and defining characteristic. This is generally true for development of this nature in a rural landscape wherever it occurs.

Within the 2km to 5km range the landscape remains very open other than within built up areas. The turbines would be widely visible and often relatively prominent features although locally screened by topography in patches along the Skerne and in pockets of dead ground north of Preston Lodge and north of Elstob Hill. In the open landscapes elsewhere in this zone the turbines would again be fairly consistently visible throughout the area. Impacts would be typically in the 'medium' range. Views would include those from isolated properties, the edges of towns and villages, the minor roads and public rights of way connecting them and sections of major roads: the A66, the A167 and the A1(M). In some of these views the landscape has some characteristics that make it less sensitive to wind development although views are more variable in character - in some cases being from, or taking in, finer grained landscapes in the foreground with less of an obvious 'rationale' for wind development. In views of a predominantly rural landscape lacking in tall structures, the development of turbines of this scale and in these numbers will clearly have a substantial presence in the local landscape and bring a significant change to its character, appreciated by relatively large numbers of viewers.

In views within distance ranges of around 5 – 15km the turbines would be widely visible as small but noticeable features. Given the scale of the area the representative viewpoints (viewpoints 10 -20) can only give a small sample of the types of views in which the turbines would be visible. In some views the landscape has an urban fringe or semi-rural character with urban and industrial development and overhead services visible. In other views the character of the landscape is very rural. In some views the turbines would be seen against the sky, in other views against the Cleveland Hills. I would generally assess the impacts of the proposals in views across this area as being slightly higher than some of the values assigned in the Landscape and Visual Assessment (LVIA) but would agree that they are generally of a low or low-medium order

A smaller scheme would have a smaller impact. I would see this as a matter of degree rather than a matter of a larger scheme crossing a definable threshold dictated by the specific character of the local landscape. A smaller array would occupy a smaller proportion of the view as well as reading as a more discrete and contained event within the landscape. Although it

is linear in character, the proposed array would read as a relatively compact group in most long and middle-distance views. There are some views where the array is less well composed, containing 'clumps' 'gaps' and 'stragglers' as in the view from Sadberge (viewpoint 9). This seems to arise largely from the design constraints on the site and wouldn't be materially different if numbers were reduced.

The question of whether the proposals as they stand are out of scale with their surroundings is a complex issue and one on which judgements will vary. They would certainly, by virtue of their scale, have a substantial impact on the character of the local landscape and to that extent it would be difficult to argue that they were 'in scale' with their surroundings in any common-sense understanding of the term. The level of impact would not, however, be dissimilar in an obvious way to that of developments of a similar scale elsewhere in the region which have been judged to be acceptable. In my view the relatively open and broad-scale character of parts of the local landscape provides as much of a rationale for development of this scale here as it does elsewhere on the Tees plain.

Impacts on residential amenity

By impacts on residential amenity I mean levels of visual disturbance – that might arise from having large structures and moving rotors in close proximity to a dwelling – as distinct from changes in the character of the landscape setting or the quality of views from a property. The line between the two is subjective and difficult to draw. In modelling constraints for wind farms I use a figure of 5 x turbine height (in this case 500 – 550m) as a proxy for the threshold at which I would expect impacts to start becoming acute. There are no non-involved properties within that distance of the proposals.

Views from individual residential properties within 1km are described reasonably well in the ES and I would concur with its findings effectively that there are no non-involved properties where the proposals would have an acute visual effect on living conditions.

Impacts on settlements

The area in which the proposals would have their most significant impacts contains a number of settlements. The turbines would be prominent features of the local environment, visible from some residential properties and from roads and recreational footpaths / bridleways serving those communities. In this respect they are not unique and the situation here would be similar to that in the locality of some existing and approved wind farms elsewhere in the region.

Views from individual settlements are described reasonably well in the LVIA and I would concur generally with its findings. It is in the nature of views from settlements that impacts often vary considerably within the settlement and it is difficult to come to overall conclusions about the magnitude or significance of the effects of proposals 'in the round' on the visual environment of the community. The LVIA doesn't attempt to draw such conclusions but articulates the main issues for each of the main settlements affected. Key factors in my experience are:

- *Whether the proposals would have an overwhelming impact on the residential amenity of individual properties.*

- *Whether the proposals would be visible from public areas or community facilities within the fabric of the village and if so whether they would dominate that visual environment.*
- *Whether the proposals would dominate the settlement in views of it, and particularly from the main approaches to it.*
- *Whether the proposals would dominate the recreational footpath network serving the community.*

These are matters which can be difficult to assess, and on which judgements will vary. My own judgements are as follows.

The most substantial impacts would fall on Barmpton, Little Stainton and Sadberge. While there would be impacts on other settlements, I don't believe the proposals would have the potential to dominate their visual environment at distances of >2 km in the shallow views typical of this landscape.

Barmpton

Impacts on some individual properties in Barmpton could be high (as noted in 6.177) in views from the rear of properties. Turbines would be at a sufficient distance (>900m) not to be overwhelming. Views would be similar to Viewpoint 2 although views would be generally less open, with turbines screened or partially obscured by intervening buildings and vegetation. I would agree with the LVIA that turbines wouldn't generally be visible from the main village lane other than through occasional gaps in buildings, and shouldn't appear above the roofline.

Turbines would appear above the roofline of the village in the approach from the south. It is difficult to predict the precise affect of that without a visualisation. Similar situations occur elsewhere in the region – for example approaches to Sunniside from the west in which the Broom Hill wind farm looms above the village at similar distance ranges. This view would only occur over a relatively short section of the road – north of Elly Hill House – and views of the turbines would be filtered – or partially obscured in summer months – by mature trees.

The village is well served by footpaths. Those towards and across the site would be generally dominated by the proposed turbines but impacts would be much lower on paths running east and northwest along the valley of the Skerne.

I would conclude that while the turbines would be very prominent features of the landscape around the village, and dominant features of the landscape to the north, they would not have an 'overwhelming' impact on the community's visual environment.

Little Stainton

Impacts on some individual properties on the western side of Little Stainton could be high (as noted in 6.128) in views from the rear of properties and gardens. Turbines would be at a sufficient distance (>1800m) not to be overwhelming. Views would be similar to Viewpoint 7 although views would be generally be less open, with turbines screened or partially obscured in varying degrees by intervening buildings and vegetation. I would agree with the LVIA that turbines wouldn't generally be visible from the main village street other than in occasional gaps between buildings, and shouldn't appear above the roofline.

Although the Figure 6.7 TZVI suggests that rotors would be visible above the village on the main approach from the east, the shallowness of the view and the dense vegetation along the

eastern edge of the village is such that I wouldn't expect any sense of the village being dominated by them. The village isn't particularly well served by footpaths in the area towards the site. The turbines would be prominent but not dominant features of paths close to the village.

I would conclude that the turbines would be prominent features of the landscape around the village but would not have an 'overwhelming' impact on the community's visual environment.

Sadberge

Some individual properties on the northern edge of Sadberge could experience high- medium impacts (as noted in 6.132) in views from northern elevations and gardens. Turbines would be at a sufficient distance (>2000m) not to be overwhelming. Views from properties with an open northerly aspect would be similar to Viewpoint 9 although views would vary depending on the effects of intervening buildings and vegetation. The turbines would be visible from some public areas (Norton Crescent, streets and urban green space west of Hillhouse Lane), and community facilities (the village hall) – but wouldn't be visible from much of the urban fabric of the village. The elevated position of the village and the openness of the landscape to the north are such that where the turbines would be visible, they would often be clearly visible as a fairly large array in panoramic views of open countryside.

Although visible from approaches to the village from all directions, the degree of visual separation is sufficient that the village wouldn't be dominated by the proposals in external views. The village is served by a number of footpaths radiating from it, although the presence of the A66 may discourage access southwards in some degree. The turbines would be widely visible from the network north of the village being prominent or dominant features as closer ranges. Impacts on footpaths to the south would be lower.

I would conclude that the turbines would be very prominent features of the landscape north of the village but would not have an 'overwhelming' impact on the community's visual environment.

Cumulative impacts

Given the widespread visibility of wind turbines, cumulative impacts of some order are inevitable. The issue is whether the combined impacts of two or more developments would reach levels that are unacceptable. The LVIA limits its enquiries to sites within 20km which was agreed with the consultants as being the area beyond which significant impacts would not arise. The LVIA contains a detailed assessment of a range of scenarios (Appendix 4). Given the status of other proposals in the area at the time of writing the only relevant scenario is scenario 1 which is cumulative effects with operational and approved sites. I would agree generally with its findings.

Cumulative impacts with A1 can't reasonably be taken into account given its uncertain status at present. I'm also assuming that given the time that has lapsed since Darlington Council were minded to approve Royal Oak, and given that the permission has never been issued, there must be questions over the likelihood of it going ahead without re-assessment and a new application. The key issues relate primarily to cumulative impacts with the Butterwick / Walkway complex, Red Gap Moor, High Volts, Trimdon Grange and Seamer.

Although the development of Moorhouse would lead to an increase in the general presence of wind turbines as features visible in typical views of this part of the Tees Plain landscape, I can't find any individual views where this would be particularly acute, or would bring the whole across a tangible threshold of what is or isn't an acceptable level of overall impact on the character of the landscape. This is a matter of judgement, and it is difficult to make fully informed judgements while some permitted turbines are yet to be built. The turbines at Butterwick and Red Gap Moor are likely to have a big impact on the overall sense of the scale of wind development in the area and the extent to which it is seen to dominate the landscape.

My own judgement – which accords with the conclusions of the ARUP report - is that the additional impact of the Moorhouse proposals would not bring the overall level of impact from wind farms in the area over a tangible threshold of what is or isn't acceptable.

The above analysis is necessarily comprehensive but can be summarised as follows –

1. The proposals would be reasonably consistent with the findings of the Landscape Appraisal and ARUP Landscape Capacity Study but would exceed the scale of development considered appropriate in the latter.

2. The proposals would not have significant adverse physical impacts on the fabric of the landscape. What impacts they did have would be offset by landscape improvements in and around the site.

3. The proposals would be widely visible and would have significant effects on the character of the landscape of the Tees Plain within around 5km of the site. This level of impact is typical of development of this kind wherever it occurs.

4. The question of whether the proposals are out of scale with their surroundings is a matter of judgement. The judgement is that in this landscape the difference between the impacts of a 6 turbine and 10 turbine development would not be sufficiently tangible and detrimental to warrant refusing planning permission.

5. The proposals lie close to a number of residential properties but at sufficient distances that they should not have an overwhelming impact on the visual amenity of residents.

6. The proposals lie relatively close to a number of settlements. The turbines would be prominent, and at times dominant, features of their visual environment, visible from some residential properties and from roads and recreational footpaths / bridleways serving them. Whether the visual impacts on these communities are considered acceptable is a matter of judgement. The judgement is that the proposals wouldn't have an 'overwhelming' impact on their visual environment and that impacts would be comparable to those of schemes considered acceptable elsewhere in the region.

7. The proposals would have some cumulative impacts with existing and approved wind farms in the vicinity. These impacts would be of a generalised nature – increasing the presence of turbines in views of the landscape of the Tees Plain. There would be no acute cumulative impacts on individual receptors. The proposals would not bring the overall level of impact from wind farms in the area over a tangible threshold of what is or isn't acceptable.

8. The relatively open and broad-scale character of parts of the local landscape provides as much of a rationale for development of this scale here as it does elsewhere on the Tees plain.

The above advice is noted by Officers and there now follows an appraisal of the planning issues followed by the recommendation to Members based on the available facts and opinions expressed by consultees.

PLANNING ISSUES

The main issues for Members to consider in this case are:

- Planning Policy
- Landscape and visual impact
- Ecology Issues
- Residential amenity including noise and shadow flicker
- Aviation issues
- Other issues raised by consultees.

Planning Policy Guidance

The relevant national planning policies in this case are Planning Policy Statement 1 (PPS1) – Delivering Sustainable Development and Planning Policy Statement 22 (PPS22) – Renewable Energy.

PPS1 states that the development of renewable energy should be promoted and encouraged. It clearly states that the wider environmental and economic benefits of all renewable energy applications, either directly or indirectly, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.

In environmental and economic terms, this application has the potential to generate between 20-25MW installed capacity of renewable electricity at any given time, potentially supplying between 11,000 and 14,000 households via the electricity grid operated by NEDL. Grid connection will be made to the north west of the site near Brafferton which the applicants consider is capable of accepting additional input from the site.

PPS22 sets out the Government's policies for renewable energy, which planning authorities should have regard to when preparing local development documents and when taking planning decisions.
It states that; landscape and visual effects are only one consideration to be taken into account in assessing a planning application, these must be considered alongside the wider environmental, economic and social benefits that arise from renewable energy projects. These are all material considerations that should be given significant weight in determining whether proposals should be granted planning permission.

The key ‘saved’ Local Plan policy E26 states that renewable energy proposals will be encouraged and permitted where there is no material adverse impact upon landscape, wildlife

and amenity. Specifically for wind energy proposals four criteria must be satisfied; each will be considered in detail below.

1. In the Area of High Landscape Value they do not significantly detract from the particular landscape quality of the area and there are no suitable sites in less sensitive areas
Not applicable - the site is not within the Area of High Landscape Value

In addition the application site does not lie within any nationally designated landscape designations, within any national and international ecological designations, scheduled monuments or listed buildings.

2. Elsewhere proposals do not significantly affect landscape character or visual amenity
PPS1 Supplement states that the approach to protecting landscape and townscape must be consistent with PPS22 and should not preclude the supply of any type of renewable energy other than in the most exceptional circumstances.

The Durham County Council Landscape Section report above contains a detailed analysis of both the individual visual impact of the proposal and its cumulative impact in association with other wind farms nearby.

While there is an acknowledged landscape and visual impact the significance of this will be considered in further detail in the following section of the report.

3. Turbines and associated structures are of a high standard of design;
It is acknowledged that the design of the turbines must be of a certain height and design to capture wind and be functional; as such their design cannot be altered. However it is important that the design of the associated infrastructure is consistent with the Council's adopted Design SPD; its scale and materials must be appropriate to reflect the character zone the site lies within. The applicants propose to design the control building as if it were a traditional agricultural building; details of the design and materials must be consistent with the character of the landscape from close proximity and from long views of the site. The overall design should be to the satisfaction of the Council's Urban Design Officer.

4. Proposals do not adversely affect the amenity of neighbouring properties or the character and setting of settlements by reason of noise, shadow flicker, visual dominance or electro-magnetic interference.

These issues are covered separately in the sections below.

Reference has been made to the two Arup reports that were commissioned in 2008 and 2009 by the North East Assembly and its successor the Association of North East Councils.

It must be stressed that these documents are not Supplementary Planning Guidance and do not have great weight in planning terms when considering the acceptability or otherwise of wind turbine developments.

At the time however Durham District Councils and Darlington and Stockton considered that with a large number of wind turbine developments being proposed in the region, some kind of technical appraisal should be made of the capacity of the landscape to accept such developments without harming its character to an unacceptable degree.

The 2008 report was completed and its conclusions are detailed above in the Durham County Council Landscape Section report. In essence it recommended that in the zone within which Moor House is situated "the landscape could have the capacity to accommodate more than one medium small – small scale development (i.e. 4-6 turbines per development)".

During the course of preparing the 2008 report, circumstances on the ground changed and new proposals for wind turbine development emerged which had made some assumptions for the Darlington area out of date. In 2009 therefore an addendum was produced for the area around Moor House which concluded that:

Overall the level of development proposed in this location exceeds the capacity of the landscape identified in the main study. However, the extent to which a development of the scale proposed would exceed the capacity of the local landscape, and the significance of that in the context of the policy environment at the time the application is determined, can only be fully resolved through a detailed investigation of the landscape and visual impacts of the individual scheme which is beyond the scope of this study.

The Landscape report above concludes that the proposed development is broadly in line with the recommendations of the Landscape Appraisal for Onshore Wind Development (GONE 2003) in that the area within which Moor House is located can accommodate some medium scale development.

Landscape and Visual Impact.

The application is for the provision of 10 wind turbines and associated infrastructure, situated on agricultural land interspersed with small areas of woodland to the north east of the village of Barmpton, north east of the Darlington urban area. The site is bordered on all sides by agricultural land with Bishopton Lane adjoining the site to the south east.

The site is not subject to any landscape, ecological or cultural heritage designation and as such the site's sensitivity to wind turbine development is accordingly reduced. In addition a detailed mapping exercise undertaken by the applicants highlighted that there were few suitable sites for commercial wind energy development in Darlington. Once the various constraints to development were combined onto one map only seven areas in the Borough were identified

Wind turbines by their scale and tendency to be formed in groups, will always have a visual impact upon the landscape within which they are located and an impact on the amenities of people who live in the locality. The degree of impact depends on the form and character of the landscape and the perceptions of the public who are affected by the development.

The turbines will be visible over a wide area; however the fact that they are visible does not necessarily mean that they are visually harmful to such an extent as to warrant refusing planning permission.

The advice given within the Senior Landscape Officer's report above is comprehensive and appraises the proposals from a number of different aspects with a view to covering all the concerns expressed by local residents and others.

Government guidance stresses that the protection of residential amenity is one of the most important issues to consider when determining wind turbine proposals. Experience has shown that a 500 metre buffer from dwellings is usually sufficient to avoid unacceptable visual and noise impacts on residents – although other advice has been voiced suggesting a greater distance is desirable. If dwellings have a financial interest in the development, that is own the land then reduced separation distances may be acceptable.

Noise issues are covered later, but bearing in mind the analysis of visual impacts on local residents and villages provided above, officers are of the opinion that the erection of ten wind turbines as proposed would not harm residential amenity to an unacceptable degree. It is concluded that although the thresholds noted in the Arup report have been exceeded – a maximum of 6 turbines in any one group – capacity for two such groups is suggested in the Arup report as being acceptable – i.e. a maximum of 12 turbines. It is considered that the visual and other impacts of one group of 10 turbines would be less than two groups of 6.

Cumulative impacts of this proposal taken with other existing and approved sites nearby have been analysed within the DCC Senior Landscape Officer's report above where it was concluded that the current proposal would not be likely to take the combined impact of existing and approved developments in the locality above an unacceptable threshold. However there are a number of other developments nearby in the planning stage and it is yet to be seen how these are judged as the cumulative impacts will be greater as individual developments are approved.

Physical Impacts Including Ecology and Protected Species

Extended discussions have taken place between the applicants, Natural England and Council countryside officers with a view to providing substantial mitigation to offset the potential impact of the development on the ecology and biodiversity of the application site and its environs.

Mitigation to protect badgers and protected birds has been included within the submitted Environmental Statement which is satisfactory to Natural England. Measures such as timing vegetation clearance to be outside the breeding season are proposed for example. Similarly the impact on bats is restricted as the design of the layout has avoided placement of turbines within 50 metres of woods and hedgerows.

The scheme has been modified to minimise hedgerow loss and in discussions with the Council the applicants have agreed on and off site enhancements to habitats and biodiversity such as improvements to Catkill Lane, enhancing uncultivated field margins, watercourses and ponds, and these measures have the support of Natural England. These benefits will be achieved via the completion of a Section 106 legal agreement prior to the commencement of development.

Noise Issues

The Council's Environmental Health team have assessed the potential noise issues that may arise from the proposed development in accordance with the relevant guidance that covers proposals for wind farms. This is provided in PPS22 and in The Assessment and Rating of Noise from Wind Farms that is referred to as ETSU-R-97.

PPS22 sets out the Government policy and approach on renewable energy. In relation to noise, it states:

Renewable technologies may generate small increases in noise levels (whether from machinery such as aerodynamic noise from wind turbines, or from associated sources - for example traffic). Local planning authorities should ensure that renewable energy developments have been located and designed in such a way to minimise increases in ambient noise levels. The 1997 report by ETSU for the Department of Trade and Industry should be used to assess and rate noise from wind energy developments.

The 1997 ETSU report '*describes a framework for the measurement of wind farm noise and gives indicative levels thought to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development or adding unduly to the costs and administrative burdens on wind farm developers or local authorities'*.

The ETSU-R-97 report describes the method of how and where ambient (background) noise measurement surveys should be undertaken. It also establishes the levels of turbine noise that are acceptable in different locations and situations, as either a fixed limit, a level relative to the prevailing background noise level, or a combination of both of these.

The noise conditions are, in addition, divided into day and night periods. For the daytime consideration is given to the amenity for outside spaces and is based on the times normally associated with leisure such as at weekends and during evenings but any day time limit would apply throughout the day. For the night period (23:00 to 07:00) consideration is given to the impact of the noise on sleep and therefore the emphasis is on the amenity of indoor spaces within residential properties. Higher noise levels are considered appropriate for any properties with a financial interest in the development.

The assessment of wind turbine development proposals should follow the methodology detailed in ETSU-R-97 and if constructed, should comply with the noise limits established by and that result from applying this method. Satisfactory evidence that the wind turbines can comply with the ETSU-R-97 requirements and that noise levels arising from the proposed development would be within the noise limits determined from the guidance would therefore demonstrate that noise control measures for the scheme are both appropriate and can be achieved.

Some commentators insist that ETSU –R-97 is out of date and therefore irrelevant to current noise assessments of wind turbine proposals, however numerous Appeal Inspectors have emphasised that this is currently the methodology adopted within PPS22 and it is this to which Local Planning Authorities should have regard.

As noted above this Council sought advice from Parsons Brinckerhoff (PB) who reviewed information supplied on noise issues by the applicants. This included amplitude modulation issues.

PB have concluded, after requesting further work from the applicants, that the assessments of noise impacts made by the applicants are accurate and that *"the wind farm as laid out ……is compliant with the ETSU- R-97 derived noise limits"*. PB are content that planning conditions applied to any permission granted should avoid mechanical noise nuisance to residential properties closest to the proposed development.The predicted wind turbine noise levels, taking into account the latest guidance on wind shear and measured background noise levels indicated

that for dwellings neighbouring the development, wind turbine noise will meet the quiet daytime and night time Noise Criteria defined in ETSU-R-97.

There is the further issue of *Aerodynamic Modulation* about which much has been written in recent planning appeals.

To explain what the issue is there follows an extract from a letter from Sadberge Parish Council clerk which may be of use to Members.

Aerodynamic modulation (AM) consists of amplitude modulation of the aerodynamic noise from wind turbines, over and above the 'blade swish' type of amplitude modulation acknowledged by ETSU-R-97.

Aerodynamic modulation causes wind turbine noise to take on a loud, 'thumping' character and to become audible at a considerable distance from the wind farm.

Research by a Dutch physicist, Dr. Frits van den Berg, has indicated that aerodynamic modulation occurs during stable atmospheric conditions, when there is an unusually high degree of wind shear.[2] For more information, see my notes on "Noise from Wind Farms" and "Probable Cause of Aerodynamic Modulation"..

Based on Dr. van den Berg's work, a settlement near a wind farm is likely to be affected by aerodynamic noise if and when

(1) there is sufficient wind at turbine hub height for the wind turbines to be emitting aerodynamic noise,

(2) there is high wind shear, and

(3) the wind is blowing from the wind farm towards the settlement.

Aerodynamic modulation noise can be audible at more than 2 km from a wind farm. Dr. van den Berg reported that on one occasion wind turbine noise was "much higher than expected" at a distance of more than 2 km from a wind farm, but said that this was apparently a rare occurrence, possibly associated with the formation of high-level temperature inversion layers. He also quoted a resident living 2.3 km from the wind farm describing the sound as like "an endless train".

PB have examined the available evidence and the details submitted by the applicants and concluded that there is a “greater than average risk of AM at this site” and have suggested that a suitable planning condition should be attached to any permission granted but accepts that this may be difficult to do whilst ensuring the condition adheres to the five tests required by Government.

The applicants have included reference to AM within their Environmental Management Plan, however a more robust planning condition is preferred by Officers. It is therefore proposed to impose a condition used in an appeal decision in December 2009 which will, in response to a complaint of amplitude modulation, require the wind farm operator to employ an independent consultant to assess the complaint and if necessary implement a scheme of mitigation. See condition 22 below for full details of this condition and its note.

Shadow Flicker

Under certain combinations of geographical position and time of day, the sun may pass behind rotors of a wind turbine and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off; the effect is known as 'shadow flicker'.

A residential property must usually be within 10 rotor diameters of the turbine in order to experience shadow flicker. For this proposal, the applicant has stated that one residence may potentially be affected but this could be mitigated against should flicker occur. In the event that shadow flicker occurs, mitigation should be ensured through a condition which controls a programming system that stops the wind turbine(s) when shadow flicker could occur. Subject to the use of appropriate conditions, it is considered that any detrimental effect on local residents through incidences of shadow flicker can be satisfactorily controlled and that this would not therefore be a sufficient ground on which to refuse planning permission. PB concur with this opinion.

Aviation

After protracted negotiations with the Durham Tees Valley Airport, the applicants have come to an agreement to supply radar equipment which will mitigate the impact of the development on the operations of the airport. Conditions have been suggested by the airport and agreed with the applicants. It is likely that the equipment will need to be housed in a small building within the application site.

Traffic and public right of way impacts

The development proposals will generate abnormal load movements during the construction phase. A range of traffic management measures will be employed to enable the safe movement of abnormal loads. Traffic impact has been assessed and it has been demonstrated that construction traffic will not create significant impact on the surrounding highway network. The construction phase will last approximately ten months, after which the development will generate negligible traffic volumes. The Highways Agency has raised no objection to the proposed development and the Council Highway Engineer has recommended certain conditions to any approval given.

The two public footpaths and bridleway that run alongside and across the site are to be maintained, including through the construction phase to allow continued access for the public. Natural England have commented that they are satisfied that the rights of way will be retained and their condition enhanced by the developers.
The rights of way are beyond the industry accepted standoff distance of 50 metres for footpaths and 150 metres for bridleways and as such are considered to present no safety issues to users of the local rights of way.

Television Interference

Wind turbines have the potential to disrupt analogue TV signals within the local vicinity. The outcome of this interference is a 'ghosting' effect on the TV screen. To assess the impact of the Moor House wind farm proposal on television reception, the BBC Windfarms Tool website was used. This concluded that the current proposal was unlikely to affect homes if approved.

In the event of reception problems, the applicant suggests improving the receiving aerials or providing the affected households with an alternative source of television signals through a different transmitter, an existing cable connection or a digital system, which could be dealt with as a condition of planning.

Loss of agricultural land

Natural England are content that the proposals will not raise any significant agricultural or soil resource protection issues – the majority of the site is classified as Grade 3 agricultural land in line with other areas in the locality – only the tracks and turbine bases will be lost to agriculture with the intervening land remaining in such use.

Impact on Bishopton Conservation Area

The Durham County Council Landscape Section report above confirms the following:

The most substantial impacts would fall on Barmpton, Little Stainton and Sadberge. While there would be impacts on other settlements, it is not believed the proposals would have the potential to dominate their visual environment at distances of >2 km in the shallow views typical of this landscape.

Bishopton lies some 3.5 kilometres from the application site and as such officers consider that the direct visual impacts upon this village will be minimal and not sufficient to warrant a refusal of planning permission.

Ice Throw

Some concerns have been expressed that ice forming on the turbine blades may fall off and injure members of the public. PPS 22 Companion Guide refers to a British Wind Energy report which estimates that the specific weather conditions required for ice to build up as being less than one day per year. The proposed turbines will be located in agricultural land away from public rights of way and fenced off to prevent unauthorised access. Furthermore the turbines will automatically shut down if ice forms and creates an aerodynamic imbalance.

Various letters of representation have been received in relation to the proposed wind farm development. It is considered that the majority of issues raised by objectors have been covered in this report. However some representations received have raised issues that are not considered to be relevant to the determination of the planning application. For information, the following issues have been held by appeal inspectors *not* to be material planning considerations:

- Loss of value to a property
- Wind speed at the site
- Efficiency of the technology
- Safety of the turbines
- Questioning Government targets or policy.

Other Matters

The applicants have proposed a scheme of planning gain to the Council in the event that planning permission is granted for the development. They have offered a contribution of

£50,000 towards the establishment of a so called Warm Zone within Darlington which would bring increased energy efficiency to existing dwellings through measures such as loft and wall insulation. The developer considers this is a material consideration as this planning gain would be financed by profit from the development and as such there is a link between the two. Officers however take the view that such a planning gain would not be directly related to the development itself and as such would not be material to the final decision. The advice of officers therefore is that this offer of planning gain should not influence Members in the determination of this planning application.

CONCLUSION

It is accepted that the proposed wind farm would make a contribution towards the overall supply of renewable energy, and contribute towards reaching regional and national targets in terms of energy production. There is very strong and consistent policy support for renewable energy projects. The scheme would have significant benefits in this respect, and the key consideration in determining the application is whether or not this policy support for the proposal outweighs any environmental or social impacts the proposal may have.

In terms of visual impact, the proposed wind turbines due to their scale and design will undoubtedly have an impact on the landscape, and will be highly visible features in the locality. Any impacts the proposed development will have on the wider landscape however are considered to be commensurate with the benefits the turbines will provide in terms of the production of renewable energy.

It is considered, taking into account the views of the Durham County Council Landscape Section, that the application is consistent with policy E26 in that whilst it would be significantly visible it would not result in a material adverse impact on the landscape. The Local Plan was adopted in 1997 but Government guidance clearly states that in the interim period before the development plan is updated to reflect the policies in PPS1 Supplement, it is essential that the proposed development is consistent with government guidance.

On this basis the PPS22 Companion Guide is quite clear; landscape and visual effects are only one consideration to be taken into account in assessing a planning application, these must be considered alongside the wider environmental, economic and social benefits that arise from renewable energy projects. These are all material considerations that should be given significant weight in determining whether proposals should be granted planning permission'.

In environmental terms the application has the potential to generate between 20-25MW installed capacity of renewable electricity at any given time, potentially supplying supply between 11,000 and 14,000 households with renewable electricity via the national grid.

Subject to all mitigation matters and the design and access being satisfactorily addressed, on balance it is considered that the environmental, economic and social benefits generated by the application are sufficient to outweigh the impact on the landscape and visual impact generated by the application.

RECOMMENDATION

That subject to the applicants entering into a Section 106 Agreement relating to off site habitat and biodiversity improvements, the development be permitted with the following conditions:

Time Limits

1. The development hereby permitted shall be begun before the expiration of five years of the date of this decision.

Reason: Pursuant to the requirements of Section 91 of the Town and Country Planning Act 1990, as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2. The planning permission hereby granted shall be for a temporary period only, to expire 25 years after the first commercial export of electricity from the site. Written confirmation of the date of commercial electricity export shall be provided to the Local Planning Authority within one month after the event.

Reason: To provide certainty over the duration of the development.

Approved Drawings

3. Unless otherwise required by conditions attached below, this permission shall relate to the following drawings:
HJB/721/PA03; HJB/721/PA04a; HJB/721/PA05b; HJB/721/PA07; HJB/721/PA08; HJB/721/PA09; HJB/721/PA11; HJB/721/PA12; HJB/721/PA13; HJB/721/PA20; HJB/721/PA25

Reason: For the avoidance of doubt as to what has been approved.

Decommissioning

4. Not later than six months before the date on which the planning permission hereby granted expires, all wind turbines, ancillary equipment, buildings, crane platforms and access roads shall be dismantled and removed from the site and the land reinstated to its former condition in accordance with a scheme to be submitted to the Local Planning Authority for written approval prior to the commencement of development. The scheme to be submitted shall include the dismantling and removal of all turbines, equipment, buildings, and access roads above existing ground levels and the removal of turbine bases and crane platforms to a depth of one metre below existing ground levels.

Reason: To provide certainty over the duration of the development.

5. If any of the turbines hereby permitted ceases to be operational for a continuous period of 6 months, or such period of time as may otherwise be agreed in writing by the Local Planning Authority, all of its above ground elements plus one metre of each turbine base and associated crane pad below ground level, as well as any access track that directly serves it, shall be removed within the ensuing period of not more than six months, or as may otherwise be agreed in writing by the Local Planning Authority, and the land reinstated to its former condition.

Reason: To ensure that the development is carried out in an efficient manner.

Layout and Appearance

6. Development shall not commence until details of the surface finish of the access tracks and crane bases have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Reason: To mitigate the visual impact of the development

7. Development shall not commence until full details of the turbines, including make, model, power rating, design, external finish and colour, hub height, turbine base to tip height, blade measurements, existing site levels and finished site levels, including the finished level of each turbine base, have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details and shall be so retained for the lifetime of the development unless otherwise agreed in writing by the Local Planning Authority.

Reason: To mitigate the visual impact of the development

8. The maximum height of the wind turbines hereby permitted when measured from the existing ground level to blade tip in vertical position, shall be no greater than 110 metres.

Reason: For the avoidance of doubt

9. Development shall not commence until full details of the site control building, including details of the materials and colours to be used on its external surfaces and security fencing have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Reason: In the interests of visual amenity

10. All of the turbine blades shall rotate in the same direction in relation to their horizontal axis.

Reason: To mitigate the visual impact of blade movement

11. The turbines shall be located in the positions shown on drawing HJB/721/PA05b unless otherwise agreed in writing by the Local Planning Authority .
Reason: For the avoidance of doubt

Cabling

12. All electrical cabling between the individual wind turbines and the on-site
control building shall be located underground. Thereafter, the excavated ground shall be reinstated to its former condition within three months of the commissioning of the wind turbines.

Reason: To mitigate the visual impact of the development

Construction Works

13. Development shall not commence until details of the site compound, temporary structures and temporary security fencing to be used in connection with the construction of the development together with detailed proposals for the restoration of the site compound and any

other land associated with temporary structures have been submitted to and approved in writing by the Local Planning Authority. The development shall not be carried out otherwise than in accordance with the approved details. Within six months of the commissioning of the wind farm, the compound, temporary structures, temporary security fencing and ancillary materials shall be removed and the ground restored to its previous condition in accordance with the approved details. For the purposes of this condition, commissioning shall mean the date upon which the grid connection to the wind farm is first energised

Reason: In the interests of visual amenity

14. Development shall not commence until a Construction Method Statement has been submitted to and approved in writing by the Local Planning Authority. The Construction Method Statement shall include details relating to surface water drainage, the prevention of silt-laden run-off, the treatment of sediment-laden water, site lighting, fuel, oil and chemical storage, and dust management. Development shall not take place except in accordance with the approved Construction Method Statement.

Reason: In the interests of protecting the amenity of neighbouring occupiers and the environment

15. Site establishment and civil and electrical ground works (including roads, foundations, substation, site control building) shall only take place between the hours of 08:00 – 18:00 on Mondays to Fridays inclusive, 08:00 – 13:00 hours on Saturdays, with no such work on a Sunday or Bank Holiday working unless otherwise approved in writing by the Local Planning Authority.

Reason: In the interests of protecting the amenity of neighbouring occupiers and the environment

16. Turbine delivery and erection shall only take place between the hours of 08:00 – 22:00 on Mondays to Fridays inclusive, 08:00 – 13:00 hours on Saturdays, with no such work on a Sunday or Bank Holiday unless otherwise approved in writing by the Local Planning Authority following a request by the Police and Highways Agency.

Reason: In the interests of protecting the amenity of neighbouring occupiers and the environment

17. Turbine testing and adjustment activities prior to commissioning shall only take place between the hours of 08:00 – 22:00 on any day.

Reason: In the interests of protecting the amenity of neighbouring occupiers and the environment

Operational Noise

18. The rating level of noise emissions from the combined effects of the wind turbines, (including the application of any tonal penalty) when assessed in accordance with the attached Notes, shall not exceed the values set out in the tables below. For any noise sensitive property not specified in the tables below the noise limits for the nearest geographical location listed in the tables shall apply.

Between 23:00 and 07:00 hours (Noise Level in dB $L_{A90,\ 10min}$):

	Wind Speed at 10 m height (m/s)									
Location	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
H1 Mount Pleasant Farm	43.0	43.0	43.0	43.0	43.0	44.2	46.7	49.2	51.5	53.6
H2 Carr House	43.0	43.0	43.0	43.0	43.0	43.0	44.8	47.1	49.3	51.3
H3 Dale House Farm	45.0	45.0	45.0	45.0	45.0	45.0	45.9	47.9	49.7	51.3
H4 Burdon Grange Bungalow	43.0	43.0	43.0	43.0	43.0	43.0	43.7	45.4	47.1	48.6
H5 Barmpton	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.7	44.8
H6 Little Ketton Farm	43.0	43.0	43.0	43.8	46.4	49.1	51.7	54.3	56.8	59.0
H7 Copper Garth	43.0	43.0	43.0	43.7	45.9	48.0	50.0	52.0	53.8	55.5
H8 Burdon Grange	43.0	43.0	43.0	43.0	43.0	43.0	43.7	45.4	47.1	48.6

At all other times (Noise Level in dB $L_{A90,\ 10min}$):

	Wind Speed at 10 m height (m/s)									
Location	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
H1 Mount Pleasant Farm	39.1	40.3	41.6	42.9	44.3	45.8	47.5	49.4	51.6	53.9
H2 Carr House	40.1	41.0	42.1	43.2	44.5	45.8	47.3	48.9	50.5	52.3
H3 Dale House Farm	45.0	45.0	45.0	45.0	45.0	45.9	47.3	48.8	50.3	51.9
H4 Burdon Grange Bungalow	39.7	40.6	41.6	42.6	43.7	44.9	46.1	47.4	48.7	50.1
H5 Barmpton	39.2	40.2	41.2	42.2	43.1	44.0	44.9	45.7	46.6	47.4
H6 Little Ketton Farm	41.7	43.5	45.3	47.2	49.1	51.1	53.2	55.2	57.3	59.4
H7 Copper Garth	42.1	44.0	45.8	47.3	48.7	50.1	51.4	52.7	54.1	55.7
H8 Burdon Grange	39.7	40.6	41.6	42.6	43.7	44.9	46.1	47.4	48.7	50.1

Reason: in the interests of protecting the amenity of neighbouring occupiers.

19. Within 28 days of a written request by the Local Planning Authority, following the receipt by the Local Planning Authority of a complaint, the wind farm operator shall supply a written report from a consultant approved by the Local Planning Authority, providing a detailed assessment of level of noise emissions from the wind farm at the complainant's property following the procedures described in the attached Notes.

Reason: in the interests of protecting the amenity of neighbouring occupiers.

20. The wind farm operator shall continuously log wind speed, wind direction and power generation data for each wind turbine. Within 28 days of a written request by the Local Planning Authority, following the receipt by the Local Planning Authority of a complaint, the wind farm operator shall supply such wind speed, wind direction and power generation data for each wind turbine as may be set out in the Local Planning Authority's written request.

Reason: In the interests of protecting the amenity of neighbouring occupiers.

21. No development shall commence until there has been submitted to the Local Planning Authority details of a nominated representative for the development to act as a point of contact for local residents (in connection with conditions 18-20 above) together with the arrangements for notifying and approving any subsequent change in the nominated representative. The nominated representative shall have responsibility for dealing with any noise complaints made during the construction, operation and decommissioning of the wind farm and liaison with the Local Planning Authority.

Reason: To ensure a satisfactory development and to safeguard residential amenity.

22. On the written request of the local planning authority, following a complaint to it considered by the local planning authority to relate to regular fluctuation in the turbine noise level (amplitude modulation), the wind farm operator shall at its expense employ an independent consultant approved in writing by the local planning authority to undertake the additional assessment outlined in Guidance Note 5 to ascertain whether amplitude modulation is a contributor to the noise complaint as defined in Guidance Note 5. If the said assessment confirms amplitude modulation to be a contributor as defined in Guidance Note 5, the local planning authority shall request that within 28 days of the completion of the noise recordings referred to in Guidance Note 5, the developer shall submit a scheme to mitigate such effect. Following the written approval of the scheme and the timescale for its implementation by the local planning authority the scheme shall be activated forthwith and thereafter retained.

Reason: In the interests of protecting the amenity of neighbouring occupiers.

Highways

23. Prior to the commencement of the development hereby permitted, a Traffic Management Plan shall be submitted to and approved in writing by the local planning authority and the Highways Agency. The Traffic Management Plan shall include details of all roadways (temporary or otherwise), and appropriate signage, to be used for the conveyance of construction materials, plant and equipment. The Traffic Management Plan shall confirm the routes to be used for transportation of abnormal loads both during construction of the turbines and during their decommissioning. The Traffic Management Plan shall include a road condition survey of the roadways to be used for the conveyance of construction materials, both pre and post construction. The Management Plan shall include a procedure for approval of the temporary removal of highway furniture. The development shall be carried out in accordance with the approved Traffic Management Plan unless otherwise approved in writing by the local planning authority.

Reason: In the interests of highway safety

Archaeology

24. No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation, including a timetable for the investigation, which has been submitted by the applicant and approved in writing by the Local Planning Authority. The Scheme shall provide for:

i) the proper identification and trial trench evaluation of the extent, character and significance of archaeological remains within the application area in accordance with a brief issued by the County Durham Archaeology Section; the evaluation is to be undertaken following the approval of planning permission,

ii) an assessment of the impact of the proposed development on any archaeological remains identified in the trial trench evaluation phase; a report on the results is to be submitted to the planning authority;

iii) proposals for the preservation in situ, or for the investigation, recording and recovery of archaeological remains and the publishing of the findings, it being understood that there shall be a presumption in favour of their preservation in situ wherever feasible;

iv) sufficient notification and allowance of time to archaeological contractors nominated by the developer to ensure that archaeological fieldwork as proposed in pursuance of (i) and (iii) above is completed prior to the commencement of permitted development in the area of archaeological interest; and

v) notification in writing to the County Durham and Darlington County Archaeologist of the commencement of archaeological works and the opportunity to monitor such works."

Reason: To comply with policy E34 of Borough of Darlington Local Plan as the site may potentially contain features of local archaeological importance.

25. The archaeological mitigation strategy shall be carried out in accordance with the approved details and timings, subject to any variations agreed in writing by the local planning authority.

Reason: To comply with policy E34 of Borough of Darlington Local Plan as the site may potentially contain features of local archaeological importance.

26. A copy of any and all analysis, reporting (evaluation and post-excavation and/or final reports), publication or archiving required as part of the above mitigation strategy shall be deposited at the County Durham Historic Environment Record within six months of the date of completion of the development hereby approved by this permission or such other period as may be agreed in writing by the local planning authority.

Reason: To comply with policy E34 of Borough of Darlington Local Plan as the site may potentially contain features of local archaeological importance.

Ecology - Badgers

27. No development shall take place unless in accordance with the mitigation detailed within ‘Supplementary report to Chapter 7 of Moor House Environmental Statement AESL June 2010’ including, but not restricted to adherence to spatial restrictions (no setts are within 50m of a turbine or access track); undertaking confirming surveys as stated (Table 7.8, Table 7.9);

adherence to precautionary working methods (method statement provided should be agreed with local authority before planning permission granted); implementation of a monitoring scheme (paragraph 7.133).

Reason: To conserve protected species and their habitat.

Ecology - Birds

28. No development shall take place unless in accordance with the mitigation detailed within the protected species report Table 7.9 'Supplementary report to Chapter 7 of Moor House Environmental Statement AESL June 2010,' including, but not restricted to:

- Any on site vegetation clearance should avoid the bird breeding season (March to end of August), unless a checking survey by an appropriately qualified ecologist has confirmed that no active nests are present immediately prior to works (Table 7.8 of Supplementary report to Chapter 7 of Moor House Environmental Statement AESL June 2010.)
- A breeding bird monitoring scheme implemented following construction (section 7.134)

Reason: To conserve protected species and their habitat.

Ecology - Bats

29. No development shall take place unless in accordance with the mitigation detailed within the protected species report Table 7.9 'Supplementary report to Chapter 7 of Moor House Environmental Statement AESL June 2010,' including, but not restricted to undertaking confirming surveys as stated; adherence to precautionary working methods; post-construction monitoring (section 7.132)

Reason: To conserve protected species and their habitat.

Ecology – Habitat Mitigation/Enhancements

30. Development shall not commence until a strategy for landscape and biodiversity mitigation has been submitted to and approved in writing by the planning authority. The strategy for landscape mitigation shall be based upon the proposals set out in drawing HJB/721/66c and shall demonstrate the means by which the landscape and biodiversity of the area will be protected and enhanced. The strategy for landscape mitigation shall include the following:

(a) On and off-site planting including hedgerow and hedgerow tree planting.
(b) Provision of enhanced field margins
(c) Enhancement of Catkill Lane
(d) A programme of phasing for the landscape mitigation works contained in the strategy
(e) Provision for the ongoing care and maintenance of the works during the life of the development

The development shall not be carried out or operated except in accordance with the approved scheme of landscape mitigation, phasing and maintenance management.

Reason: To mitigate the landscape and biodiversity effects of the development.

TV Reception

31. Prior to the commencement of the development hereby permitted, a scheme shall be submitted and approved in writing by the Local Planning Authority setting out the protocol for the assessment of television interference in the event of any complaints, including the remedial measures to be taken within six months of commissioning. Operation of the wind turbines shall not take place except in accordance with the approved protocol.

Reason: To mitigate any interference with electromagnetic transmissions.

Aviation

32. Development shall not commence until a detailed scheme for the provision to air traffic controllers of Durham Tees Valley Airport ("the Airport") of Additional Radar Information (as defined in the Note below) in respect of aircraft and other radar returns over or within 3 nautical miles of the boundary of the site which is the subject of this planning permission has been submitted to and approved in writing by the local planning authority in consultation with the Airport operator and all necessary approvals for the installation, testing and operation of the requirements of the approved detailed scheme have been obtained to the satisfaction of the local planning authority in consultation with the Airport operator, including the regulatory approval by the Civil Aviation Authority where necessary.

Reason: To mitigate interference with radar.

33. The wind farm shall not commence operation until the requirements of the approved detailed scheme have been installed, effected, tested and become operational and any further necessary approvals for the same, including the regulatory approval of the Civil Aviation Authority, have been obtained, all to the satisfaction of the local planning authority in consultation with the Airport operator. Any variation to the approved scheme, including its implementation, shall not take place except with the prior written consent of the local planning authority.

Reason: To mitigate interference with radar.

Shadow Flicker

34. Prior to the commissioning of the development hereby approved, a scheme to alleviate the incidence of shadow flicker at any affected property shall be submitted to and approved in writing by the Local Planning Authority. At the request of the occupant of the affected property which existed prior to the grant of planning permission within 820 metres of the nearest turbine an assessment will be carried out to verify whether shadow flicker is occurring. If it is demonstrated to be occurring, the turbines producing shadow flicker shall be programmed to be shut down during the conditions which cause the shadow flicker effects. The development shall be carried out in accordance with the approved details.

Reason: in the interests of the amenity of neighbouring residential properties.

Ice Throw

35. The turbines shall not be operated except in accordance with a scheme detailing measures to minimise the potential for ice throw from turbine blades to impact on the safe use of public highways and rights of way adjoining the development which has first been submitted to and approved in writing by the Local Planning Authority.

Reason: To minimise any impact on the safe use of public rights of way near the development.

Environmental Management Plan

35. Prior to the commencement of any works, a revised Environmental Management Plan shall be submitted to and approved in writing by the local planning authority. This shall include details relating to:

- the prevention of silt-laden run-off;
- the treatment of sediment-laden water;
- site lighting;
- the location of contractors compounds and the parking and storage of related vehicles and machinery;
- fuel, oil and chemical storage;
- surface water drainage;
- the protection of private water supplies
- the means of construction of any watercourse crossings;
- staff facilities and drainage;
- the prevention of mud and debris being tracked onto local roads;
- dust management;
- works to the public highway;
- fencing and security
- concrete management
- details of the re-instatement of the ground, post-construction.
- the protection of wildlife habitats
- the management of operational turbine noise (including any amplitude modulation)
- procedures for the periodic review of the Environmental Management Plan

Development shall be carried out in compliance with the approved Environmental Management Plan, unless otherwise approved in advance in writing by the local planning authority.

Reason: In the interests of protecting the amenity of neighbouring occupiers and the environment

NOTE FOR THE ECOLOGY CONDITIONS

The developer may need to obtain a Natural England licence prior to commencement of works.

NOTE FOR THE AVIATION CONDITIONS

These notes are to be read with Conditions 32-33.

The detailed scheme referred to in the condition (32) above shall:-

a) Provide for data supplied by primary radar ("the Additional Radar"), other than the primary radar located at the Airport, which is fully compatible with the radar data processing system used by the Airport; and

b) Demonstrate that the scheme when operational will ensure that any radar returns from the development will not be displayed to air traffic controllers of the Airport and will not otherwise adversely affect the air traffic control at the Airport.

"Additional Radar Information" means information from a primary radar optimised in order to be interpreted or combined with information from the primary radar (Watchman) located at the Airport.

NOTES FOR THE NOISE CONDITIONS

These notes are to be read with Conditions 18-20. They further explain these conditions and specify the methods to be deployed in the assessment of complaints about noise emissions from the wind farm.

Note 1

Values of the $L_{A90,\ 10min}$ noise statistic should be measured at the complainants property, using a sound level meter of IEC 651 Type 1, or BS EN 61672 Class 1, standard (or the equivalent relevant UK adopted standard in force at the time of the measurements) set to measure using a fast time weighted response. This should be calibrated in accordance with the procedure specified in BS 4142:1997 (or the equivalent relevant UK adopted standard in force at the time of the measurements).

The microphone should be mounted at 1.2 – 1.5 m above ground level, fitted with a two layer windshield or suitable equivalent approved by the Local Planning Authority, and placed outside the dwelling. Measurements should be made in "free-field" conditions, so that the microphone should be placed at least 3.5 m away from the building façade or any reflecting surface except the ground.

The $L_{A90,\ 10min}$ measurements should be synchronised with measurements of the 10-minute arithmetic average wind speed and with operational data from the turbine control systems of the wind farm.

To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed and arithmetic mean wind direction data in 10-minute periods by direct measurement of 10 m height wind speeds at a location within the

application site to be agreed by the Local Planning Authority prior to commencement of the development.

Note 2

The noise measurements should be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b). Such measurements should provide valid data points for the range of wind speeds, wind directions, times of day and turbine operations requested by the Location Planning Authority. In specifying such conditions the Local Planning Authority shall have regard to those conditions which were most likely to have prevailed during times when the complainant alleges there was disturbance due to noise. Upon its request the wind farm operator shall provide all of the data collected under Condition 2 to the Location Planning Authority.

Valid data points are those that remain after data during all periods of rainfall have been excluded.

A least squares, “best fit” curve of a maximum 2nd order should be fitted to the data points and define the rating level at each integer speed.

Note 3

Where, in the opinion of the Local Planning Authority noise emissions at the location or locations where assessment measurements are being undertaken contain a tonal component, the following rating procedure should be used.

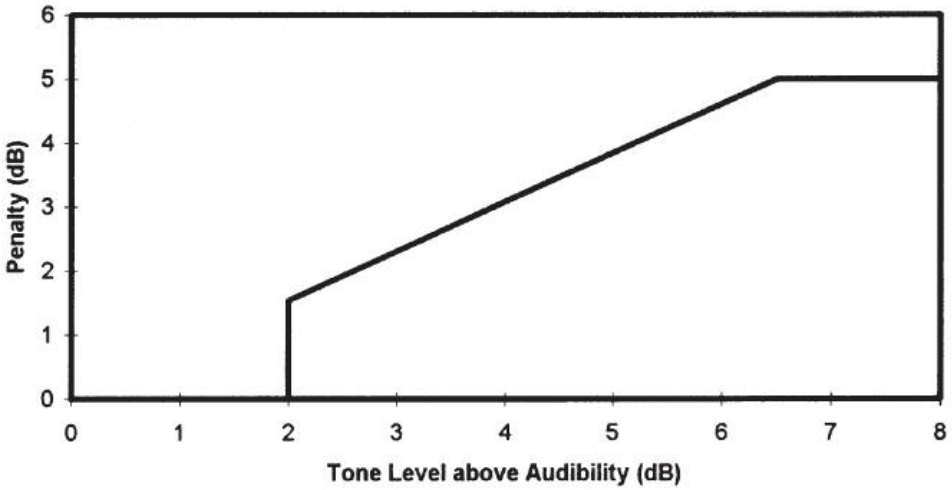
For each 10-minutes interval for which $L_{A90,10min}$ data have been obtained as provided for in Note 1 a tonal assessment is performed on noise emissions during 2-minutes of each 10-minute period. The 2-minute periods should be regularly spaced at 10-minute intervals provided that uninterrupted clean data are available. Where clean data are not available, the first available uninterrupted clean 2-minute period out of the affected overall 10-minute period shall be selected. Any such deviations from standard procedure shall be reported.

For each of the 2-minute samples the margin above or below the audibility criterion of the tone level difference, ΔL_{tm}, should be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97 “The assessment and rating of noise from wind farms”, DTI September 1996.

The margin above audibility is plotted against wind speed for each of the 2-minute samples. For samples for which the tones were below the audibility criterion or no tone was identified, substitute a value of zero audibility.

A linear regression should then be performed to establish the margin above audibility at the assessed windspeed for each integer wind speed. If there is no apparent trend with the wind speed then a simple arithmetic average shall be used.

The tonal penalty is derived from the margin above audibility of the tone according to the figure below. The rating level at each wind speed is the arithmetic sum of the wind farm noise level, as determined from the best fit curve described in Note 2, and the penalty for tonal noise.



Note 4

If the rating level is above the limit set out in the conditions, measurements of the influence of background noise should be made to determine whether or not there is a breach of condition. This may be achieved by repeating the steps in Note 2, with the wind farm switched off, and determining the background noise at the assessed wind speed, L_3. The wind farm noise at this speed, L_1, is then calculated as follows where the L_2 is the measured level with turbines running but without the addition of any tonal penalty:

$L_1 = 10 \log [10^{L2/10} – 10^{L3/10}]$

The rating level is re-calculated by adding the tonal penalty (if any) to the derived wind farm noise L_1. If the rating level lies at or below the values set out in the conditions then no further action is necessary. If the rating level exceeds the values set out in the conditions then the development fails to comply with the conditions.

Note 5

Amplitude Modulation (AM) is the regular variation of the broadband aerodynamic noise caused by the passage of the blades through the air at the rate at which the blades pass the turbine tower. ETSU-R-97, “The Assessment and Rating of Noise from Wind Turbines”, assumes that a certain level of AM (blade swish) is intrinsic to the noise emitted by the wind turbine and may cause regular peak to trough variation in the noise of around 3 dB and up to 6 dB in some circumstances. The noise assessment and rating framework recommended in ETSU-R-97 fully takes into account the presence of this intrinsic level of AM when setting acceptable noise limits for wind farms.

Where the local planning authority considers the level of AM may be at a level exceeding that envisaged by ETSU-R-97, they may require the operator to appoint an approved independent consultant to carry out an assessment of this feature under Condition 22. In such circumstances, the complainant(s) shall be provided with a switchable noise recording system by the independent consultant and shall initiate recordings of the turbine noise at times and locations when significant amplitude modulation is considered to occur. Such recordings shall allow for analysis of the noise in one-third octave bands from 50Hz to 10kHz at intervals of 125 milliseconds. The effects of amplitude modulation are normally associated with impacts experienced inside properties or at locations close to the property, such as patio or courtyard

areas. For this reason the assessment of the effect necessarily differs from the free-field assessment methodologies applied elsewhere in these Guidance Notes.

If, over a period of 6 months, commencing at a time of the first occasion at which the local planning authority records an amplitude modulation event, the complainant fails to record 5 occurrences of significant amplitude modulation, in separate 24 hour periods, then its existence as a contributor to the noise complaint shall be excluded. If, however, the independent consultant, on analysis of the noise recordings, identifies that amplitude modulation is a significant contributor to the noise complaint then the local planning authority shall be informed in writing.

INFORMATIVE

The applicant is advised that works are required within the public highway to construct new access road and adjust level of verges, and contact must be made with the Assistant Director: Highways and Engineering (contact Mr.A.Ward 01325 388743) to discuss this matter

SUGGESTED SUMMARY OF REASONS FOR GRANTING PLANNING PERMISSION

The decision to grant planning permission has been taken having regard to the policies and proposals in the Borough of Darlington Local Plan set out above, and to all relevant material considerations, including Supplementary Planning Guidance:

SECTION 17 OF THE CRIME AND DISORDER ACT 1998

The contents of this report have been considered in the context of the requirements placed on the Council by Section 17 of the Crime and Disorder Act 1998, namely the duty on the Council to exercise its functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in its area. It is not considered that the contents of this report have any such effect.