

Agenda Item A5	Committee Date 19 th September 2011	Application Number 11/00073/FUL
Application Site Fanny House Farm Oxcliffe Road Heaton With Oxcliffe Morecambe	Proposal Erection of a single 2-2.5MW wind turbine, associated access roads, switchgear enclosure and associated infrastructure	
Name of Applicant British Telecom Plc	Name of Agent Mrs Claire Wingfield	
Decision Target Date 29 May 2011	Reason For Delay Awaiting additional information and increase in officer caseload	
Case Officer	Mr Andrew Holden	
Departure	No	
Summary of Recommendation	Approval subject to conditions and legal agreement	

1.0 The Site and its Surroundings

- 1.1 The proposed application site is located on land immediately to the north of the BT Heysham Radio Station and the A683 Heysham link road. The application site lies approximately 750m to the east of the residential properties in Heysham and 1.7km to the south of Morecambe. Lancaster City is approximately 4km to the east. The Port of Heysham lies 2.5km to the west of the site. The application site covers an area of approximately 7.4ha.
- 1.2 The surrounding area occupies a low-lying position amongst a gently rolling landscape. Land rises steadily to the north, northeast and east beyond Morecambe and Lancaster, towards the Lake District and Yorkshire Dales National Park and Forest of Bowland AONB. The coastline is approximately 1.8km to the west of the site.
- 1.3 Surrounding land uses reflect the open characteristics of the area with several farmsteads, roads linking small settlements, infrastructure related to the distribution of electricity (predominantly pylons and transmission lines) to/from the nearby Heysham Power Station and telecommunications apparatus. Transmission line routes run to both the west/north and the south (running east/west) of the site, with a total of three lines close to the application site. The line running to the west of the site lies between the proposed turbine and housing to south Heysham. The BT Radio Station includes a 30m high lattice telecommunications mast with associated antennas; transmission dishes and ancillary equipment and security fencing around its perimeter and lies approximately 500m to the south west of the site.
- 1.4 The farmsteads lie mainly in a cluster to the northeast and east of the site with a smaller number to the south. The closest of the farmsteads is Downlands Farm to the northeast, approximately 600m from the turbine.
- 1.5 The immediate area in and around the site is flat predominantly agricultural pasture with hedgerow

field boundaries and a network of field drains following boundaries. The southern part of Heysham occupies a ridge running north-south and overlooks the application site and is occupied by established residential housing along with developing housing sites. The site and surrounding Mossland lies at a height of 5m Above Ordnance Datum (AOD). The highest part of the neighbouring ridge is to 30m AOD with the general area of housing lying at 15/20m AOD. There are two public footpaths in close proximity to the site, one runs approximately 500m from the site's northern boundary, the other to the south west of the site outside but along the southern boundary of the site.

- 1.6 Areas of significant international ecological importance including the extensive Morecambe Bay Special Protection Area (SPA), also designated as a Special Area of Conservation (SAC) and a RAMSAR site, and which is located within 2km of the site. A large proportion of the coastline of Lancashire is designated as 'internationally important' for its nature conservation value due to its estuarine environment (Rivers Ribble, Lune and Wyre) which is known to support more than a million waders and wildfowl. The Lune and Ribble Estuaries are also RAMSAR sites along with Leighton Moss and Martin Mere which are further afield.
- 1.7 Land adjacent to the west of the site is designated as Heysham Moss Biological Heritage Site (BHS), which is a site of local importance, predominantly for the quality of its vegetative habitats and species of flora. The Heysham Moss Site of Special Scientific Interest (SSSI) is also a Nature Reserve, is located beyond the BHS within 270m of the site's western boundary. Heysham Moss SSSI has a number of important habitats including areas of woodland and scrub, wet grassland and most importantly a central area of raised bog. The site is not subject to any landscape designations, the closest designation being Forest of Bowland Area of Outstanding Natural Beauty (AONB) approximately 7.5km to the east. There are no archaeological or cultural heritage designations on the site.

2.0 The Proposal

- 2.1 British Telecom PLC is seeking full planning permission for the installation and operation of a single wind turbine with an output of approximately 2.0 and 2.5 megawatts (MW), and associated infrastructure. The proposed turbine falls within Schedule 2 II of the Environmental Impact Assessment (EIA) Regulations 1999 and as such a full EIA and Environmental Statement (ES) accompany the application. This is a resubmission of an earlier withdrawn application (09/00155/FUL) which sought consent for two 110m turbines on a similar site.
- 2.2 The proposal broadly seeks planning permission to erect and operate a single wind turbine with a generating capacity of between 2.0 and 2.5 (MW), creation of approximately 700m of new internal access track, a crane pad area, a switchgear enclosure and underground cabling on site. A temporary compound will also be required to facilitate construction activities.

The key site elements are as follows:

- One, three bladed wind turbine of up to 110 m tip height with an installed capacity of between 2 and 2.5 MW
 - Turbine support foundations likely to measure 14m in diameter, and approximately 2 m in depth, requiring up to 350 m³ of concrete and 38 tonnes of steel reinforcing.
 - A new access point from the A683 for the proposed 6 month construction
 - A 5 m wide access track approximately 700 m in length.
 - A temporary construction compound to house site offices, welfare facilities and storage.
 - A hard-standing area for construction cranes.
 - An on-site switchgear enclosure which will connect via an agreed in principle grid connection to a suitable nearby point on the local electricity distribution network.
 - A transformer either within the turbine nacelle, tower or externally in a separate cabinet.
 - An on-site electrical and control network of buried cables laid in trenches adjacent to the new track.
- 2.3 The supplier of the proposed turbine has not been identified but it will be a three bladed, horizontal axis machine with a hub height of approximately 70m, a blade length of 40m with a rotor diameter of 80m, giving a ground-to-tip height which will not exceed 110m. The assessment of the development within the EIA has been undertaken using the constraints of hub and overall height along with

approximate generating capacity. The turbine will be supported on tapered tubular steel towers. The rotors will consist of three fibreglass blades and will be attached via the hub and main shaft to the nacelle which contains the generator, gearbox and other operating equipment. The turbine will generate power at wind speeds between 4 and 25 metres per second, but will not operate outside this range for reasons of efficiency and safety.

- 2.4 The wind turbine will require a buried reinforced concrete foundation. The dimensions may change depending on the final make of turbine selected but a typical foundation will be 14m in diameter and 2-2.5m deep. The precise foundation design will be the subject of detailed design following ground investigation. Prior to excavation topsoil and subsoil will be removed and stored for reinstatement. Following excavation the foundations will be developed with a finish approximately 1m below ground level. Earthing cables and a perforated drain will be installed around the perimeter of the turbine foundation. A further short foundation base of the turbine tower will be cast into the reinforced concrete foundation and will be extended approximately 0.5m above the finished ground level. Selected suitable excavated material will be compacted in layers on top of the concrete foundation to terminate flush with the existing ground level, leaving sufficient room for topsoil reinstatement.
- 2.5 For routine operational access to the installed turbine it is proposed to utilise an existing agricultural access running north from the site onto Oxcliffe Road, close to Fanny House Farm. However, to enable the construction, operational and decommissioning phases of the proposed development, a new access will be required directly off the A683. The access will consist of a bitumous surfaced bell mouth leading to a 5m wide access track. The bell mouth is offset with a shallow flatter swept splay on approach to allow for abnormal loads to access the site from the west. The overall width of the access will be 43m, 40m being the splay design to accept abnormal loads as it is anticipated that all wind turbine components will be shipped to the Port of Heysham and will then be transported by road to the site. The eastern approach to the access is built to a tighter radius as this element is only anticipated to receive normal vehicular traffic. Localised overrun areas leading from the Port of Heysham to the site entrance will be limited with the need for limited carriageway widening, footway or verge reinforcement and temporary removal of street furniture. Once the construction of the wind turbine is completed the access to the A683 would be closed off but will remain in place should there be a need for more than routine maintenance.
- 2.6 A new access will be created to enable construction including the delivery of wind turbine components, from the A683. The new track will be 5m wide and approximately 700m long. The track would be built to a sufficient standard to allow construction and wind turbine delivery vehicles access to the wind turbine location, during the construction, operational and decommissioning phases. Construction of the track would be made up of a 450mm thick sub-base of suitable material, likely to comprise aggregate, and a 150mm thick top layer of fine crushed stone. Either side of the track drainage ditches designed and sized to the hydrological conditions will be installed.
- 2.7 The provision and route of the access track will require the crossing of two field drainage ditches. It is proposed to bridge the ditches as they are of relatively narrow width and will result in the least possible disturbance to the ditch channel and side. The width of the crossing will be kept to a minimum but will be wide enough to ensure safe crossing whilst preventing blocking or wash-out. The precise design is to be agreed following detailed on-ground assessment.
- 2.8 Whilst the point of access onto the A683 is defined, the precise route of the access track and bridge crossing as set out on the plan will require some flexibility (alignment and positioning) to within 20m. This will enable the precise route to be defined during the detailed design phase or indeed at construction. This will lead to improved design and the potential to reduce effects on the ground to habitats of presently unknown features. The access track and bridge crossing will remain post construction.
- 2.9 A temporary contractors compound will be formed approximately 3000sqm in area on the eastern side of the access road, approximately 100m from the A683. This will house site offices, welfare facilities and provide storage for plant and materials during construction and decommissioning. The base for the compound would be constructed using the same methodology as the access track. Buildings within the compound are likely to comprise portable buildings. At the end of the construction period the buildings and aggregate base of the compound will be removed and topsoil relayed, the area then being reseeded and restored to agricultural use.
- 2.10 Following construction of the turbine foundation and backfilling, a crane hard-standing (45 m x 30 m)

will be constructed adjacent to the turbine base. The hard-standing area is required for the cranes and delivery vehicles involved in erecting the wind turbine. The crane hard-standing will be constructed to the same specification as the access track although localised load-bearing pads will be required to support the crane outriggers. The load bearing pads are constructed of compacted granular fill and are of a deeper construction to the main hard standing. The precise location of the pads and the construction depth will be directly dependant upon the crane layouts and ground conditions. This approach significantly reduces the amount of imported material, only deepening the sub base where required. The crane standing area would remain post construction to allow for works access that would need a crane.

- 2.11 The electricity produced by the turbine will be converted to the appropriate voltage by a transformer housed either with the nacelle (hub of the turbine) or within a combined transformer and switchgear building located at the base of the turbine. Typically this building will be small in scale at 2.5m by 2.3m and standing approximately 2.3m high. The building is sat on a similar sized concrete plinth standing 1.3m above ground level. The switchgear enclosure will be secured with secure palisade fencing to meet appropriate regulations, typically 2.2m high. The colour of the building is finished to match the turbine.
- 2.12 All cabling is proposed to be routed underground. The cabling for the grid connection is proposed to run north from the turbine to the 6.6Kv network already present at the Heysham site. The route will follow the route of access tracks for ease of maintenance and aid separation from the day to day agricultural activities. Agreement has been granted in principle with Electricity North West for a connection to the grid but precise details of the point of connection are not agreed and will be the subject of a further application. To lay the cables, trenches approximately 1.1m deep and 610mm wide are typically required.
- 2.13 The construction period will be approximately six months with working taking place during daylight hours Monday to Friday. Weekend and night-time working will be minimised. Provisional estimates suggest that 1100 cubic metres of compacted stone will be required, although the exact quantities will depend on actual ground conditions encountered during construction. An allowance for 3500 cubic metres has been made in the Assessment. Material excavated during the construction of the turbine and infrastructure will be reused as far as practical on site, primarily for restoration of disturbed ground or during the implementation of the proposed habitat mitigation strategy. Ready mixed concrete for the foundation is to be source locally to ensure that material and water sources are kept off site.
- 2.14 The permanent land take associated with the development during the operational stage, which comprises the turbine foundation, site access track and crane pad hardstanding, totals to approximately 1.0 hectares. Following decommission after 25 years this land will be reinstated and returned to agricultural use.

3.0 Site History

- 3.1 The site has a limited planning history, all relating to the development of wind energy at the site. It has been the subject of a withdrawn planning application to develop two wind turbines of 110m maximum height (69m column and 41m blades). This application (09/00155/FUL) was submitted in February 2009 and resulted in a formal objection by the Ministry of Defence (MoD). The objections were not overcome and whilst the development was considered acceptable in respect of landscape impact and residential amenity, the application was recommended for refusal at the July committee meeting. The summary for the reasons for refusal were as follows: -
- Contrary to national interest in that wind turbines in the position shown would interfere with radar tracking of aircraft from Warton.
 - Insufficient information to show that wildlife interests of the site will be safeguarded.

Following the recommendation of refusal of the application and an inability to overcome the formal objection, the application was withdrawn by the applicant, British Telecom PLC before determination.

The current application has been submitted following ongoing discussions with the MoD and the ecology consultees. In order to address concerns raised over developing a turbine site close to Heysham Moss SSSI and to reduce impact upon neighbouring residential properties the new application has been reduced to a single turbine. The proposed site of the turbine reflects that of the

easternmost location of the original scheme and moves the turbine site approximately 380m further away from housing in south Heysham.

Application Number	Proposal	Decision
07/01790/FUL	Erection of a 60m high anemometer mast	Approved - Feb 2008
08/00697/EIR	EIA screening opinion for a wind turbine	June 2008
09/00155/FUL	Erection of 2 wind turbines and associated works including switch room, Cable routing and trenches, site access and tracks, including new vehicular access from A683, hardstanding area and contractors compound	Withdrawn – July 2009
11/00005/FUL	Continued siting of a 60m high anemometer mast	Approved – Feb 2011

4.0 Consultation Responses

4.1 The following responses have been received from statutory consultees:

Statutory Consultee	Response
County Planning	<p>Concludes that the proposed development would make a contribution to meeting the Lancashire renewable energy target in the Regional Spatial Strategy and would make a positive contribution to targets for reducing greenhouse gas emissions. Furthermore the proposed development would provide wider economic, social and environmental benefits. The likely landscape and visual impacts of the proposed development do not raise matters of strategic significance.</p> <p>One 2–2.5 MW turbine would, if approved, would provide a contribution to meeting the Lancashire Renewable Energy targets, of which there is a significant shortfall at the present time. The proposal would make a positive contribution to targets for reducing greenhouse gas emissions. The site is also not located within a Mineral Safeguarding Area in the draft Joint Lancashire Minerals and Waste Development Framework Site Allocations and Development Management Policies DPD</p>
County Highways	<p>The previous (2009) application for two turbines in a similar location established County Highways informal consent to use the A683 during the construction and decommissioning stages of the development, and the use of Clay Lane for operational access. Works have been identified that will require entry into a Section 278 (Highways) Agreement including the development of a Traffic Regulation Order for a temporary 30 mph. Although the scheme now differs there will be no change in the arrangements agreed under the previous proposal in relation to site access and the use of Clay Lane.</p> <p>The speed limit on the A683 has now changed to 60mph and the previously agreed arrangement will need to be revised to comply with the Design Manual for Roads and Bridges in terms of geometry and visibility requirements. A new safety audit will be required.</p> <p>The S278 (Highways) Agreement will require: -</p> <ul style="list-style-type: none"> • The new junction works to the A683 including removal and reinstatement after erection of the wind turbine has been completed. • All off-site works to the existing highway network between the Port of Heysham and the site associated with enabling the turbine delivery vehicles, including reinstatement on completion. <p>In addition, as above, a temporary 30mph speed restriction in the vicinity of the temporary construction access and the A683 is to be introduced with the cost of the Traffic Regulation Order being borne by the applicant.</p> <p>Suggested planning conditions:-</p>

	<ul style="list-style-type: none"> • Scheme for the construction and subsequent removal of the temporary site access and the off-site highway works associated with facilitating the turbine delivery route from the Port of Heysham to be agreed • Development to be constructed in accordance with the agreed scheme • Construction not to commence until the 30mph temporary Traffic Regulation Order is in place
County Ecology	<p>These proposals have the potential for impacts upon biodiversity, including:</p> <ul style="list-style-type: none"> • Qualifying species of Morecambe Bay Special Protection Area - pink-footed goose; • Non-statutory designated sites: Heysham Moss – land adjoining SSSI Biological Heritage Site; • Habitats of Principal Importance – coastal and floodplain grazing marsh; • European Protected Species – great crested newts; • Protected Species and Species of Principal Importance – water voles, common toads, bats, breeding birds. <p>In order for Lancaster City Council to be satisfied that the proposals are in accordance with the requirements of biodiversity planning policy, guidance and legislation, further information (great crested newt survey, pink-footed goose mitigation) is required prior to determination of the application. This includes:</p> <ul style="list-style-type: none"> • A survey for great crested newts, together with a method statement for the protection of the species if newts would be affected. • Mitigation proposals for impacts on pink-footed geese should be approved by Natural England. <p>If the above matters can be adequately addressed, then the following planning conditions/obligations will be required:</p> <ul style="list-style-type: none"> • If required, approved mitigation measures for impacts on great crested newts will be implemented in full. • No site clearance, site preparation or development work shall take place until a Construction Environment Method Statement and Site Environmental Management Plan have been submitted and approved by Lancaster City Council in consultation with specialist advisors. • No site clearance, site preparation or development work shall take place until a Habitat Creation and Management Plan has been submitted and approved by Lancaster City Council in consultation with specialist advisors. • Detailed mitigation measures for impacts on pink-footed goose (as agreed with Natural England) shall be implemented in full. <p>Update - Following receipt of a Great Crested Newt survey it was concluded that as no evidence of great crested newts was found, the proposals are therefore unlikely to impact upon a population of this species locally and no mitigation is required for this species.</p> <p>However, common toads (Species of Principal Importance in England – Section 41 Natural Environment and Rural Communities Act (NERC) Act 2006) were found to be present in all ponds. It would therefore be appropriate for the applicant to submit a method statement to demonstrate that impacts on common toads and their habitat will be avoided. Recommends a planning condition requiring the submission of a construction environment method statement (CEMP) to include mitigation measures for impacts upon species including amphibians. As the presence of common toads has been confirmed in ponds in this area (and they are known to also use the ditches), it will be important to ensure that their protection is dealt with by the CEMP.</p> <p>Details of the approach to the mitigation for pink-footed geese have been the subject</p>

	of joint discussion with RSPB, Natural England and County Ecology. The approach to secure offset land (minimum of 28 hectares) within the general feeding areas of the geese is acceptable. The secured areas will have shooting rights removed and ongoing land management to encourage use by pink-footed geese.
County Archaeology	The desk study assessment has concluded that there is a medium to high potential for prehistoric activity on the site. Similar landscapes in the northwest have produced well preserved remains. It is however not considered likely that any surviving deposits would be of such significance as to merit preservation in-situ, but rather that preservation by record (archaeological excavation and recording) would be an appropriate means of mitigation. A condition is required to that effect.
Environmental Health	<p>Satisfied that disturbance from the proposed turbine will not cause disturbance to residential properties in the area. To ensure that noise does not become a problem to residents the imposition of the following conditions is recommended.</p> <ol style="list-style-type: none"> 1. Standard limitation on construction hours but also with a provision to allow evening working up to 9pm by prior arrangement with the LPA 2. No piling operations are anticipated but should any driven pile systems be used prior notification in writing to the LPA will be required. 3. .At any currently occupied, and properly consented residential location, noise from the turbine shall not at any time exceed a noise level of 40dB daytime or 43dB night-time measured on the La90 scale over any 10 minute period, or 5dB above the agreed prevailing background noise level, whichever is the greater. 4. In the event of any complaint of noise being received, the noise from the turbine shall be monitored for compliance with the requirement of condition 3, with results submitted to the local planning authority. Should any noise from the turbine exceed the limits set out in condition3, under some or all operating conditions, measures shall be taken by the operator to reduce the noise output of the turbine as necessary to bring noise levels into compliance, whether by stopping its operation or otherwise.
Ministry of Defence (MoD)	<p>Initial response raised a formal objection to the scheme. The development of a 110m high turbine which will be 33.5 km from, in line of sight to, and will cause unacceptable interference to the Air Traffic Control (ATC) radar at Warton Aerodrome.</p> <p>Wind turbines have been shown to have detrimental effects on the performance of MoD ATC and Range Control radars. These effects include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns which air traffic controllers must treat as real. The desensitisation of radar could result in aircraft not being detected by the radar and therefore not presented to air traffic controllers. Controllers use the radar to separate and sequence both military and civilian aircraft, and in busy uncontrolled airspace radar is the only sure way to do this safely. Maximum turbine height for no visibility to radar is 38 metres. This is an indicative figure. Any changes to turbine heights should be resubmitted to Defence Estates Safeguarding for reassessment.</p> <p>If the developer is able to overcome the issues stated above, the MOD will request that all turbines be fitted with 25 candela omni-directional red lighting or infrared lighting with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration at the highest practicable point.</p> <p>Update - Following a more detailed examination and reassessment of the development a further consultation response now supersedes and removes the formal objection to the scheme. Suggested condition for the fitting of aviation lighting</p>
National Air Traffic Services (NATS)	Formal comments yet to be received. The applicant has been in discussion prior to submission where it was determined that the site is located underneath airway N615 and Upper N615 which has a base level of 14500ft and it is possible that the turbine will be detected by the NATS en-route radars at Lytham St Annes and Great Dunn

	<p>Fell but is shielded from the Lowther Hill radar. The area is not critical for the manoeuvring of aircraft and it is considered that a single turbine in this location will have minimal impact upon their operations. Any response will be verbally reported.</p>
Civil Aviation Authority	<p>The CAA would not wish to make any site specific observations, it is understood that the applicant is in discussion with NATS and MoD. Structure over 300 feet high need to be charted on civil aviation maps and should the wind turbine progress the developers will need to provide details to the Defence Geographic Centre via a planning condition. Consultation with other aviation stakeholders could raise the following points:</p> <ol style="list-style-type: none"> The need to provide obstruction lighting if the structure is considered to be a credible aviation hazard. The rotor blades, nacelle and upper 2/3 of the supporting mast that are deemed to be an aviation hazard should be painted white. The number of pre-application enquiries associated with turbine developments has been significant. It may not be the case that a support for of a single turbine application in the generic area would result in the same positive response. Viewpoint of the local emergency services air support units should be sought.
Envirolink Northwest	<p>Funded regionally and internationally to develop and support the NW energy and environment technology, including the support of renewable energy technologies. No site specific comments have been provided but one on the wider strategic context.</p> <p>Government has set ambitious targets for renewable energy; by 2020 15% of our energy needs should come from renewable sources. PPS 22 sets the national policy framework and states that the wider environmental and economic benefits of all proposals for renewable energy, whatever the scale are materials considerations that should carry significant weight in determining proposals.</p> <p>Policy EM17 of the RSS sets out that by 2010, 2015 and 2020 at least 10%, 15% and 20% respectively of the electricity needed to supply the region should be from renewable energy sources.</p> <p>The application is for a single 2-2.5MW turbine. Typical performance for turbines of such scale is an expected generation of 5000MWh per annum. This equates to the electricity demand of around 1100 homes or 2500 tonnes of CO2.</p>
Environment Agency	<p>Initial objections to the submission as a Survey of Great Crested Newt had not been undertaken. But following review of the Great Crested Newt survey, withdrawal of the objection, subject to suggested conditions: -</p> <ul style="list-style-type: none"> Details for the protection/mitigation of damage to common toad Details of proposed mitigation measures and compensatory habitat provisions in respect of the loss of coastal floodplain grazing marsh A 5m buffer strip of at least 5 metres measured from the top of the bank of watercourse and ponds shall be identified and kept clear of any works associated with the development. <p>Recommends bridge crossing (bank to bank) of the watercourses rather culverts</p>
Natural England	<p>No objection, but advises that the local planning authority considers the impact of the development on protected species, biodiversity and landscape. Other than generic guidance provided as part of this consultation, the following comments have been received:</p> <p>Natural England (NE) and RSPB have had meetings with the applicant's agent to discuss the scope of mitigation for the displacement likely to occur to feeding Pink-footed goose during the winter months. These are an SPA species for Morecambe Bay and any likely significant affect on this species will therefore need to be</p>

	<p>considered in accordance with the Conservation of Habitats & Species Regulations 2010.</p> <ol style="list-style-type: none"> 1. NE have no concerns regarding collision risk to Pink-Footed Geese based on the information submitted in the ES, and believe that the impacts of displacement can be mitigated, and if an appropriate mitigation scheme is developed it can form the basis of a suitable planning condition so NE would be unlikely to object. 2. Have agreed that a multiplier of 2 should be applied to the perceived loss of functional land within the 600m buffer around the turbine. They therefore expect the mitigation land to comprise a contiguous area of land of approximately 28ha. 3. The search area should focus on suitable land north of the Lune Estuary in the first instance (outwith the 600m displacement distance of the proposed turbine), the area described in S8.6.10 of the Ornithology chapter should be considered if no land can be secured in the primary search area. 4. There must be evidence that any proposed mitigation land is within an area where sporting/shooting rights are actively exercised, this land should not be within or adjacent to the existing designated areas where wildfowling agreements are already in place. 5. Suitable mitigation would involve the suspension of all shooting over the entirety of the mitigation area for the life of the windfarm (construction, operation, decommissioning) 6. The details need to be supplied to the LPA so that suitable conditions can be agreed with NE prior to determination. 7. NE have discussed with colleagues in the North who agree with the principles of the mitigation and have suggested this could be an appropriate solution. I have yet to receive a formal opinion from our national specialists. <p>Update - Following discussion with National NE staff, agreement to the mitigation approach is accepted with the following additional comments added in respect of the loss of feeding areas for SPA birds: -</p> <ul style="list-style-type: none"> • The 'qualifying land' should fall within the areas identified in the study completed by Pete Marsh on behalf of BT, focusing initially on the qualifying areas north of the Lune; • Once wildfowling has ceased on the appropriate area of land, this land should not become subject to any secondary or deliberate source of disturbance within the limits of control of the land manager.
<p>Royal Society for the Protection of Birds (RSPB)</p>	<p>In principle, the RSPB have no objection to the development.</p> <p>RSPB and Natural England have had discussion with agent over the need and approach for mitigation/offset of feeding areas displaced by the development.</p> <ul style="list-style-type: none"> • Any mitigation land needs to be at least 600m from our turbine; • A suitable (contiguous) area should be at least double the 'sterilised' area of 13.9 Ha contained in our submission • The land should be within the area detailed in paragraph 8.6.10 of our Ornithology chapter; • Within this area, there is a preference for land north of the Lune – alternatively, land Suitable mitigation measures would be the suspension of all sports/recreational shooting rights over the entirety of the mitigation area for the lifetime of our project. No other PFG mitigation measures would be necessary • Enhancement measures already proposed (control of water from ditches and management of the field next to Heysham Moss) to enhance the nature conservation value of the immediate area and thus demonstrate that measures in the NERC Act (no net loss <i>and enhancement</i>) are adhered to. This enhancement is additional to the mitigation for PFG, which we confirm is limited to buying out shooting rights over an agreed area of land.

	<ul style="list-style-type: none"> As a further 'enhancement measure', the 'goose alert' areas that Pete Marsh mapped on your behalf should be made publically available (ie. via GIS layers), as this information will enable Natural England/ RSPB/ decision makers to help conserve key pink-footed goose feeding areas (functionally linked to SPA's) in the future. <p>Formal agreement has been reached over the approach to mitigation /offset for pink-footed geese.</p>
The Wildlife Trust	<p>Comment on the objectives set out in the EIA: -</p> <p>Objective 1 - To increase the quality and carrying capacity of the available habitat for pink-footed geese</p> <p>The proposed mitigation area is already regularly used for in excess of 2000 pink footed geese, queries the ability of this area to further increase the carrying capacity of the area. The ornithology chapter appears to conflict with this objective seeking to ensure the feeding numbers are not reduced. Measures that would make the land more attractive appear to have been discounted with no explanation.</p> <p>Objective 2 - To enhance and manage the remaining grazing marsh habitat in line with the UK BAP description</p> <p>Considers the 30% annual ditch clearance to be excessive, management of the neighbouring ditches have not seen relocation of key species.</p> <p>Objective 4 - To monitor the success of these measures and set in place management changes if necessary to improve such success.</p> <p>No provision for the monitoring of PFG foraging making it impossible to judge whether Objective 1 has been accomplished.</p> <p>The description conflicts with the ornithology mitigation indicating recording of location and numbers of al PFG each winter before enhancement and for five years after erection of the turbine. They are disappointed that the period for monitoring ceases after five years as long term monitoring of operational site would assist in the consideration of future applications</p> <p>Access track/ditch crossing – questions the need for the track to extend west and demand a second crossing. The turbine field would appear to have sufficient space to allow the turning area to be sited closer to the crane hardstanding</p> <p>Great Crested Newts – Survey has not been undertaken. The presence or otherwise of European protected species should be established prior to determination of the application. Update - Following receipt of the Great Crested Newt survey, noted that no evidence of newts, including Great Crested Newts, was recorded via the survey. Accordingly, they have no further comments to offer in terms of Great Crested Newts</p> <p>Construction Method Statement/Site Environmental Management Plan – These should be secured by means of a planning condition and supported by the employment of a suitably qualified and experienced Ecological Clerk of Works.</p> <p>Mitigation/Enhancement Management Plan – Habitat Management Plan to be produced post consent. As adjoining land managers of Heysham Moss SSSI/BHS, we would appreciate our Heysham site manager being involved in the development of this document in order to maximise biodiversity gain for both sites.</p>
Office of Communications (OFCOM)	No response received.

Fire Safety Officer	The Fire Authority has no objections to the proposal providing suitable access provision for fire service appliances. Advice is provided in this regard.
Lancashire Constabulary	No response received.
Air Ambulance	No response received.
Parish Councils	No response received.
English Heritage	The application has been considered but specialist staff do not wish to offer comment on this application. The application should be determined in accordance with National Local Policy guidance and on the basis of your specialist Conservation advice.
Conservation Officer	Does not consider that the development would have any significant impacts upon the Schedule Ancient Monuments (St Patrick's Chapel and Lancaster Castle) - or Heysham Village Conservation Area

5.0 Neighbour Representations

- 5.1 At the time of compiling this report, a total of 40 letters (37 objection and 3 support) of representation were received as a result of neighbour consultations including a letter from David Morris MP for Morecambe and Lunesdale. The comments received have been summarised as follows: -

Letter from MP David Morris

Writes on behalf of a number of residents who have contacted him raising objections to the development. The main areas of concerns are:

- Noise pollution and shadow flicker which are both detrimental to health
- Significant visual impact on the area dominating the landscape
- Clearly visible from garden areas and reduce property value
- Economic benefits to the area would be very small
- Approval of this application could result in additional applications to those already under consideration

Procedural Concerns

- This is a revised version of the previous application, the original application was objected to by MoD and RSPB. How does this current application differ or overcome the original concerns.
- A private members bill by Lord Reay of Whittington is currently progressing through the House of Lords and has had a second reading. The Bill stipulates that no turbines should be erected within 1.5km from the nearest residence. It is suggested that whilst the outcome of the White Paper is unknown it would be inappropriate of the City Council to consider an application.

Residential Amenity Concerns

- Too close to residential properties minimum separation distances from residential properties apply in Scotland, Wales and other European countries. The UK Noise Association recommends a minimum separation distance of 1 mile (1.6km) from residential properties. In Scotland a minimum distance of 2km is encouraged. The Governments of Germany and Denmark have now legislated a minimum setback distance of 2km after numerous noise pollution issues. The French Government requires a minimum distance of 1.5km. Independent medical experts now recommend that people should not live within 2.4km (1.5 miles) of a turbine cluster. The residents of Heysham also deserve this protection.
- Visually intrusive from the elevated position of nearby house many of the properties face directly towards the turbine development from an elevated position. Principal rooms, bedrooms and rear gardens will have a direct view of the development. Impact upon neighbouring residents will be compounded by the potential turbine development proposed by Banks Renewables.

- Noise disturbance – turbine development generate excessive levels of noise disturbing so close to residential properties. Evidence indicates that long term effects of noise can be detrimental to human health leading to sleep disturbance, abnormal heart beat and headaches.
- There is evidence that the noise radiation from wind turbines is made up of a number of sound characters, which include low frequency noise, infrasound, vibration, rhythmic pulsation, and tonal qualities. Acoustic infrasound is very low frequency sound which can travel further distances and easily penetrate most buildings and vehicles. Unlike higher frequencies, the ultra low frequency waves, produced as the turbine tips and blades rotate, can penetrate thick walls (passes through obstructions with less attenuation) and can be detected by the human body, and can be upsetting or unsettling. The longer wavelengths in low frequency noise resonate within rooms magnifying their loudness relative to the outside. Prolonged exposure to low frequency noise causes a complex disease known as vibro-acoustic disease. Evidence indicates that physical & mental health problems subsequently experienced by residents when living within 2km of wind turbines have been due to low frequency noise emitted by the wind turbines.
- Consideration should be given to the cumulative effects of living with this noise 24/7, 365 days per year, for the lifetime of the turbine (at least 25 years) and is not comparable with visiting for a few hours or days or working nearby during a weekday. This would be exacerbated for people who are retired or in their houses most of the time for other reasons. We would have no respite from the noise and it could have a detrimental impact on our mental and physical health.
- Close proximity to residential properties in Heysham
- Shadow flicker - The EIA assessment predicts that 9 properties, in the 900m calculation zone from the turbine, would likely be affected by effects of shadow flicker and the well-being of these residents must also be considered.

TV interference

- Concerns that the development will disturb TV, radio and mobile phone reception. Once erected the ability to protect against such disturbance will be difficult to control. The EIA indicates that transmitters are likely to be effected by the turbine development potential effecting over 10,000 homes in the area.

Character of the Area

- The area is already over developed with electricity supply infrastructure (pylons and power lines), increased sub station and possible 3rd nuclear station. The area cannot cope with additional structures
- The area appears to becoming a dumping ground for turbine applications; the immediate area has already been the subject of three applications. This development, if approved will lead to further applications
- The area to the south/east of Heysham development of any turbines in area will disturb the quiet, tranquil and scenic beauty of the area.
- The location of turbine development should, in principle be directed to areas without substantial residential properties to reduce impact.
- The location and scale of the development will impact upon views of Ashton Memorial, the Bowland Fells, Clougha and Ingleborough. The photomontages are misleading and indicate far less intrusion than will actually occur.
- If this wind turbine development were allowed to go ahead, this would also set a precedent for subsequent approval of the application for the 4 wind turbine Heysham South development, which is being proposed by Banks Renewables, to be built in the field just across the A683 from this development. The cumulative effect would be greater with respect to visual aspect and noise.
- The development does not accord with Policy E4 of the LDLP, it is out of scale and keeping with the area and inappropriate.

Ecology

- Potential impact upon pink footed geese, the area is used extensively all year round for grazing and as a flight path during migration. The placement of turbines will disturb feeding

area, lead to bird strike, death and injury.

- The fields surrounding the turbine location are used by large numbers of wading birds when the tide fills the bay and estuaries.
- Potential to disturb bats in the area and the wider nature reserve. The sensitive and delicate nature of the Moss will be disturbed by such intrusive development.
- Concern over the impact of the neighbouring Heysham Moss SSSI. The area has many special plants, wildlife and ancient peat land. The area is home to a wide variety of breeding birds including, lapwings, grasshopper warbler, greater spotted woodpecker in addition to overwintering geese, snipe, teal and woodcock.

Highways/Safety

- Visually distracting for users of the neighbouring Heysham link road and other nearby highways.
- The development is likely to cause disturbance to household and neighbouring highways during the construction process.
- Evidence is available to indicate that there can be danger from ice build up on the blades being thrown great distances when the turbines start to move. Public footpaths run relatively close to the site and walkers could be affected.

Energy Development

- Comments that the only future for energy generation is nuclear power.
- Wind energy development should be focussed upon off-shore with reduced impact on residential homes and the landscape
- Wind turbines are not cost effective and require heavy subsidy for construction. Neither are they an efficient generator of energy. The area is regularly calm and wind free. The amount of energy produced by these forms of development whilst appearing to be substantial is in effect has little impact upon the generation needs of the country. The neighbouring Heysham power stations (two and present and potential three) produce very large amounts of power approx 1320 MW each.
- BT have not provided a justification for such development, only seeking gain revenue at the expense of the landscape in this area.
- Wind energy development is grossly inefficient, many long periods of no wind, typical winter months with sustained high pressure with no wind for many weeks. . The production of power by constant sources such as nuclear power is the only practical way forward. Recent evidence indicates that turbines operated at only 24% capacity last year overall and only 5.8% during the period before Christmas. There is a strong need to develop other low-carbon forms of energy production.
- The wind generation figures appear to conflict with the monitoring statement produced by BT as part of the EIA submission.

Social, Cultural and Economic concerns

- Heysham has an ancient history and conservation area, development will affect such areas.
- Loss of value to residential properties (*not a planning consideration*).
- Wind turbine development does not bring jobs or local employment into the area. Power station generates many local jobs and monies spent within the local economy. Turbine developments do neither.
- Turbine applications are “regularly approved” despite 100% rejection from local residents.
- Alternative energy is to be supported but not at the expense of the landscape.
- Disturbance noise and potential safety concerns are considered to be a potential violation of Article 8 of the Human Rights Act
- BT is seeking to develop wind energy merely for economic benefit with little regard to the impact of local residents upon this local and national sensitive site.
-

Letters of Support

- Include comments that are wholly supportive of the nature of development;
- Support for the development suggesting additional turbines could be accommodated in the

area without affect upon the character of the area given the presence of existing electricity infrastructure.

6.0 Principal Development Plan Policies

6.1 National, Regional and Local planning policy are relevant to this proposal. The following list is of particular relevance and shall form the principle policy framework for assessing the application:

6.2 National Planning Statements (NPS), Planning Policy Statements (PPS) and Planning Guidance Notes (PPG)

PPS1 (Delivering Sustainable Development) sets out the Governments overarching planning policies on the delivery of sustainable development and provides generic advice for all new development. The Government sets out four aims for sustainable development. These are:

- developing strong, vibrant sustainable communities
- protection of the natural and historic environment
- prudent use of natural resources
- promoting a strong, stable and productive economy

With regard to environmental protection, PPS1 states that a high level of protection should be given to most valued townscapes and landscapes, wildlife habitats and natural resources, conserving and enhancing wildlife species and habitats and the promotion of biodiversity. It goes on to state that planning policies should take account of environmental issues; such as the mitigation of the effects of, and adaption to, climate change through the reduction of green house gases and the use of renewable energy. Where adverse impacts are unavoidable, mitigation and compensatory measures may be appropriate.

PPS1 (Planning and Climate Change Supplement) indicates that planning has a key role to play in tackling climate change and securing progress towards the UK's emission targets. It also states that planning authorities should provide a framework that promotes and encourages renewable and low-energy generation and as such policies should be designed to promote and not restrict renewable technologies and supporting infrastructure. Subsequently, applicants for renewable energy development should not be required to demonstrate the overall need for renewable energy, nor should the energy justification for a proposed development in a particular location be questioned.

PPS5 (Planning for the Historic Environment) now supersedes PPG15 and PPG16 in relation to the historic environment and archaeology. The Government's overarching aim is that the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations. In order to deliver sustainable development, PPS5 states that polices and decisions concerning the historic environment should:

- Recognise that heritage assets are a non-renewable resource
- Take account of the wider social, cultural, economic and environmental benefits of heritage conservation
- Recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained in the long term.

Policy HE1: Heritage Assets and Climate Change is particularly relevant. HE1.3 states that where conflict between climate change objectives and the conservation of heritage assets is unavoidable, the public benefit of mitigating the effects of climate change should be weighed against any harm to the significant of heritage assets in accordance with the development management principles in this PPS and national planning policy on climate change. Policy HE6 of PPS5 states that where an application site includes or has the potential to include heritage assets with archaeological interest, planning authorities should require developers to provide an appropriate desk-based assessment or where appropriate a field evaluation with an application.

PPS7 (Sustainable Development in Rural Areas) sets out the Government's overall aim is to protect the countryside for the sake of its intrinsic character and beauty, the diversity of its landscapes, heritage and wildlife, the wealth of its natural resources and so it may be enjoyed by all. This advice is also formally provided in PPS 4 – Planning for Sustainable Economic Growth, which supersedes certain paragraphs of PPS 7. When determining planning applications for development

in the countryside, local planning authorities should continue to ensure that the quality and character of the wider countryside is protected and, where possible, enhanced. They should have particular regard to areas that have been afforded statutory designation for their landscape, wildlife or historic qualities. Major developments should not take place in these designated areas, except in exceptional circumstances. When determining planning applications for development in the countryside, planning authorities should:

- take account of the need to protect natural resources, and;
- provide for the sensitive exploitation of renewable energy sources in accordance with the policies set out in PPS22.

PPS9 (Biodiversity and Geological Conservation) sets out planning policies on the protection and enhancement of biodiversity and geological conservation through the planning system. The aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests. Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that, before planning permission is granted adequate mitigation measures are put in place and appropriate compensation measures sought.

PPS22 (Renewable Energy) is the overarching national policy that sets out Government's stance on renewable energy development and positive steps towards delivering Government's commitment to tackling climate change. PPS22 sets out a number of key principles that planning authorities should adhere to when considering applications for renewable energy developments. These include:

- Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily;
- Regional and local policies should be designed to promote and encourage, rather than restrict, the development of renewable energy resources;
- The wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations and should be given significant weight;
- Planning authorities should not make assumptions about the technical and commercial feasibility of renewable energy projects;
- Small-scale projects can provide a limited but valuable contribution to overall outputs of renewable energy and meeting energy needs both locally and nationally. Planning authorities should not therefore reject planning applications simply because the level of output is small;
- Developers of renewable energy projects should engage in active consultation and discussion with local communities at an early stage in the planning process;
- Proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures.

The Government has already set a target to generate 10% of UK electricity from renewable energy sources by 2010. The White Paper sets out the Government's aspiration to double that figure to 20% by 2020. PPS 22 requires regional spatial strategies to include regional targets for renewable energy capacity in the region, and states that these targets should be expressed as the minimum amount of installed capacity. PPS22 also emphasises that the potential to generate substantial amounts of renewable energy from offshore projects should not be used as a justification to set lower targets for onshore projects.

PPS22 has regard to the potential landscape and visual effects of renewable energy developments and states that such effects may be minimised through appropriate siting, design and landscaping.

PPS22 (Planning for Renewable Energy: A Companion Guide) offers practical advice as to how the policies contained in PPS22 can be implemented. The guide provides advice and guidance relating to a range of technologies. With regards to wind turbine development, this guidance expands and covers social and environmental benefits, together with issues such as noise, shadow flicker, landscape and visual impact, access and associated infrastructure, electromagnetic

interference, ecology, historic conservation and archaeology. The companion guide should be read in conjunction with PPS22.

PPG24 (Planning and Noise) advises local planning authorities when determining planning applications for development which will either generate noise or be exposed to existing noise sources to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business. The authority should ensure that development does not cause an unacceptable degree of disturbance, considering carefully in each case whether proposals for new noise-sensitive development would be incompatible with existing activities. Authorities should consider whether it is practicable to control or reduce noise levels, or to mitigate the impact of noise, through the use of conditions or planning obligations. Ambient noise should be taken into account when considering the application.

PPS25 (Development and Flood Risk) requires flood risk to be taken into account at all stages of the development process. PPS25 recognises that flooding cannot be wholly prevented, but its impacts can be avoided and reduced through good planning and management.

Draft National Planning Statement (NPS) EN3 for Renewable Energy Infrastructure – Section 2.7 relates to onshore wind and reiterates the guidance contained in PPS22. It identifies the key impacts of onshore wind development as the historic environment, landscape and visual, noise, shadow flicker, and traffic and transport. This policy also lists a series of information to be provided with applications.

PPS (No Number Yet Allocated): Consultation (Planning for a Low Carbon Future in a Changing Climate) - this consultation document brings together PPS1 Climate Change Supplement and PPS22 into a new draft PPS for *Planning for a Low Carbon Future in a Changing Climate*. The requirement for this is a response to a significant amount of new legislation and policy, such as the Climate Change Act 2008 and The Low Carbon Transition Plan and Renewable Energy Strategy (July 2009). The consultation document states that the planning system sets out the overall framework for development. This should help secure progress against the UK's emissions targets, both by direct influence on energy use and emissions through, for instance, encouraging energy efficiency, and through bringing together and encouraging actions from others. Policy LCF14: Renewable and low carbon generation is most relevant and reiterates a number of the criteria in PPS22 for determining planning application for renewable energy proposals. For particular importance, it reiterates that planning authorities should not require applicants for energy development to demonstrate overall need; and that significant weight should be given to wider environmental, social and economic benefits of renewable energy projects.

Planning for Growth – Minister of State for Decentralisation, Ministerial Statement 23 March 2011. The Statement is capable of regarded as material planning consideration and carries significant weight in determining planning applications. The Statement identifies that planning has a key role in rebuilding Britain's economy. The Government's top priority in reforming the planning system is to promote sustainable economic growth and jobs. The answer to development and growth should wherever possible should be 'yes', except where this would compromise the key sustainable development principles set out in national planning policy.

Local planning authorities should support enterprise and facilitate housing, economic and other forms of sustainable development, whilst considering the likely economic, environmental and social benefits of the proposal including long term and indirect benefits such as consumer choice, more viable communities and more robust local economics

The (Draft) National Planning Policy Framework - sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations. Whilst it is a consultation document and therefore subject to potential amendment nevertheless it gives a clear indication of the Government's 'direction of travel' in planning policy. Therefore the Draft National Planning Policy Framework is capable of being a material consideration although the weight to be given to it will be a matter for the decision maker's planning judgement in each particular case.

North West Regional Spatial Strategy (RSS) - adopted September 2008.

It is acknowledged that the regional tier of policy will be abolished following the implementation of the Localism Bill. At the present time the RSS remains part of the Development Plan although the Government's intention to abolish is acknowledged as being the likely, imminent direction of policy.

Policy DP7 (Promote Environmental Quality) seeks to protect environmental quality by, amongst other means, respecting the character and distinctiveness of places and landscapes; maintaining and enhancing the quantity and quality of biodiversity and habitat; the protection and enhancement of the historic environment; and maintaining tranquillity of the open countryside and rural areas.

Policy EM1 (Integrated Enhancement and Protection of the Region's Environmental Assets) - The Region's environmental assets should be identified, protected, enhanced and managed. Schemes should deliver an integrated approach to conserving and enhancing the landscape, natural environment, historic environment and woodlands, and where proposals affect these assets then mitigation and compensation for loss or damage should be a minimum requirement. Of particular relevance is Policy EM 1 (A) which states that planning proposals should identify, protect and maintain distinctive features that contribute to landscape character in the Region. This approach recognises the importance of landscape character assessments undertaken by local authorities.

Policy DP9 (Reduce Emissions and Adapt to Climate Change) – as an urgent regional priority, plans, strategies, proposals, scheme and investment decisions should contribute to reduction in the Region's carbon dioxide emissions from all sources in line with national targets to reduce emissions to 60% below 1990 levels by 2050. Increasing renewable energy capacity and promoting micro generation are key measures identified to help reduce carbon emissions.

Policy EM17 (Renewable Energy) supports the development of renewable energy schemes. It states that in line with the North West Sustainable Energy Strategy, by 2010 at least 10% (rising to at least 15% by 2015 and at least 20% by 2020) of the electricity supplied in the North West should be provided from renewable energy sources. The following criteria should be taken into account but should not be used to rule out or place constraints on the development of all, or specific types of, renewable energy technologies. The criteria includes:

- anticipated effects on local amenity resulting from development, construction and operation of schemes (e.g. air quality, atmospheric emissions, noise, odour, water pollution and disposal of waste)
- acceptability of the location/scale of the proposal and its visual impact in relation to the character and sensitivity of the surrounding landscape, including cumulative impact
- effect on the region's World Heritage Sites and other national and internationally designated sites or areas, and their settings but avoiding the creation of buffer zones
- effect of development on nature conservation features, biodiversity and geodiversity, including sites, habitats and species, and which avoid significant adverse effects on sites of international nature conservation importance by assessment under the Habitats Regulations
- potential benefits of development on the local economy and local community
- effect on agriculture and other land based industries

Policy EM18 (Decentralised Energy Supply) expects local planning authorities to provide a framework that promotes and encourages renewable and low carbon energy development in order to contribute to the achievement of regional renewable energy targets.

6.3 Saved Policies of the Lancaster District Local Plan (LDLP)- adopted April 2004

Policy E4 (Countryside Area) – Within the countryside development will only be permitted where it is in scale and keeping with the character and natural beauty of the landscape, is appropriate to its surroundings in terms of siting, scale, design, materials, external appearance and landscaping, would not result in a significant adverse effect on nature conservation or geological interests, and makes satisfactory arrangements for access, servicing, cycle and car parking.

Policy E7 (Protection of Water Resources) – Development proposal which would affect an existing watercourse will only be permitted where the water quality would be maintained or improved, and there would be no significant adverse impact on the landscape, nature conservation, recreation and amenity importance of the watercourse.

Policy E12 (Nature Conservation) – Proposal must take into full account any impacts upon wildlife, wildlife habitats, protected species and important geological features. Where development is permitted, developers will be required to minimise any adverse impact and/or create and provide for the appropriate management of compensatory wildlife habitats.

Policy E22 (Wind Farms) – partly superseded by the Core Strategy, states that proposals for the development of wind turbines will be assessed against their impact on the character of the landscape (including cumulative impact), nature conservation, historical conservation and nearby dwellings.

Policy E35 (Conservation Areas) – development proposals which would adversely affect important views into and across a Conservation Area or lead to an unacceptable erosion of its historic form and layout, open spaces and townscape setting will not be permitted.

Policies E44-E46 (Archaeology) – development proposals should take into account archaeological considerations and the need to safeguard important sites from damage or destruction. Development proposals that would have an adverse impact on the site or setting of a scheduled ancient monument or other monument of national importance will not be permitted. Other sites of archaeological importance will also be protected. When development affecting such sites is acceptable in principle, a scheme for mitigation of damage should be secured to preserve the remains in situ, or where preservation is not justified adequate provision for investigation and recording before and during development will be required. An archaeological assessment and/or evaluation will be required as part of the planning application to make adequate assessment of the nature, extent and significance of the remains present and the degree to which the development is likely to affect them.

6.4

Lancaster District Core Strategy (LDCS) - adopted July 2008

Policy SC1 (Sustainable Development) seeks to ensure new development proposals are as sustainable as possible, minimise greenhouse gas emissions and are adaptable to the likely effects of climate change. This policy requires development proposals to be integrated with the character of the landscape and where appropriate enhances biodiversity. The use of renewable energy technologies and the efficient use of land (previously developed land) are measures promoted by this policy.

Policy SC3 (Rural Communities) seeks to build healthy sustainable communities by empowering rural communities to develop local vision and identity, identify and need local needs and manage change in the rural economy and landscape. Development should protect, conserve and enhance rural landscapes and the distinctive characteristics of rural settlements.

Policy SC5 (Achieving Quality in Design) – proposals should maintain and improve the quality of development in Areas of Outstanding Natural Beauty, Conservation Areas and other rural areas. New development should reflect the positive characteristics of its surroundings including the quality of the landscape.

Policy ER7 (Renewable Energy) seeks to maximise the proportion of energy generated in the District from renewable sources where compatible with other sustainability objectives. The need for renewable energy must be balanced against landscape impacts, local amenity, habitats and species, farming and land based industries and local transport networks. South Heysham is identified as a key focus for renewable energy generation including wind and biomass technology whilst ensuring the protection of Natura 2000 sites including the Morecambe Bay, Bowland Fells and Leighton Moss Special Protection Areas from adverse effects.

Policy ER1 (Higher and Further Education) states that Lancaster University is the Districts most important economic asset and its continued growth is important to the District and to the Region. This policy seeks to support the continued expansion of Lancaster University within the existing built-up part of the campus and, outside this area, where special justification is demonstrated.

Policy E1 (Environmental Capital) – its purpose to improve the District's environment by:

- protecting and enhancing nature conservation sites and landscapes of national importance,

Listed buildings, conservation areas and archaeological sites

- minimise the use of land and non-renewable energy
- resist development which would have a detrimental effect on environmental quality and properly manage environmental risks such as flooding,
- ensuring that development in the city of Lancaster and other historic areas conserves and enhances their sense of place
- protect and where possible enhance habitats and the diversity of wildlife species, and conserve and enhance landscape

Policy E2 (Transportation Measures) – ensuring all major development proposals are accompanied by enforceable measures to minimise and mitigate the transport impacts of development.

7.0 Comment and Analysis

7.1 Principle of the Development

In determining this application regard should be made to local policies contained in both the Lancaster District Local Plan and the Lancaster District Core Strategy. Both documents look favourably on renewable energy schemes and seek to promote and encourage proposals provided that any potential impacts are satisfactorily addressed. This includes an assessment of the scheme's impact on the character of the landscape, ecological interests, heritage assets, and residential amenity.

In making this assessment national planning policy for renewable energy (PPS22) clearly states that the wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, is also a material consideration and should be given significant weight in determining proposals. This includes the contribution of the scheme to achieving regional and national targets for renewable energy generation. The proposed development, whilst relatively small (in comparison to other non-domestic turbine schemes) would make an important contribution to these targets.

7.2 Main Issues

The main issues for Members to consider in the determination of this application are:

1. The benefits and contribution that the proposal would make to achieving regional and national targets for renewable energy generation.
2. The effects of the proposal upon the character and appearance of the landscape of the immediate and surrounding area.
3. The effects of the proposal upon the living conditions of nearby local residents, particularly in terms of visual impact, noise and shadow flicker.
4. The effects of the proposal upon biodiversity and habitat.
5. The effects of the proposal on the nearby heritage assets.
6. The effects of the proposal on television and radio interference
7. Other issues

7.3 Renewable Energy Generation

The Climate Change Act 2008 was put in place to set legally binding targets for the UK to reduce greenhouse gas emissions by 80% by 2050. The UK Government has also set a target of 10% electricity to be generated by renewable energy sources by 2010, rising to 15% by 2015 and 20% by 2020. The EU Renewable Energy Directive has also set the UK with a legally binding target of achieving 15% of all energy from renewable sources by 2020. Government later produced the Renewable Energy Strategy (RES) in July 2009 which provides a strategy for how the UK can achieve the EU target of 15% of energy from renewables by 2020 in order to meet the wider challenge of climate change. The RES indicates that these targets will be delivered through mechanisms to provide financial support (feed-in tariffs and the Renewables Obligation); drive and clear away barriers; increase investment in emerging technologies; and create new opportunities for individuals, communities and business to harness renewable energy. Of the potential mix of technologies available to contribute towards these targets, wind energy development is identified as

one of the most developed and cost-effective renewable electricity technologies.

7.4 These targets are set out in PPS22 and adopted in the Regional Spatial Strategy (RSS). The RSS provides a breakdown of renewable energy generation targets for each county by renewable energy type. For example in 2010 Lancashire should have been generating 205.5MW of electricity from onshore wind turbines (including wind farms, clusters and single large turbines) and 239MW from all renewable technologies. The aim was to increase these figures to 249MW and 297.4MW respectively by 2015. However, as of November 2010, the total operating capacity (all renewable technologies) amounted to 137.8MW; a shortfall of 101.16MW relative to the 2010 figure. Further updated figures indicate that the total operating capacity (onshore wind turbines over 1MW with planning permission and operational) in Lancashire amounts to 142.4MW. This is a shortfall of 63.1MW to meet the latest 2010 target (from onshore wind turbines including wind farms, clusters and single large turbines) for the county. The struggle to meet targets across the Country has led to the publication of the UK Low Carbon Transition Plan 2009 and the UK RES 2009, which is likely to lead to adoption of a new national planning policy - *Planning for a Low Carbon Future in a Changing Climate*, superseding PPS1's companion guide and PPS22. This is currently a consultation paper. In addition to these national and regional drivers, adopted Core Strategy Policy ER7 supports renewable energy development in the whole, commenting that encouraging and establishing the District as a centre of environmental technologies is part of the District's economic vision. It does however indicate that the need for renewable energy must be balanced against landscape impacts, biodiversity and land based industries, such as farming. Partially saved policy E22 of the District Local Plan takes a similar approach.

7.5 The above policies and targets clearly emphasise the growing need for renewable energy installation in both the Region and the UK as a whole.

7.6 **Efficiency of Wind Energy Development**

The companion guide to PPS22 indicates that the principle of harnessing wind energy by wind turbines is well established and that there is no doubt about the technical viability of wind power. Furthermore, it states that the UK is particularly well placed to utilise wind power. There is a vast range of policy documents produced by Government which endorse the use of renewables and wind technology in particular. These have been fed into national planning policy (PPS22) which clearly states that wind energy development is accepted as a key method for meeting energy demands of the country and states that planning authorities should not reject planning applications simply because the level of output is small – they still provide a limited but valuable contribution towards overall outputs. Current planning policy highlights the scale and urgency to address climate change. It is equally clear that the benefits of renewable energy proposals should be given significant weight in the determination of planning applications.

7.7 **Predicted Efficiency on Site**

Estimated wind speeds have been sourced from the national wind speed database available from the Department of Energy and Climate Change (known as NOABL). NOABL estimates the annual average wind speed for the application site as 6.9m/s at 45m height. This is around the UK average and well suited to a wind turbine scheme. The application states that the scheme will generate sufficient carbon-free electricity to power approximately 1,110–1,400 homes each year of its estimated 25 year lifespan. This equates to the elimination of 2,260–2,825 tonnes of carbon dioxide each year by replacing conventional fossil fuel electricity generation.

7.8 Although some objectors have questioned the predicted efficiency of the turbine and lack of justification, opposition on the grounds of the efficiency, validity and viability of wind energy technology and development is not a material consideration. This issue has been addressed in many of the recent appeal decisions: In the case of the Sillfield planning appeal for the erection of three wind turbine generators and associated infrastructure, the Inspector Robin Brooks stated “...the precise nature of climate change, the contribution that wind power can make to averting such change, its inherent efficiency, the scale of carbon dioxide savings...are matters for the political arena rather than a planning [application]”. This view was echoed Paul Griffiths, the Planning Inspector for the appeal at Newlands Farm, Carlisle when he reported:

“...Key Principle (v) of PPS22 confirms that assumptions about technical and commercial feasibility of renewable energy projects should not be made. I find it difficult to understand why a developer

would take a scheme to an Inquiry, if the project was not commercially sound”.

Furthermore national policy dictates that applicants for renewable energy development should not be required to demonstrate the overall need for renewable energy, nor should the energy justification for a proposed development in a particular location be questioned.

7.9 It is abundantly clear in current planning policy of the scale and urgency to tackle climate change. It is equally clear that the benefits of renewable energy proposals should be given significant weight in the determination of planning applications. In this context, the output from the proposal and its overall contribution to meeting regional targets for the production of energy from renewable sources is acceptable and complies with the relevant policies listed in section 6.0 of this report. How these benefits balance against other material considerations will be discussed in the following sections.

7.10 **Landscape and Visual Impact**

The applicant has carried out a thorough Landscape and Visual Impact Assessment (LVIA) as part of the submission and has undertaken this with regard to best practice and relevant legislation, policy and guidance. Computer generated Zones of Theoretical Visibility (ZTV) maps and wireframes have been produced within a 30km radius. These are based on bare ground conditions and as such represent the worst case scenario; they exclude any localised screening or intervening structures and therefore fail to take account of anything that lies between the viewpoint and the turbine. ZTV or visibility maps subsequently tend to overestimate the extent of visibility and as such the applicant has also provided a series of visualisations (or photomontages). These help illustrate a more representative view and are common practice when dealing with applications of this type, although it is acknowledged that such visualisations do not provide the perfect view/experience of the development as they can not illustrate the motion of the turning blades, nor the visual context against changing weather condition backdrops.

7.11 Notwithstanding this, a selection of 18 representative viewpoints experienced from various distances and directions (8 within 5km and a further 10 up to a distance of 30km, to include views from highpoints across Morecambe Bay and higher ground to the east) has been provided. All the viewpoints are supported by wireframe drawings. The landscape character areas were agreed with the local planning authority prior to the application being submitted. Despite some criticism from objectors, the methodology undertaken as part of the submitted LVIA follows standard practice and is not disputed or questioned by Officers or the relevant statutory consultees, such as Natural England and the County Planning.

7.12 In addition, 30km cumulative ZTV maps and wireframes have also been produced which identifies built, sites in planning and sites at scoping stage.

- Consented and Built: - Armistead, Askam, Barrow Offshore, Caton Moor, Dewlay Cheese, Harlock Hill and Kirkby Moor;
- Sites in Planning: - Claughton Moor Community, Lancaster University, and Orchard End;
- Sites at Scoping: - Heysham South, Longfield Tarn and Port of Heysham.

7.13 The aim of the LIVA is to identify, predict and evaluate potential key effects arising from the proposed development, in particular the visual effects and landscape effects. Firstly, it should be noted that there is a distinction between landscape effects and visual effects. The former is the degree to which the site and the immediate landscape setting can accommodate change with regard to effects on its fabric, character and quality. Visual effects of the proposal relate to how the proposal will change the character of available views and change the amenity of visual receptors. The sensitivity of potential visual receptors will vary depending on the location of viewpoints, receptor activity and the importance of a viewpoint. Parameters of landscape sensitivity equally depend on the landscape value, quality and capacity to accommodate development. The applicants have clearly identified that residents living within view of the proposal would usually be regarded as the highest sensitivity group, although the threshold for significance of the visual effects relies on professional judgement. This is a matter which warrants careful consideration of local circumstances. The assessment suggests that it is generally rare for the impact of the development on a single property to be categorised as high significance for the development overall. This is an

area of continued controversy and will be discussed later in the report, although it is clear from previous Inspector decisions that the impact of a wind turbine proposal on a single property can clearly be classified as 'high sensitivity' and result in an impact of high significance.

7.14 In terms of the assessment undertaken, for clarification purposes landscape sensitivity is described as high, medium and low; and the magnitude of change arising from development described as substantial, moderate, slight or negligible. Magnitude of change can vary in response to distance; the duration of the effect; the extent of development in the view and the field of view; the background to the development; and other built development visible. The significance of landscape or visual effect is assessed in terms of major, moderate, minor or none. For example, where landscape sensitivity is considered high and the magnitude of change arising from the development is described as substantial (i.e. a total loss or major alteration to key landscape elements/features such that the baseline landscape character will be fundamentally change), the significance of the landscape and visual impact is regarded 'major'. The measure of significance does not however necessarily imply an adverse effect. The effect may be temporary or permanent; direct or indirect; positive or negative. These terms are used to provide consistency throughout the submission and form part of the analysis of landscape and visual impact.

7.15 The application site is located in the low lying predominantly flat area of Heysham Mossland with rising Heysham-Overton low coastal Drumlins to the east, west and south of the site. The site lies wholly and central to the national recognised Lune Estuary character area (No.31) which sits adjacent to open sea, and Bowland Fringe and Pendle Hill landscape character area (No.33). The key characteristics, amongst many, of the Lune Estuary include: -

- Landform - broad relatively flat lowlands enclosed by steeply sloping escarpments, opening out dramatically into the undulating landscape of the coastal strip with substantial drumlin features
- Land cover - range of coastal landscape features towards the mouth of the estuary including extensive salt marshes, reclaimed mosses and marshland, a small area of mossland at Heysham, sand and shingle beaches north of the estuary and sandstone cliffs at Heysham.
- Visual Character - panoramic vistas across the valley and Lancaster from higher ground
- Cultural Features - development concentrated along the coastal strip where Heysham Power Station and caravan sites dominate the coastal scenery, with the remaining pastoral elements providing important countryside wedges.

7.16 The Lancashire County Council Landscape Character Assessment - 'A Landscape Strategy for Lancashire' (2000) - has provided baseline information for the submitted LVIA. This document defines a number of Landscape Character Types (LCTs), which are then sub-divided into Local Landscape Character Areas (LLCAs). The development site is wholly within a single landscape character types and areas. The site lies within the Heysham Mosslands 16f LLCA. The description of the LLCA is as follows: -

16f Heysham Moss - Located between the built up areas of Lancaster to the east and Heysham to the west only a small part of Heysham Moss is now uncultivated. It is largely a pastoral landscape where fields are drained by straight ditches and divided by post and wire fencing, resulting in an open and expansive landscape. Electricity pylons, associated with the nearby Heysham Power Station, are particularly noticeable as they cross the moss. The A683 between Lancaster and Heysham also crosses the moss, bringing traffic movement into the open landscape. The proximity of the City of Lancaster influences the character of the mossland in the north of the character area where trading estates, residential estates and caravan parks spill out onto the mosslands, obscuring the landscape pattern and eroding the rural nature of the landscape.

7.17 The Landscape Sensitivity to Wind Energy Development in Lancashire, document focuses on the appropriate scale of such development for the LLCA that the site is situated within. It should be noted that single turbines were not considered in the context of this broad strategic study. According to the study, small, medium and possibly larger scale wind energy development comprised of 11 to 25, 1.3MW+ wind turbines may be appropriate for the landscape character area, 16f - Heysham Moss, which the site is situated within. This area is identified as having a low landscape sensitivity to wind energy development.

- 7.18 In terms of landscape and visual effects, the development proposed would have different impacts (temporary/permanent, direct/indirect and positive/negative) in response to the construction, operational and decommissioning stages of the development, although it is clear that the operational stage of the wind turbine will give rise to prolonged landscape and visual effects. Whilst this is the case, temporary effects at the construction and again at the decommissioning stage will occur, including ground excavation, compound and storage areas, vehicle movement, foundation areas and cable runs. The application indicates that the construction operation would take place over a period of approximately 6 months. The landscape effects encountered during the construction phase are considered to be no greater and broadly similar to those experienced during the operational phase. Following erection of the turbine all land, other than the access track, the turbine and crane pad, would be removed and the land reinstated back to its original agricultural form upon the turbine becoming operational. The proposal therefore maintains a significant proportion of pasture land across the site (7.4ha), which would allow the land to be continued to be utilising for grazing sheep. The reinstatement of the site upon construction can be adequately controlled by an appropriately worded condition.
- 7.19 The LVIA has assessed in detail the LLCA within a 10 KM radius of the site. It is considered that beyond this distance the turbine will be seen as a minor element in the landscape and only in conditions of good visibility. Consequently, the impact upon national character areas will only be slight or negligible. The assessment has concentrated on the Local Character Areas within 10km. As indicated earlier in the report the turbine is centred in Heysham Mosslands LLCA but a further 12 LLCA lie within the 10km radius. The ZTV maps indicate that the turbine will be visible or partially visible from within all the LLCAs in the 10km area. The sensitivity, magnitude of change, effect and significance has been assessed for all 13 LLCAs. The ZTVs clearly show that the theoretical visibility of the turbine (both hub height and blade tip height) would be widespread within 10km of the proposed turbine to the north and south. Topography to the east of the site limits visibility beyond 8km. The submitted visualisations help illustrate the likely landscape and visual effects of the development. Of the 18 sites selected, which includes sites within 0.8km–20km of the application site, the sites most likely to experience significant landscape effects are those where landscape sensitivity is high and the magnitude of change substantial. It is clear that the character areas in and immediately adjacent to the site (Heysham Mosslands, Heysham-Overton Low Coastal Drumlins and Lune Open Coastal Marsh) will have significant direct (landscape) effects with a medium to high sensitivity to change. The indirect effects (visual) being experienced over a greater distance from the turbine. There will clearly be a substantial magnitude of change to the fabric, character, quality and visual amenity of the landscape within a 5km range which would result in significant effects.
- 7.20 Visual effects in particular are concerned wholly with the effect of the development on views and the general visual amenity as experienced by people (receptors). Visual effects are assessed in relation to viewpoints, settlement, properties, tourist and recreational destination and transport routes. The proposed development will be visible from many aspects within a 10km range. The most prominent views will be from neighbouring residential properties and the A683 Heysham link road, within 1km of the site. The site will also be visible from the Heysham Moss Site of Special Scientific Interest (SSSI) and nearby public rights of way together with the local road network. There are a significant number of individual residential properties that will have clear sight of the proposed turbines. The impact on residential amenity will be discussed under a separate heading.
- 7.21 It is considered that the direct effects on the landscape resource will be limited and ultimately reversible. Direct effects relate to such elements as the construction of the access track, turbine and switchgear enclosure. This development will only occupy a small portion of the site, this leaves the majority of the existing landform, fields and vegetation unaffected. Mitigation measures will aid any local impact by preventing soil erosion and changes in ground water conditions.
- 7.22 The potential effects on the quality and setting of designated landscapes were also assessed. Two National Parks (Lake District 17km and Yorkshire Dales 27km) and two AONBs (Forest of Bowland 7km to the east and Arnsdale and Silverdale 10km to the north) lie within the study area. In addition, eight Parks and Gardens on English Heritage Register of Parks and Gardens were also assessed within the study. The boundary to the Lake District NP lies 17 km from the proposed turbine and is considered to a high sensitivity to change however it is considered that beyond 20km the turbine is unlikely to be visible and as can be seen at viewpoint 17 at Grange-over-Sands the turbine appears as an insignificant element within the large scale landscape. A similar assessment is considered for the Yorkshire Dales NP with only limited views at considerable distance of the turbine from the western flanks of fells above Ingleton.

- 7.23 Both AONBs are considered to have a high sensitivity to change. Within the Forest of Bowland AONB the ZTV indicates that there will be limited views of the turbine but when viewed it will be across open landscape within a large scale landscape, consequently the magnitude of change will be slight and the significance moderate. The ZVT indicate that views with the Arncliffe and Silverdale AONB will be limited and restricted to views from the low-lying coastal areas at considerable distance. As can be seen at viewpoint 16 Jenny Brown's Point illustrates the turbine is will appear insignificant in a large landscape.
- 7.24 Of the eight registered Parks and Gardens within the study area, four Capernwray Hall, Dallam Tower, Levens Hall and Sizergh Castle are identified in the ZTV as having no visibility of the turbine from either the property or immediate settings. Stanley Park lies 24 km to the south and whilst highly sensitive to change at the distance the turbine could potentially be viewed, the change will be negligible. Holker Hall to the north similarly is highly sensitive to change but lies 17km from the turbine site. Views are likely to be severely limited by numerous large trees in the parkland and if viewed the change to the large landscape will be negligible. The two registered gardens that lie closest to the site are Lancaster Cemetery (6km) and Ashton Memorial (6km). Both are highly sensitive to change but potential visibility from Lancaster Cemetery is limited and contained by mature trees. When views are available the turbine will be seen as a minor element across the Heysham peninsula and will not be significant. Similarly the views from Aston memorial will be limited to the north and west slopes and in areas will be contained by trees in the woodland setting. Where viewed the turbine will be seen at a distance in a large landscape and will not be significant.
- 7.25 The submitted LVIA has also considered the impact of the development on settlements with the study area. The principal settlements in the area are Lancaster, Morecambe Heysham, Fleetwood, Grange over Sands, Ulverston and Barrow. Smaller settlements at Middleton, Overton, Glasson, Aldcliffe and Galgate have also been assessed. All settlements in the study are considered to be high sensitivity due to residential receptors. The closer settlements could experience some form of visibility as shown on the ZTV maps and visualisations. The overall landscape and visual effects from Fleetwood, Grange over Sands, Ulverston and Barrow are considered negligible given the distance at which the turbine could be viewed. In Lancaster the change is considered to be slight with more localised moderate change from the Abraham Heights neighbourhood. The significance is considered to be moderate-to-none across the majority of the city. Viewpoint 7 is considered to fairly representative of views from the visible areas of Lancaster. Morecambe will potentially have visibility from all areas as identified in the ZVT maps but will in practice be restricted by the built form and vegetation. Open views will be restricted to the southern edge of Morecambe along Oxcliffe Road Viewpoints 5 and 9 illustrate the changes which will range from slight in the centre of town to substantial on the southern edge. Where viewed the turbine will appear as a significant and prominent large scale element. Heysham again will vary significantly across the area. From the historic core and lower Heysham views will be limited and the significance of the effect will be moderate. In areas to the east of Middleton Way visibility will increase and the turbine will be prominent within the Heysham Mossgate area. The elevated position will result in moderate to substantial change to areas close to the development with result of the changes ranging from major to moderate. A more detailed assessment of residential amenity within 2km of the site will be considered in more depth further in the report. Middleton and Overton are considered to major/moderate effect but at distances of between 1.5 to 2km with limited views and the presence of infrastructure between the site and the settlements. Glasson, Aldcliffe and Galgate all have views limited by built form and landform. The elevated areas of Glasson afford some direct views as illustrated in Viewpoint 10 but the draw no significant effect. There are no reasons to dispute these conclusions.
- 7.26 Key transport routes have also been assessed. Road and rail are considered to be medium sensitivity whilst cyclists and footpath users are high. This distinction relates to the time for potential exposure to the development when moving through the area. At the M6 motorway, viewpoint 11 lies beyond 10km and the change is considered to be slight. Along the A6, with a representative viewpoint 11 at, Junction 33, there is potential for views of the development when travelling along it. Around Lancaster the turbine will be approximately 5km away but views will be restricted by built form and vegetation. Views at Hest Bank and Galgate are likely to be more open but at the distances the turbine will be viewed in a larger landscape and the changes are considered to be slight. The A683, with a representative view in viewpoint 6 on the bypass, runs close to the site (approximately 500m) and on to Heysham Dock and the power stations. Potential visibility will be high with some variation due to built form and vegetation. There is considered to be a moderate

change on receptors given the transitory nature. The overall effect is moderate with local major effects. The West Coast, Morecambe Branch and Furness Railways have also been assessed but the conclusions draw no significant effect other than a very localised major/moderate on the Heysham branch line. National cycle network routes (NCR) 6 and 69 run within 3 and 5 km respectively of the site. Viewpoint 8 is considered to provide a representative view on NCR 6 and change from these routes is considered to be slight on receptors and not significant. NCR 72 runs along the southern coastline in Cumbria with negligible change on receptors and not significant. Long Distance footpaths, Lancashire Coastal Way, Cistercian Way and Cumbrian Way have also been assessed with generally slight change on receptor and not significant. Locally the Lancashire Coastal Way follows the Lune Estuary. The turbine will be seen across the Lune Estuary as a vertical element against the skyline. The magnitude of change will be moderate with the overall effect major/moderate and therefore significant.

7.27 Cumulative Landscape and Visual Effects

The proximity of the proposed turbine to other wind farms has also been assessed and forms an important part of the ES. Neighbouring wind farm/turbines were considered including the operational Caton Moor and Dewlay Cheese. All the operational sites are located in differing LCAs and are substantial distances away from one another. In view of this they are able to co-exist without transformation of landscape type and coalescence of character. However there would be significant cumulative landscape and visual effects arising from the interaction of the Heysham turbine with the planning and scoping stage sites (in particular Heysham South and Port of Heysham). Within 5km of the site significant cumulative effects are predicted to arise on the settlements of Heysham, Lancaster, Morecambe, Overton and Glasson. Significant cumulative effects are also predicted on the A683 Heysham link road and short sections of coastal footpath as it crosses open terrain. The cumulative viewpoints were chosen as being representative of vantage points within the study area. Significant effects on receptors would be experienced from the Stone Jetty, Morecambe and Glasson Dock both in respect of the Port of Heysham development. No objections have been raised in respect of cumulative landscape and visual effects and development of the proposed turbine and the operational sites.

7.28 Conclusion Landscape and Visual Impact

It is considered that the likely landscape and visual impacts of the proposed development do not raise matters of strategic significance and would not unduly impact upon the National Character Areas. However, the development will result in some significant localised landscape and visual impacts, a view shared by officers and consultees. The LLCA's known as Heysham Mosslands, Lune Open Coastal Marshes and Heysham-Overton-low Coastal Drumlins are considered to be significantly impacted upon by the development. The turbine will be viewed from within the majority of the areas which all enjoy a high degree of indivisibility. The proposed turbine will appear within a large, wide landscape as a new vertical feature and a focus within the landscape. It is also noted that the local landscape has already been extensively modified with the construction of two nuclear power stations, the routes of three transmission lines with associated pylons, industrial complexes, road and rail infrastructure and expanding residential areas.

7.28 However, whether the impact of the development would outweigh the overall benefits of the proposal requires a carefully considered and balanced judgement with regards to national, regional and local planning policy. PPS22 states that renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily. It is becoming evident from recent appeal decisions (both allowed and dismissed) and the increase in planning submissions for turbines in this District and others, that proposals for development of this nature in more sensitive, intricate and more densely populated and urbanised locations are becoming more frequent. This presumably is principally due to the larger landscapes being at full or near capacity or that such other landscapes are designated and afforded the greatest level of landscape protection. This in itself means sites outside of designated areas are more likely to become under pressure to develop. The Government is under increasing pressure to support renewable energy schemes and consequently development of this nature in non-designated landscapes will undoubtedly have to be accepted more often. Lancaster Core Strategy policy ER7 (Renewable Energy) reflects localised support for such development identifying Heysham South as a focus for renewable energy generation including wind and biomass technology.

7.29 On balance it is considered that the landscape and visual impacts identified would be outweighed by the long-term environmental benefits of the proposal and in accordance with PPS22, the wider landscape impact is considered to be acceptable and as such the environmental benefits of the proposal would outweigh any localised impacts on the character of the landscape in this instance.

7.30 **Residential Amenity**

Visual Effects

Unlike Scotland and Wales, there are no statutory limits (at present) or policy separation distances for wind turbines in relation to dwellings set for England. It is also clear from a number of recent appeal decisions (Gargrave, Sillfield, Carlisle and Eagland Hill) that Inspectors are paying greater regard to the effects of wind turbine development on the living conditions of nearby properties. However the consideration of impact is not exclusive to properties within what is perceived to be close proximity (and this particular application has considered amenity impacts beyond figures of 650m). Following these recent appeal decisions and submission to this District it is clear that the impact of development upon residential amenity is a major, material consideration in the determination of the planning application. At present there is no published guidance on the assessment of visual amenity. A methodology and approach to a Residential Visual Amenity Assessment (RVAA) assessment has been the subject of agreement with the LPA.

7.31 A phased approach has been taken to identify whether or not the proposed turbine would be visible from dwellings within 2 km radius of the proposal. Theoretical visibility mapping was used to identify properties which would experience the turbine, a second phase involved field work to note the address of the property, number of storeys, nature of urban character, direction in which the turbine would be viewed, presence of screening and likelihood of visibility from the location. The nature of those views were confirmed from ground floor and principal frontages. Direct views have been defined as a view straight towards the turbine (rather than oblique) from ground or upper floors. Open views is a view that is largely unimpeded by intervening vegetation or built form. The study has been assessed on the ground and considered to be sound, reflecting the findings of officers. This approach now provides a structured and repeatable approach to defining potential changes. The assessment has not used photomontages to assess the level of visibility but the application has been supplemented with the addition of photomontages following a request from the LPA to provide a series of photomontages along the east edge of the Heysham housing area.

7.32 The assessment acknowledged the large areas of housing within the 2km radius and cluster types were identified to group together housing of similar form, orientation and scale. A total of 80 clusters were identified ranging from single dwellings to large groups of dwellings. The assessment concluded that of the 4,855 properties within the survey area, 554 properties would experience direct or open views of the turbine.

7.33 Key Information

The nearest properties are Downlands Farm/Woodlands, sited 578m from the turbine. The edge of the main group of built residential properties to the west of the turbine on the Heysham ridge lie between 786m to 1,020m from the turbine. The Heysham Mossgate site is still under development and additional housing will be brought closer to the turbine along with the development of a large area of public open space (POS). The new dwellings when constructed will be approximately 800m from the turbine and the POS 900m from the turbine.

7.34 There are a large number of properties within the survey area that will have visibility of the turbine in a variety of locations all around the site, although the application will focus on the nearest residential properties surrounding the turbine site.

7.35 North of the Turbine

The Fanny House Farm group lies approximately 1.4km north of the turbine. The properties are two storey and sit on the south side of Oxcliffe Road the orientation is southeast. The dwellings have substantial farm buildings to the west and south and will have only partial views of the turbine limited by built form. Furthermore, the distance from the turbine means that there will be no overbearing impact.

- 7.36 Oxcliffe New Farm Residential Caravan site comprises a complex of 23 static caravans. The site lies 1.3km north of the turbine. The boundaries of the site have substantial evergreen trees and the majority of the caravans have an east west orientation. Units on the southern edge of the site will have partial views but most will be screened by other units. Furthermore, the distance from the turbine means that there will be no overbearing impact.
- 7.37 Whittam House/Hall are a cluster of detached houses/barn conversions sited on either side of Oxcliffe Road. The group lies 1.5km north of the turbine. Whittam House is two storeys in height site on a raised bank to the west of Oxcliffe Road. The orientation is east west with no direct views. A neighbouring barn conversion has direct views of the turbine from a principle elevation and garden area. Some restriction of view will be gained from boundary vegetation but it considered that the distance will prevent the turbine being dominant in a wide landscape.
- 7.38 Stud Farm Residential Caravan site lies to the north of Oxcliffe Road, 1.9km from the turbine site. A substantial landscaped bund follows the boundary of the site with Oxcliffe Road. The caravan/park homes are closely sited and most of the units will have only limited views screened by built form. The units on the southern boundary of the site will have partial views across a flat open landscape screened by the landscaped bund. Furthermore, the distance from the turbine means that there will be no overbearing impact.
- 7.39 Oxcliffe Road is fronted on its northern site by a ribbon of detached and semi-detached properties with principle elevation facing south towards the turbine. Private garden areas face north away from the turbine. Many of the properties also have residential caravan to the rear. The properties will have direct views (at distance of 1.9km) of the turbine as view point 5 illustrates. The views will be over a large open and flat landscape and are not considered to be overbearing.
- 7.40 Northeast – East of the turbine
- Downlands Farm/Woodlands are the closest properties to the development at approximately 580m. A shallow rise of land lies immediately to the rear of Woodlands which has a stand of dense conifers wrapping behind and to the north of the properties. The orientations of principal windows look directly to the turbine but all direct views are screened by landform and vegetation. Downlands Farm has an east west orientation with no direct views of the turbine. The turbine will be visible from other locations within the farmland.
- 7.41 Moss Side Farm/North Farm are two farm groups approximately 900m from the turbine. Moss side is orientated away from direct views of the turbine but with clear vies across a flat open landscape from other parts of the farm. North Farm is sited further north and is orientated with partial view from the front elevation of the turbine as they are partial screen by trees close to the farmhouse and agricultural buildings. The turbine will be visible form other locations within the farmland.
- 7.42 Hillside Farm a two storey dwelling lies 740m from the turbine site on the south side of the A683. To the east of the main group of arm buildings. The orientation of the principle elevation is away from the turbine. Views from the farm house will be screened by built form. Clear views of the turbine will be available from other parts of the farm viewed across an open flat landscape and is not considered to be unduly dominant.
- 7.43 Old Woodhouse is part of a cluster of several properties approximately 1.5km from the turbine. Most of the dwelling is orientated away from the turbine with no direct views. Land rising behind the dwellings will also screen outlook of the turbine.
- 7.44 Millhouse lies 1.4km from the turbine and has westerly orientation with windows providing views across open grassland towards the turbine. The land immediately in front of the dwelling is slightly higher than the dwelling with boundary hedgerows to the adjacent road. The views will be most prominent form the upper floors but at a distance that is not considered dominant.
- 7.45 Riverside Farm/Greenbank lie 1.4km from the turbine with rising land immediately behind the properties. Orientation of Greenbank restricts views of the turbine with views only available to the upper rear windows to Riverside at a considerable distance.

7.46 Southeast to South of the turbine

Heaton Hall and Wymber Hill Farm/Cottage lie 1.9km and 1.6km respectively. The properties have only partial views screened by built form and views from secondary areas at a considerable distance.

7.47 Downyfield Farm and Lodge (Grade II listed buildings) lie 1.8km from the site. The rear of the main farmhouse is orientated towards the turbine but with most views screened by the built form of agricultural buildings. The lodge lies further west and is orientated away from the turbine. Views will be available from elsewhere in the farm but at some distance.

7.48 Southwest of the turbine

Old Trafford Residential Caravan Park is a cluster of densely spaced park homes access off Borrans Lane. Dense woodland surrounds the east and southern boundaries but views to the north towards the turbine are open. The orientation and spacing of the units will severely limited views from within the site. The units on the northern boundary will have limited views screened by vegetation at a distance of 1.4km.

7.49 Broadfoot Residential Caravan Park a tightly clustered group of mainly static caravan sited on gently rising ground to the north. The spacing and orientation will limit views from most units or areas inside the site. Trees along the north and part eastern boundaries will further aid screening of the turbine. Partial views will be afforded to the units on part of the north boundary but at a considerable distance of 1.7km.

7.50 West to Northwest of the turbine

This comprises the main residential area to South Heysham running along the north-south orientated ridge. Properties to the east of the ridge are considered in detail. Viewpoints 1 to 4 provide an illustration of the relationship of the turbine when viewed from several locations within the housing area of South Heysham of its eastern flank. The photomontages are considered to accurately represent general views within the housing area both close to the edge of the housing development but also within the older established residential area higher up the ridge and further away from the proposed development. Following discussions with the agent additional photomontages have been provided from within residential properties along the eastern edge of the built form and within the area to be designated as Public Open Space (Viewpoint 1). These additional viewpoints sought to provide views from properties with direct views of the turbine with either the intervening transmission line either viewed with the pylon or through power lines.

7.51 Peplow Road/Littledale Avenue/Mallowdale Avenue – lie at least 1km from the turbine and form the boundary with the older residential properties and the ‘newer’ established housing development. Many of the properties in these areas have orientation which face away from the turbine and will not predominantly have direct views. The east side of Peplow Road and the Bowland Road cluster are all two-storey properties and will have views of the turbine. The lower views will be partially limited by vegetation and built form/fencing but clear views will be gained from upper floors. Within these views the turbine will be seen behind the line of transmission pylons and lines running broadly NE/SW across the large flat landscape.

7.52 Meldon Road is located 800m from the turbine with development. The northern end of Meldon Road is only developed on the west side of the road directly overlooking the turbine from an elevated position. The Heysham branch line runs parallel with vegetation bounding the rail line on both sides. Views will be partly limited by vegetation from ground floor only. Gardens to the rear will not have direct views of the turbine. The southern end of Meldon is developed on both sides of the road with a mixture of bungalows and houses. Many of the properties will be screened from the turbine by built form and local vegetation.

7.53 Jenny Close/The Spinney/Longmeadow Lane are found at the northern end of Meldon Road and comprises mainly of two storey dwellings laid out on a series of curved cul-de-sacs. A large area of established trees lie immediately to the east of the housing spanning land to either side of the rail line. The trees form the edges to the Heysham Mossland SSSI. Representative views are provided in Viewpoints 21 and 22. The layout of the cul-de-sac will restrict open views from many of the properties in this area. Views at ground floor and gardens will also be limited by vegetation to the east. Properties with an east west orientation will have direct views from the upper floors. The view

of the turbine will be seen within a large landscape with many vertical features at a distance of 800m.

- 7.54 A large area of public open space (POS) is to be developed on the edge of the new housing complex at Mossgate Park. The POS will form part of a larger landscaped area which is to run around the eastern boundary of the new housing development abutting the Heysham rail line. Viewpoint 1 provides a representation of the views from the main area of POS. The turbine will be viewed at a distance of 800m from the POS. Currently the area is open and much of the turbine will be viewed though the difference in level and trees around the SSSI will block views of the lower part of the turbine tower. In time, with the establishment of planting within the POS it is anticipated that the turbine will still be clearly visible but may be partially screen. The turbine will again be viewed with transmission lines and pylons in the foreground against a wide, open landscape.
- 7.55 An area of housing is currently under construction and some approved areas are yet to be built out. Two areas of housing are to be built; one of which lies to the north of Redwing Close/Lapwing Close. This area will be over 1000m from the turbine and will only gain partial views of the turbine due to the built form of the other area of proposed housing to the east. Viewpoint 19 provides a representative view; this view being from a newly occupied property on the development. Again many of these new dwellings will have only partial views due to orientation and other new dwellings. The layout of the new dwellings will lead to properties on the eastern edge of the housing having open views of the turbine. These views will be at a distance of over 800m and viewed with transmission lines and pylons in the foreground against a wide, open landscape.
- 7.56 Tern Grove/Swift Gardens is a cluster of modern two storey houses with open front garden and enclosed rear gardens. The houses are laid out around two short cul-de-sacs resulting to a varied of aspects and orientations to the houses and gardens. Many properties will have views restricted by built form but many will have direct views, particularly from the upper floors and some screening is provided at ground level by trees along the rail line and boundary treatments. Again the views of the turbine will be at a distance of over 1km with views of transmission line and pylons both in the foreground and beyond the turbine.
- 7.57 Conclusion of Visual Effects
- Whilst acknowledging that significant effects may arise in the private context to a large number of dwellings, it is considered that the overall change in visual amenity would not be unacceptable, given the separation distance from proposed turbine and in general nature of views of the turbine within a large landscape from dwellings in the local area.
- 7.58 **Noise**
- The issue of potential noise disturbance is a concern raised by many of the objectors to the scheme. A noise assessment has been incorporated into the EIA as part of the submission documents. In accordance with PPS22, the applicant's noise assessment has had regard to the methodology and guidance in ETSU-R-97 (The Assessment and Rating of Noise from Wind Farms). The guidance advises that turbine noise levels at the nearest noise sensitive properties should be kept to within 5dB(A) of the existing evening or night time background noise level. This is in line with standard practice for assessment of most sources of noise except for transportation and mineral extraction where higher levels are permitted. A fixed lower limit of between 35 and 40dB(A) (day-time) and 43dB(A) (night-time) may be specified when background noise is very low, i.e. less than 30dB(A).
- 7.59 The local Environmental Health Officer is in agreement with the methodologies and has been in direct consultation during the assessment, agreeing positions for monitoring. The two locations identified were Longmeadow Lane and Downlands Farm. Longmeadow Lane lies close to the site and is considered to be an urban receptor. Downlands Farm is the closest property to the development and is considered to be a rural receptor. Measurements were taken in July but following concerns raised by residents at a public exhibition that background noise could be higher in summer, a set of winter measurements were also taken in November and December. Following a change in the guidance further measurements were taken at Downlands Farm and Redshank Drive between November and January 2011.
- 7.60 The assessment further identified the nearest noise receptors, 8 in the urban areas and 5 in the rural area to assess impact both at the construction and operational phases of the development. The assessment concluded that noise levels during the construction period could exceed limiting levels

but only during night work and Sunday morning and evenings, but predicted noise levels at the operational phase would be significantly lower than the permitted levels.

- 7.61 The full results of the survey were submitted to the Council's Environmental Health Officer who is in agreement with the Assessment that noise disturbance will not be caused to the occupants of residential properties in either the urban or rural areas as a result of the construction and turbine operation, subject to the addition of suitable conditions to control the timing of the construction activities and to address any mitigation should noise be an issue. It is anticipated the proposal will not cause an unacceptable degree of disturbance to surrounding residential properties and therefore accords with the provisions of PPS24.

7.62 **Shadow Flicker**

Shadow flicker is a particular phenomenon associated with wind turbines. It is the effect of the sun shining behind rotating blades and creating an intermittent shadow inside nearby buildings. The advice given in the companion guide to PPS22 explains that shadow flicker can only occur when sun shines through the turbine blades, thereby casting moving shadows. It only occurs inside buildings and only where the shadows are seen through a narrow window opening creating the effect of light flicking on and off. The guidance also indicates that it will only occur when certain meteorological, seasonal and geographical conditions prevail and as such the effect is not constant. For the effects of shadow flicker to occur there would have to be uninterrupted bright sunshine for shadows to be cast. Subsequently, buildings, trees and other topographical features could help reduce the potential effect.

- 7.63 PPS22 states that 'Flicker Effects have been proven to occur only within ten rotor diameters of a turbine'. An assessment of potential shadow flicker has been undertaken on the basis of a bare landscape to a distance of 900m. In practice intervening buildings and vegetation is likely to reduce the effect. The assessment determined that nine dwellings could potentially be affected by weak shadow flicker at differing times (both during the day and season) with only five properties within 800m. The potential yearly duration occurred on no more than 14 days in the year and varied from a low maximum of 6.2 hours down to 2.2 hours. The former figure represents an average duration of 21 minutes. These figures are based on a worst-case scenario with optimal lighting condition and no intervening buildings or vegetation. In practice, this is unlikely to occur and the potential for exposure to shadow flicker is deemed to be low.

- 7.64 The applicant has indicated that mitigation is probably unnecessary but would be kept under review for at least a full year following operation of the turbine and mitigation measures (usually cessation of blade movement) deployed if disturbance of amenity occurs. This could be addressed by a suitably planning condition.

7.65 **Ecology**

One of the key aspects of the proposal is the impact the development as a whole will have on the biodiversity of the area having regard to the relevant legislation and policy. The site comprises semi improved agricultural land made over to grassland for low level cattle grazing. The site covers 7.4 ha. and is divided by a series of field drainage ditches of varying flow, width and depth. A small section of the western boundary of the site abuts Heysham Moss Biological Heritage site (BHS). 270m away from the boundary of the site lies Heysham Moss Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR). The site has only limited hedgerows and no trees. The application site falls outside but is close to the specific designated site. The impact of the development on protected species and their habitats is a material consideration in the determination of a planning application. In order to comply with planning policy and other relevant legislation, the development proposal needs to demonstrate that the development has been located and designed in a way that would avoid ecological impacts and that mitigation/compensation measures are sufficient to fully off-set all unavoidable ecological impacts and deliver enhanced quantity and quality of biodiversity and habitat. It should also be demonstrated that habitat connectivity would be maintained and enhanced. PPS9 clearly states that the applicant must demonstrate where harm or damage is unavoidable, mitigation and compensation for the harm or loss must be commensurate.

- 7.66 The impacts of the development in relation to biodiversity do not just relate to the installation of the turbine and the direct effects of the turbine in motion. Impacts will arise from all the other works necessary to facilitate the development, including the creation of the access, the new track, ground

disturbance and excavation, areas of hardstanding and underground cabling routes. To deliver this the proposal will result in the loss of a short section of hedgerow fronting the A683, limited hedge laying and the bridging of two ditches. Access cannot be made via the existing access to the north due to its limited width and highway implications associated with the transportation of the turbine. Concern has been raised over the bridging of the ditches but this relates mainly to the methodology (ensuring bridging rather than culverting to minimise impact).

7.67 In order to assess the impacts of local biodiversity an extended Phase 1 Habitat Survey and species specific surveys have been carried out. Initially some objections from statutory bodies were raised, in particular the lack of a Great Crested Newt (GCN) survey. Following completion and submission of a GCN survey the range and methodology of the surveys carried out to date have not been disputed by Officers, the County Ecologist or Natural England and as such seem acceptable for the purposes of this proposal.

7.68 The assessment of potential impact and possible mitigation approaches has been broken down into three distinct elements, Habitats and Species, Ornithology and Geology/Hydrogeology/Hydrology.

7.69 Habitat and Species

Analysis of the Habitat survey identified the potential for significant impacts associated with:

- loss of UKBAP coastal floodplain grazing marsh
- disturbance to ditches from construction activities; and
- construction activities affecting habitats

The following mitigation and enhancement measures have been proposed: -

- Development of a Construction Environmental Management Plan (CEMP) including measures to reduce spillages and hydrology impact and the potential for harm to terrestrial species.
- Development of a Method Statement to include reasonable avoidance measures to reduce impacts on species during construction works
- Production of a Habitat Management Plan outlining measures to enhance habitat on site for the benefit of local wildlife including birds, bats and invertebrates.

This approach has been supported by the various ecological consultees and subject to agreement via condition of the Plans and Statement, no objections are raised in principle.

7.70 Ornithology

The site lies close to the internationally protected Morecambe Bay SPA/Ramsar site. The study considered birds which move or migrate over the application site, its immediate surroundings and birds which use the area for breeding, roosting or foraging. The study has been undertaken following consultation with RSPB, Natural England, Lancashire Bird Recorder, Heysham Moss Warden and Heysham Bird Observatory Warden. The methodology and results of the study have been accepted by the consultees. It concluded that the development will lead to the direct loss of habitat through the construction process but could lead to a much greater indirect loss of habitat through disturbance and avoidance of the site. Whilst other species were noted in the area, this is particularly pertinent to pink footed geese (PFG) that use the site and adjoining land in large numbers for winter grazing.

7.71 Localised mitigation has been agreed with the consultees and will include control regarding under-draining the area, not to undertake landforming which might drain the area, the thinning and laying of bushes and hedges along drains to reduce visual obstructions for the PFG, not to undertake sport or recreational shooting on the area, and the summer grazing of cattle only. In addition, offset land is to be provided at a ratio of 2 to 1 for the 13.9 ha of displaced land. A total of 28ha of land is to be sourced, ideally north of the Lune but south of the Lune is acceptable. Again the land would involve the suspension of all sports/recreational shooting rights over the entirety of the mitigation area for the lifetime of the project and suitable land management. Whilst the specific land has not been identified the approach to be taken has been agreed with RSPB, Natural England and County Ecology. The applicant has also indicated a willingness to control the mitigation land by means of a Unilateral Undertaking as this land falls outside the application site. In addition planning conditions would be required to control the use of the land within the application site.

7.72 Geology/Hydrogeology/Hydrology

Baseline surveys have established that on-site watercourses and associated flora and fauna have low sensitivity to the development. Whereas the nearby SSSI and the River Lune and Morecambe Bay are more potentially vulnerable to the development. The development, particularly during the construction period will have the potential to impact upon the water environment in the form of erosion/sedimentation or pollution. The switch gear enclosures were considered to be a high risk from tidal sources and moderate form onsite drainage. Control of erosion, sedimentation and pollution during the construction period is now standard practice but would be addressed following detailed site analysis via a Construction Method Statement. This approach is support by officers and consultees including the Environment Agency.

7.73 Conclusion Biodiversity and Ecological Impacts

In terms of impacts on biodiversity it is considered that the proposal, without appropriate mitigation has the potential to impact upon biodiversity. The applicant has proposed extensive mitigation which has already been the subject of prior discussion with consultees and subject to development of the site is accordance with the agreed Statements/Management Plans and provision of off-site mitigation. It is considered to adequately comply with the ecological/biodiversity policies listed in section 6.0 of this report.

7.74 **Heritage Assets**

Heysham Conservation Area and the Scheduled Ancient Monuments - St Patrick's Chapel and High Cross in St Peter's Churchyard lie to the west within 2 km of the turbine site. Lancaster Castle and Priory and its associated conservation area lie over 4km to the east.

7.75 PPS5 confirms central government's overarching aim which is that the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations. In addition, policy HE1 of PPS5 acknowledges that conflict between climate change objectives and the conservation of heritage assets can occur and advises that in such instances the public benefit of mitigating the effects of climate change should be weighed against any harm to the significance of heritage assets.

7.76 The proposal must also be assessed against local policies which acknowledges the need to "preserve or enhance" conservations areas which may be affected by development within the wider landscape setting. The key issue in this case appears to be whether the changed views from the conservation areas would cause unacceptable harm to their character and appearance. The ZTVs indicate that the turbine will be visible from part of the conservation area and from St Patrick's Chapel. In practice views from the conservation will be very limited and partial. Views from St Patrick's Chapel are severely restricted by trees.

7.77 English Heritage and the Council's Conservation Officer share the view that the development whilst be partially visible and would not unduly impact upon either the Scheduled Ancient Monument or the Heysham Conservation Area. On balance it is considered this would not result in unacceptable harm since the development will still enable the conservation area and the Scheduled Ancient Monuments to be appreciated and enjoyed. Furthermore given the degree of separation it is considered that the turbine would not unduly dominate the setting of the conservation area.

7.78 There are also a number of listed buildings (Grade II) in the locality. None are within 1km of the site. The nearest being Old Woodhouse in Heaton approximately 1.5km from the site. A number of farm groups have listed farmhouses, including Colloway Farm and Downyfield Farm and Downyfield House. Again these buildings are approximately 1.7m from the turbine site. Lancaster Castle and Priory, both Grade I listed buildings, are situated some distance from the development site (4km) and whilst the turbine will be viewed from this elevated location the turbine will be seen at a distance against a backdrop of industrial and other commercial development including Heysham Power Stations and transmission lines

7.79 The turbine will be visible to varying degrees from these structures and it is acknowledged that the setting of these assets contributes towards their heritage significance. However, given the separation distances and the existence of the Power Stations, transmission pylons and industrial

development this would mitigate any significant adverse impact to the setting of the Castle/Priory considered to have only a limited impact on designated heritage assets. Viewpoint 7 taken from Lancaster Castle illustrates the potential relationship and changes to outlook from the elevated priory precinct area.

7.80 Furthermore, It is also worth noting that the English Heritage document: “Wind Energy and the Historic Environment” acknowledges that climate change is itself likely to be detrimental to the historic environment for reasons which include alterations to our weather system. This document also points to the reversibility of wind energy developments which can further mitigate their impacts. It is also important to note the reversibility feature of wind energy developments in the long-term since they can just as easily be removed from a landscape when decommissioned in the future. It is therefore recommended that provision is made for the remediation and restoration of the site and infrastructure when it is decommissioned.

7.81 **Archaeology**

The submitted Environmental Statement has appropriately quantified the impact of the development and concluded that there is a medium to high potential for prehistoric activity on the site. The County Archaeologists indicates that similar landscapes in the northwest have produced well-preserved remains. The desk study assessment has concluded that there is a medium to high potential for prehistoric activity on the site. Similar landscapes in the northwest have produced well preserved remains. However It is not considered likely that surviving deposits would be of such significance as to merit preservation in-situ, but rather that preservation by record (archaeological excavation and recording) would be an appropriate means of mitigation. This could be appropriately controlled by condition and is considered to accord with guidance outlined in PPS5 and policies E44, E45 and E46 of the LDLP

7.82 **Electromagnetic, TV Reception and Radio Interference**

Wind turbines like all electrical machines produce electromagnetic radiation, which can cause interference to other electrical devices. However most turbines and their components comply with the European Commission Directive on Electromagnetic Compatibility (89/3360EEC). PPS22, states that “provided careful attention is paid to siting, wind turbines should not cause any significant problems of electromagnetic interference”. The applicant provided OFCOM with details of the scheme prior to submission. The site design is such that no adverse impacts upon telecommunications are predicted to occur and no mitigation is anticipated to be required.

7.83 The potential impact upon TV reception has been assessed using the BBC tool for wind-farm assessment. The tool indicates that using the analogue signal the development could lead to the likelihood of interference to TV reception in 86 homes with no alternative service and 10,254 homes which may have an alternative service. Potential mitigation at the developers expense could include:

- Change in aerial height
- Replacement of receiving aerial
- Retuning of TV receivers
- Provision of satellite or cable services

7.84 In practice, the scheme for change over to a digital signal started in November 2007 and has been completed in this area. Digital signals generally do not suffer from interference such as ghosting or sudden picture deterioration, consequently the turbine development is not predicted to have a significant effect on television or telecommunications. Mitigation measures should be assessed once the site is constructed and operational in agreement with the applicant and the local planning authority and carried out at the applicant’s expense. This is standard practice and could be addressed by a suitable planning condition.

7.85 **Impact on Aviation**

With regards to aviation interference, the applicant has submitted a detailed aviation assessment which is considered acceptable with no objections received from the Ministry of Defence, the Civil Aviation Authority and the National Air Traffic Service (to be confirmed) The proposed development has been examined from a technical safeguarding aspect and does not conflict with the relevant

safeguarding criteria. Neither the size nor location represents an operational hazard provided the turbine is fitted with aviation lighting.

7.86 **Highways and Access**

Highway implications associated with wind turbine development are concentrated over three phases; construction; operation/maintenance and; decommissioning.

7.87 The submitted highway/traffic chapter within the ES considers all three phases. The construction falls into two distinct phases the first is construction operations associated with the access road, turbine foundations and crane base. These operations use standard tipper and ready-mix vehicles and given the location on the A683 are not considered to significantly raise traffic on the approaches to the site. The second phases is much shorter (typically on a single day at times of limited traffic flow) where specialist vehicles delivery the large, heavy elements of the turbine. The main turbine components will be delivered on 8 low loaders all classed as abnormal roads

- Blades – 3 vehicles for 3 blades
- The Hub – 1 vehicle
- The Nacelle – 1 vehicle
- The Tower - 3 vehicles for 3 tower sections

7.88 The close relation of the site to the Port of Heysham makes this the preferred route for the loads. The stages of the routes would be : -

- Delivery to the Port of Heysham
- A589 heading east from the port towards Higher Heysham
- Turn onto the A683 across the main roundabout in Heysham
- Continue along the A683 to the proposed site entrance.

7.89 Following commissioning, the operational period would involve access via an existing farm track to the north of the site with a single two-way trip each month. The access to the A683 would be closed off and only be used if the need for abnormal works arose.

7.90 The proposed access, vehicles routes for both the main construction and abnormal loads have been assessed by County Highways who have raised no objections. The construction of the access has also been agreed in principle together with the imposition of a temporary 30mph speed limit along a short section of the A683 during the construction phase.

7.91 Operational effects mainly relate to the impact of the turbines on drivers, in particular driver distraction. PPS22 Companion Guide states in paragraph 54 covers this issues and states:

‘At all times drivers are required to take reasonable care to ensure their own and others’ safety. Wind turbines should therefore not be treated any differently from other distractions a driver must face and should not be considered particularly hazardous’.

Consequently, the issue of driver distraction, in the absence of objections from the relevant authorities would not prove problematic in this case. The proposed turbine has been positioned to provide a reasonable set back distance from the A683 and is not considered to result in a significant driver distraction and as such raises no highway objections.

7.92 The decommissioning of the wind farm once the 25 year lifespan has been reached will take place over an estimated 3 months and will in part be a reverse of the commissioning stages of development.

7.93 **Social/Economic**

There have been a number of concerns raised regarding the impact of the development on nearby house prices, human rights and the local economy. The submitted ES has provided a thorough assessment of likely socio-economic impacts, including the impact on the local economy, recreation and tourism, and nearby land uses, concluding that any effects would occur at the local and regional level and are deemed to be minor and short term; therefore not significant. There will be clear

employment opportunities associated with the construction. It is also thought that the development would contribute positively towards improvements towards the socio-economic profile of the area. There is no reason therefore to believe that wind turbine development will adversely affect the local economy.

- 7.94 The immediate land use is grazing for sheep and cattle other than the land associated with access road, turbine and crane base the remaining land of the application site and the adjoining land will be maintained in agricultural use. All the land associated within the development site will return to agriculture following decommissioning of the site.
- 7.95 Two public rights of way run close to the site but outside the boundaries of the development. The development will not affect these routes in the long-term or are considered to be an issue during the construction phase.
- 7.96 The main tourism focus in the immediate area is within Heysham Village and associated coastline. Heysham Golf Course lies approx 1.5km. Heysham Moss and nature reserve are both within 1km of the site both attract visitors and conservation volunteers on a regular basis. No significant effects are identified that may affect the integrity of the SSSI or its amenity value. Overall, it is considered that the turbine will have little effect upon the recreation and tourism opportunities in the area.
- 7.97 In conclusion, the impact of the development on the local economy, recreation/tourism and adjacent land uses is not considered adversely negative and would not be a reason to refuse planning permission.

7.98 **Icing**

With regards to icing, ice throw is a phenomenon that occurs, again, under certain climatic conditions and is the consequence of ice forming on the rotor blades under very cold climatic conditions. When temperatures rise and the ice melts there is the potential for the phenomenon to occur. PPS 22 states that.... *"the build up of ice on turbine blades is unlikely to present a problem on the majority of site in England. For icing to build up on turbines particular weather conditions are require that in England occur for less than one day per year"*. Despite the very limited potential safety systems within the turbine would detect subtle changes to the turbines performance and would shut the turbine down as an unspecified fault had been sensed. In addition the vibration sensors which detect imbalances would also cause the turbine to shut down

7.99 **Micro-siting**

The applicants have indicated in the submission the need for 50m micro-siting for the development. Given the relatively close relationship of the site to the Heysham Moss BHS and the close relationship to neighbouring residential properties, Officers do not feel micrositing is appropriate in this instance.

8.0 Planning Obligations

- 8.1 Confirmation has been received from the applicant of a willingness to provide a Unilateral Undertaking for the provision of offset land, the removal of shooting rights and maintenance for the life time of the development as detail in Para. 7.71.

9.0 Conclusions

- 9.1 National and regional planning policies, together with local planning policy seek to promote and encourage proposals of renewable energy development. PPS22 clearly states that the wider environmental, social and economic benefits of such proposals should be given significant weight in the determination of planning applications. However, all other material considerations must be considered and balanced against the benefits of the proposal
- 9.2 One of the key principles of PPS22 requires that proposals should demonstrate how environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures. Similarly, national, regional and local policies seek to ensure the District's environmental assets are protected and enhanced and where appropriate mitigated.

- 9.3 There is no doubt that the proposal offers a positive step towards renewable energy targets and would comply with national policy (including recent Statements and draft consultation documents) and regional policy with regards to its contribution towards meeting the UK's government targets. Having regard to the submitted information, planning policy and the consultation responses (statutory, non-statutory and neighbour representations), the main issues to be weighed against the proposal is the impact upon the character of the landscape, the impact upon biodiversity and residential amenity implications.
- 9.4 Planning policy which has been developed to address the issue of renewable energy runs parallel with PPS7, which seeks to protect the countryside for the sake of its fundamental character. Similarly, both regional and local planning policy seek to protect and enhance environmental assets and ensure new development is in scale and keeping with the character and natural beauty of the landscape and is appropriate to its surroundings. There is no doubt that the character and appearance of the landscape would be subject to a degree of change and the countryside in this location would be affected. However, the site in question does not fall within a designated landscape and is not a completely uninterrupted landscape. The site is situated in a large open landscape which is punctuated by communications infrastructure, several transmission lines and associated pylons, two power stations and supporting electrical infrastructure and transport networks, both rail and road. The presence of such infrastructure along with new housing developments already has a significant impact on the character of the landscape. The introduction of the turbine is not considered to be detrimental but would add a new focus and a further vertical element in this predominantly horizontal landscape.
- 9.5 It must also be noted that the character of the landscape is a product of past influences both natural and manmade and that landscape will continue to evolve in response to changes in climate, farming practices and housing and development needs as we move towards a low carbon future. It is acknowledged that turbine proposals evoke strong opinions depending on the viewpoint of the receptor. However, just as landscapes develop and change over long timeframes so does the public perception of those landscapes. Furthermore, a significant factor to be considered is the fact that the turbines have a lifespan of 25 years and after that it likely the land will be reinstated to its former condition within reason. As such it is recommended that the short-term adverse effects on this landscape, which is already interrupted with other man-made features, is limited to a relatively small localised area and located outside any special designated area, and is therefore outweighed by the long-term environmental benefits of the proposal
- 9.6 PPS9 seeks to ensure that the aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests. Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that, before planning permission is granted, adequate mitigation measures are put in place and appropriate compensation measures sought. It is clear that without appropriate mitigation the development has the potential to impact upon biodiversity. The applicant has proposed and committed to extensive mitigation which has already been the subject of prior discussion and agreement with the ecological consultees and has their support. Subject to appropriate conditions to fully develop and implement, Construction and Environmental Habitat Management Strategies together with a legal agreement in respect of the provision and control over offset land for pink footed geese, the development is considered to mitigate against the development and lead to enhancement of the ecology of the area.
- 9.7 The potential impacts on residential amenity are considered significant. There are a limited number of properties which could be affected by shadow flicker. Shadow flicker can be adequately mitigated as noted earlier in the report. Concerns over noise have been considered via the noise assessments and data produced by the applicant. It is considered by our Environmental Health colleagues that the development can satisfactorily operate within close proximity to dwellings and keep within the limits set by ETSU-R-97, which remains the current guidance to assess the impact of noise generated by wind turbine developments. Furthermore, noise can be reasonably controlled by condition to mitigate any potential impacts. The condition will relate to the limits set by ETSU-R-97. With regards to visual impact, there have been a number of relatively recent appeal decisions that have concentrated on residential amenity impacts (visual impact) of wind farms generally within 650m of properties, although there are recent appeal cases where turbines have been approved closer to dwellings. In this case only two dwellings lie closer than 780m from the turbine. The closest dwelling is 580m away from the turbine but is orientated away from the turbine with landform

and substantial trees screening directly behind the dwelling. The other property lies over 700m from the turbine and faces away from the development. All the remaining dwellings lie at least 780m away from the turbine, a distance which has proved acceptable in many planning approvals and appeal decisions where there is direct and/or open orientation to the installation.

- 9.8 It is clear from the above comments that there are potential adverse affects on landscape and on neighbouring residential amenity; however, the effects on living conditions are not of sufficient magnitude to outweigh the benefits of the proposal and warrant a refusal of planning permission. The proposed development would make a small but very important contribution towards the meeting of statutory targets set by Government to tackle climate change. It is very clear in planning policy that the need for renewable energy must therefore carry considerable weight and as such, after very careful consideration of all the potential impacts and effects, on balance, the benefits of the proposed turbine would outweigh both the landscape and residential amenity concerns. Members are therefore advised that that the proposed development can be supported, subject to appropriate conditions to address outstanding matters noted in the report and the legal agreement referred to.

Recommendation

That Planning Permission **BE GRANTED** subject to a legal agreement to deal with TV and radio interference and pink footed geese mitigation and the following conditions:

1. Standard Time Limit
2. Development in accordance with the approved plans and submitted ES
3. Turbine and associated infrastructure shall be removed from site and land reinstated in accordance with a scheme to be agreed with the local planning authority before the expiry of 25 years from the turbine being operational.
4. If the turbine fails to produce electricity to the grid for a continuous period of 12 months, it and associated infrastructure shall be removed within a period of 6 months and the land reinstated in accordance with a scheme to be agreed with the local planning authority
5. No micro siting unless otherwise agreed in writing with the local planning authority
6. No development shall commence until a Construction Traffic Management Plan has been submitted and agreed (this would include vehicle routing, timing, management of junctions, crossings, details of escorts of abnormal loads construction not to commence until 30mph temp TRO in place)
7. Implementation of a Construction Traffic Management Plan
8. No development shall commence until an Construction Management Plan and Construction Method Statement has been submitted and agreed in writing with the local planning authority (this would include timing of construction works, construction method and surface treatment of all hard surfaces including sections of the proposed access track, details of site drainage, details of wheel washing facilities, control of pollution, disposal of means of surplus material, timing of cable trenching and foundation works, timing of and construction methods and management of site compound including parking arrangements; and details of the reinstatement of temporary working areas including the access). The CMP and CMS shall be carried out in accordance with the agreed details
9. All cabling on the site shall be installed underground, precise point of connection to be agreed
10. Standard limitation on construction hours but also with a provision to allow evening working up to 9pm by prior arrangement with the LPA
11. No piling operations are anticipated but should any driven pile systems be used prior notification in writing to the LPA will be required
12. Access to be provided in accordance with the approved plans before commencement of development
13. No development shall commencement until an Environment Management Plan has been provided and agreed in writing. The development shall be carried out in accordance with such agreed details and implemented thereafter in accordance with the agreed timetables (the Environment Management Plan would include mitigation measures that will be adhered to during construction and operation of the turbine for the protection of species (e.g. nesting and wintering birds, amphibians, bats, water voles) and habitats, including watercourses.
 - Pink Footed Geese mitigation
 - Ditch improvements/enhancements
 - Ditch crossing details
 - hedgerow retention

- long term management
 - habitat creation
 - restoration following cessation of operations
 - the time of site preparation to avoid breeding bats and birds
14. Tree protection, none to be removed other than agreed condition
 15. Archaeology - programme of work to be agreed
 16. Materials, design, finish of turbine and all permanent above ground infrastructure to be agreed
 17. No development shall commence until precise details of the semi-matt external finish and colour of the turbines have been submitted and approved by the local planning authority. The turbines shall not be illuminated, other than aviation lighting (in the form of infrared lighting), or display any name, sign, symbol or logo.
 18. Noise condition restricting the turbine to the limits set by ETSU-R-97 - At any currently occupied, and properly consented residential location, noise from the turbine shall not at any time exceed a noise level of 40dB daytime or 43dB night-time measured on the La90 scale over any 10 minute period, or 5dB above the agreed prevailing background noise level, whichever is the greater.
 19. Noise condition – In the event of any complaint of noise being received, the noise from the turbine shall be monitored for compliance with the requirement of condition 3, with results submitted to the local planning authority. Should any noise from the turbine exceed the limits set out in condition3, under some or all operating conditions, measures shall be taken by the operator to reduce the noise output of the turbine as necessary to bring noise levels into compliance, whether by stopping its operation or otherwise..
 20. Scheme for dealing with noise complaints
 21. Scheme for decommissioning and restoration strategy to be agreed
 22. Before the wind turbine is brought into use, a scheme for the avoidance of shadow flicker for legally occupied buildings (dwellings and place of work, such as offices) within 10 rotor diameters of the wind turbine has been submitted agreed and operated in accordance with the agreed scheme.
 23. The wind turbine shall not be brought into use until a scheme to secure the investigation and alleviation of any electro-magnetic interference to terrestrial and digital TV caused by the operation of the turbine. (Awaiting further information to confirm exact wording of this condition together with potential legal agreement).
 24. Turbine aviation lighting to be agreed
 25. Precise routing of the access road
 26. Precise details of the crane hardstanding foundations

Human Rights Act

This recommendation has been reached after consideration of the provisions of The Human Rights Act. Unless otherwise stated in this report, the issues arising do not appear to be of such magnitude to override the responsibility of the City Council to regulate land use for the benefit of the community as a whole, in accordance with national law.

Background Papers

None.