



**REPORT of  
HEAD OF PLANNING SERVICES**

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**to  
PLANNING AND LICENSING COMMITTEE (SPECIAL MEETING)  
24 OCTOBER 2011**

**PLANNING APPLICATION FOR DETERMINATION BY THE PLANNING AND  
LICENSING COMMITTEE**

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Turncole Farm The Marshes Southminster Essex  
Applicant:- Mr Jonathan Knight, RES UK & Ireland Ltd

## BACKGROUND PAPERS

The Background Papers listed below have been relied upon in the preparation of this report:

1. The current planning applications under consideration and related correspondence.
2. All third party representations and consultation replies received.
3. The following Statutory Plans and Supplementary Planning Guidance and Advice, together with relevant Government Circulars, Orders, Directions and Planning Policy Guidance:

### Development Plans

Essex and Southend-on-Sea Replacement Structure Plan  
Maldon District Replacement Local Plan  
The Regional Spatial Strategy - The East of England Plan

### Legislation

The Town and Country Planning Act 1990  
The Planning and Compensation Act 2004  
The Town and Country Planning (General Permitted Development) (Amendment) Order 2008  
The Town and Country Planning (Control of Advertisements) Regulations 2007  
The Town and Country Planning (Use Classes) Order 1987  
Planning Policy Guidance Notes  
Planning Policy Statements  
Government Circulars

### Supplementary Planning Guidance and Other Advice (including draft Local Development Framework Development Plan Documents)

- i) Essex County Council  
Essex Design Guide for Residential and Mixed Use Areas  
Essex Historic Towns  
The Highway Aspects of Development Control
- ii) Maldon District Council  
Access to Opportunity – The Transportation Strategy for Maldon District  
Affordable Housing  
Cycling in Maldon and Heybridge  
Gypsy Sites  
Car Parking  
Maldon Town Centre Improvement Scheme  
Childrens Play Spaces  
Developer Contributions  
LDF Draft Sustainable Core Strategy

Copies of all Background Papers are available for inspection at the Maldon District Council Offices, Princes Road, Maldon, Essex CM9 5DL during normal office hours.

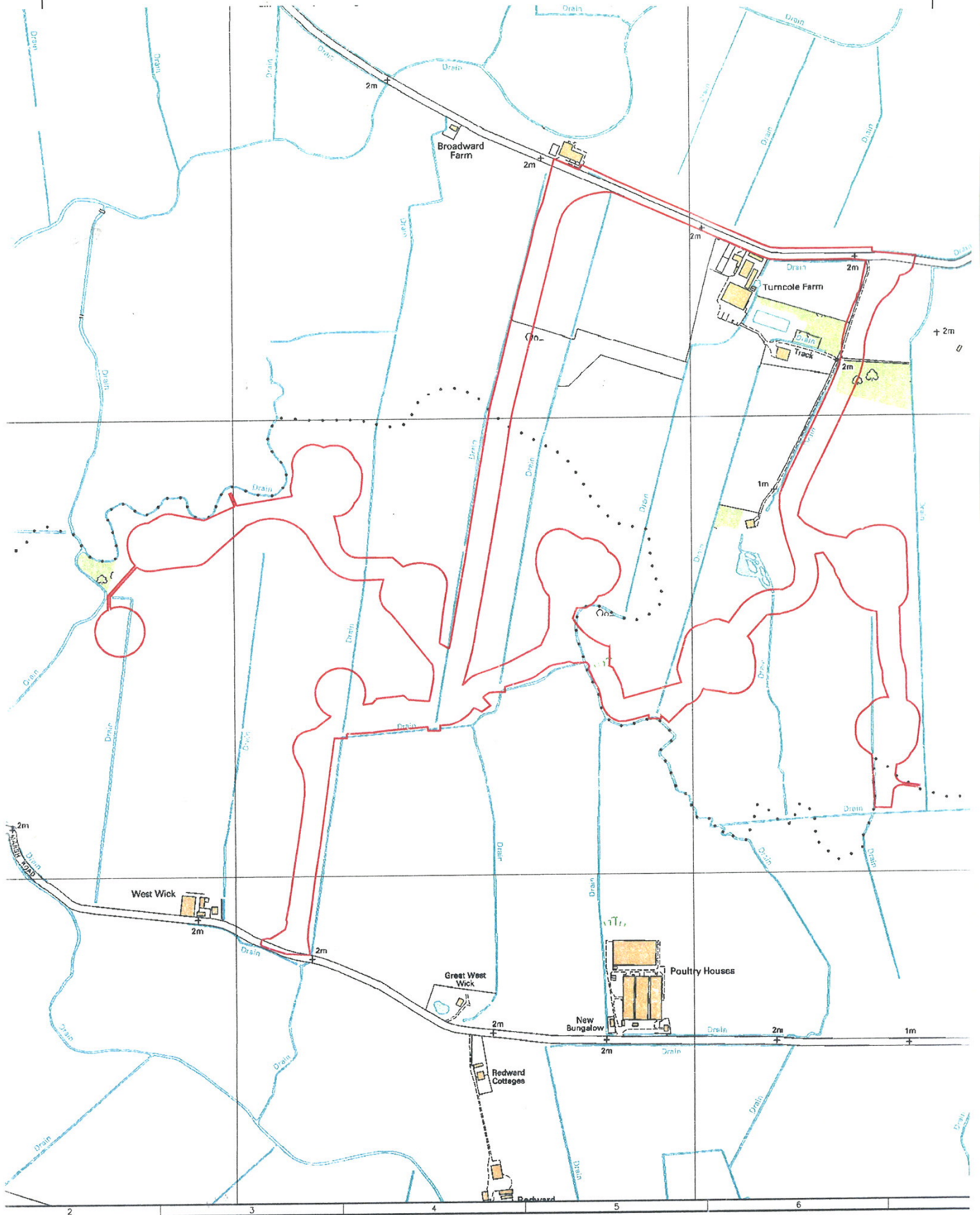
# Turncole Farm, The Marshes, Southminster

FUL/MAL/10/01070



# Turncole Farm, The Marshes, Southminster

FUL/MAL/10/01070



**PL1 FUL/MAL/10/01070 SOUTHMINSTER**

Wind Farm Development consisting of seven three-bladed, horizontal-axis wind turbines, each up to 126.5m maximum height to blade tip, with associated electricity transformers, underground cabling, access tracks, road widening works, crane hardstanding, control building, substation compound, communications mast and anemometry mast for a period of twenty five years. Also temporary works including a construction compound, laydown area, rotor assembly pads, turning heads, welfare facilities and four guyed anemometry masts.  
Turncole Farm The Marshes Southminster Essex  
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**1. Introduction**

- 1.1 This is a major planning application for a wind farm which has been submitted with an Environmental Statement that demonstrates that an Environmental Impact Assessment has been undertaken by the applicant as required under Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011.

**2. Site Description**

- 2.1 The site and the surrounding area forms reclaimed marshland which is flat and open in appearance with long views across the area to where the land gradients change in the north and west, and where the land meets the seawall to the south and east. The majority of the marshes are between 1 – 2m above sea level (AOD). There are a number field drainage ditches which pass through the site and link to the network of ditches in the area. This part of the District is sparsely populated and comprises of scattered farm buildings and dwellings. The dominant land uses are agricultural and there are few trees/vegetation in the area apart two small planting areas to the west and east of the site. The roads serving the area are one and half carriageway width.
- 2.2 The application site is located within the existing farm holding of Turncole Farm. The site area covers approximately 43 hectares with the development totaling an area of approximately 9 hectares over agricultural fields and field drainage ditches. The seven turbines would be laid out in a linear type of arrangement along an east to west axis. The access tracks would link to the highway along Marsh Road to the south, which is the primary access, with two additional accesses linking to the Marshes road where Turncole Farm is currently accessed. Within the site various associated infrastructure with the wind farm and temporary construction works would be provided.
- 2.3 The approximate nearest turbine to building distances around the wind farm site are listed as follows: Turncole Farm (750m), Broadward Farm (780m), West Wycke Farm and Bungalow (800m), New Bungalow (800m), Poultry Farm (800m), Great West Wick Farm (830m), East Wick Cottages no.1 to 4 (1km to 1.08km), Redward Cottages (1.02km), Wraywick Cottage (1.05km), Montsale Bungalow (1.16km), New Montsale (1.25km), Old Montsale (1.3km) and Wraywick Farm (1.35km). In addition there are 14 residential properties located within 2km of the proposed wind farm. Turncole Farm has a financial interest in the wind farm development.

### **3. The Proposal**

- 3.1 Planning permission is sought for the construction of a wind farm development comprising of no.7 three-bladed wind turbines. Each turbine would measure a ground to blade tip height of 126.5m. The wind farm would include associated electricity transformers, underground cabling, access tracks, road widening works, crane hardstandings, a control building, a substation compound, a communications mast and anemometry mast. All of these structures represent the permanent structures. The temporary works associated with this proposal include a construction compound, laydown area, rotor assembly pads, turning heads, welfare facilities and four guyed anemometry masts.
- 3.2 The application is accompanied by a number of documents including an Environment Statement. The proposal seeks planning permission for a development life time of 25 years and is forecast in the Environmental Statement to provide between 13 – 16 Mega Watts of electricity to supply 7585 homes per year.

#### **Permanent Construction for the Duration of Wind Farm**

- 3.3 Each of the seven turbines would measure a ground to blade tip height of 126.5m (415 feet). Each turbine is made of three key parts: the rotary blades comprising of 3 blades; the nacelle (also referred to as the hub) is the section where the blades are connected to the turbine structure which includes the gearbox and cooling systems; and the tower is the structure linking the turbine to the ground where the high voltage electrical cables are internally passed down. The turbine capacity would be between 1.8 to 2.3 MW (Mega Watts) and are operational at a wind speed of around 3-4 metres per second and a have a shut down wind speed of around 25 metres per second. The plans submitted and detail contained within the ES request a 50m micro-siting area to allow for variations in ground conditions across the site. The colour and finish of the turbines is to be agreed.
- 3.4 Located adjacent the ground level of each turbine an electricity transformer enclosure would be sited. Each of these utilitarian structures feeds the electricity cables from the turbines which transforms the 690 volts of electricity from the turbine to a higher voltage of 33,000 volts. The high voltage electrical cables are run underground from the transformer to the sub station in underground conduits.
- 3.5 The on-site substation and control building would be positioned centrally within the site 200m south of turbine 4. The building would be approximately 27m by 13m which covers a gross floor area of 351m<sup>2</sup> and would comprise of a control room, switch rooms, store rooms, an office, drying room, kitchen and WC. The building would have dual pitched roof and doors on the front and rear elevations. An air conditioning unit would be affixed to one elevation of the building. The substation distributes the electricity to the local electricity network and the point of connection would be located in the south west corner of the site. A compound area would be located to one side of the substation building incorporating electricity equipment and a free standing communications mast. An external light would be fixed to this compound area. Surrounding the compound and the building concrete and gravel areas would be created.

- 3.6 The wind monitoring mast (also known as the meteorological mast) would comprise of a free standing steel lattice structure 80m in height and constructed on a concrete base. A communications mast is proposed measuring 10m height and covering a base of 2.5m by 2.5m.
- 3.7 The plans show that there would be three access points into the site. One would be located to the southern part of the site from Marsh Road and the other two would be located either side of Turncole Farm on the Marshes Road to the north of the site. The route to the south entrance from Marsh Road would be used as the main access to the site for all construction traffic including the abnormal load deliveries. Wheel washing facilities would be installed within the site. Access tracks would be created to serve each turbine and the access points into the site. These access tracks would be approximately 5.5m wide and would cross the field drainage ditches via new and replacement culverts.
- 3.8 Various highway works are required to facilitate the delivery route and all of these works apart from the works along the B1012 on the 'S' to the north of North Farnbridge would take place within highway land subject to Essex County Council's agreement.

#### Construction Works

- 3.9 The construction programme of the development will take approximately 12 months and to facilitate the wind farm various temporary works are required throughout the site which include the provision of crane hardstandings, a construction compound, laydown areas, turning heads, and communication, calibration and meteorological masts. The construction compound would cover a land area of 50m by 60m in a secure compound with two sets of entrance gates. Within the compound there would be a laydown area, storage area, containers and skips, parking spaces, a toilet block, an office and meeting room, and another office, canteen and drying room for the workforce. The compound would be laid with compacted stone to create a suitable surface for vehicle movements. New access tracks would be formed during the construction phase and would remain for the lifetime of the development. Watercourse crossings would include two new crossing points and six upgraded crossing points.
- 3.10 Site construction would take place between Monday to Saturday between 7am and 7pm although during turbine construction there would be a period of 7 days a week.

#### **4. Relevant Planning History**

- **FUL/MAL/97/00786** – Anemometer mast, refused 08/01/98
- **FUL/MAL/03/00778** – Erection of a guyed wind monitoring anemometer mast for a temporary period of 18 months, Approved 12/09/03
- **FUL/MAL/05/00325** – Application to extend the period of temporary planning permission FUL/MAL/03/00778 for a wind monitoring anemometer mast to 31 March 2006, Approved 21/02/06
- **SOR/MAL/05/01254** – To obtain a formal scoping opinion response from Maldon District Council regarding the Turncole Farm wind site, Application Closed 21/02/06

- **FUL/MAL/06/00385** – Renewal of temporary planning permission for anemometer mast for a further 18 month period, approved 22/05/06
- **FUL/MAL/09/01078** - Planning permission is sought for the temporary erection of an 80m high guyed anemometer/meteorological mast for 18 months. The proposal is situated on existing arable farm land and is to enable RES to calculate wind regime at site in order to determine the sites viability for wind farm development – Approved 09.03.2010
- **SOR/MAL/10/00226** - Proposed wind farm development – Environmental Impact Assessment required 03.08.2010
- **FUL/MAL/11/00214** - Planning permission is sought for an 18 month extension of time for the existing 80m high guyed anemometer/meteorological mast. The proposal is situated on existing arable farm land and is to enable RES to calculate wind regime on site. (Previous application no. FUL/MAL/09/01078). Refused 31.08.2011
- **FUL/MAL/11/00806** - Three areas of permanent road widening at two junctions at the intersection of Lower Burnham Road and Fambridge Road between North Fambridge and Cold Norton. The works will result in a change of use from residential and agricultural land to form new highway land. These works are to facilitate access for abnormal load deliveries such as turbine blades to the proposed wind farm at Turncole Farm – Pending consideration

## 5. Consultation Replies

### Town / Parish Councils

#### Southminster Parish Council

The Parish object to the planning application for the following reasons:

- 1 The proposed development is not compatible with the surrounding area in particular due to the scale/bulk/height of the turbines (including the full extent to the tips of the blades). Landscape and seascape panoramic views would be detrimentally affected.
- 2 The proposed development is not compatible with the surroundings in particular due to the visual impact on the surrounding countryside and specifically to the important landscape features of the Marshes, which is designated as a “Special Landscape Area” as defined in the Maldon District adopted Local Plan (November 2005), and a Ramsar site.
- 3 The proposed development will be detrimental to the natural beauty and tranquillity of the Marshes and as such will not protect, conserve or enhance the area.
- 4 The Dengie peninsular is an important area for birds and is an important migration route, especially Brent Geese, and the proposed development would lead to a loss of habitat for many of the wild life species.
- 5 The proposed development is likely to result in high noise disturbance, as the turbines are located close to the village. There is also likely to be interference with TV reception, and the potential for shadow flicker. There is also a cumulative detrimental effect in the Dengie area of these extra turbines over and above the already approved wind farm at Middlewick.

- 6 The application states that the abnormal load traffic would be using Old Heath Road, Southminster and the standard construction traffic would be transported using the local road infrastructure via Burnham on Crouch. The current highways structure is totally inadequate to cope with the increased traffic and it's size, particularly during the construction phase. These proposals use major routes into and out of Burnham on Crouch used by busses, school children, and cyclists. It is particularly hazardous in Burnham Road as there is no recognised footpath from the Burnham Road / Old Heath Road junction to Burnham on Crouch. Traffic flow management and parking restrictions would need to be considered. Residents on the route would be subjected to continuous heavy lorry movements during the construction period with the associated inconvenience, noise, vibration and pollution.
- 7 If this application is approved Southminster Parish Council requests that there are conditions imposed that ensure that no construction traffic passes through Southminster
- 8 The forced change to the Burnham Road / Old Heath Road junction should be overseen by ECC Highways and they should ensure that the junction is returned to it's original layout or improved and that the established flora and fauna are not disturbed.
- 9 During the construction phase major safety issues would be created with the continuous flow of heavy lorries. The route through Burnham on Crouch passes two schools with crossing points causing safety issues especially for children. Safety measures would be needed to mitigate this threat.
- 10 Renewed investigations are needed with Southend Airport in light of the recent major increase in air traffic with the runway directly in line with the proposed turbines.
- 11 This application if agreed will add to an already unwelcome development allowed on appeal of another wind farm project and accumulatively will destroy the Dengie Hundred

The following Planning Policies as adopted by Maldon District Council apply:

- PU6: The development WOULD have a significant impact on the appearance of the surrounding area, generating unacceptable noise and traffic and have an adverse impact on areas of ecological, landscape and conservation importance and have a detrimental effect on adjoining properties.
- BE1: The proposed development is of a size and scale that is NOT compatible with the surrounding area. The visual effect WILL be detrimental to the surrounding area and therefore should not be allowed.
- CC6: The natural beauty tranquillity amenity and traditional quality of the District's landscape will NOT be protected, conserved or enhanced and that harm WILL be caused to the landscape character, therefore the application should not proceed.
- CC7: That the proposed development is within/adjacent to a special landscape area (Dengie Marshes) and therefore should not be allowed.

### **Burnham-on-Crouch Town Council**

Object. The Town Council concurs with the views expressed by "SIEGE" and objects on the following grounds:

- 1 The proposed wind farm development would have a detrimental impact upon the character and quality of the local landscape which is recognized for its natural beauty and tranquillity as a Special Landscape Area. The landscape is also recognized for its ecological and conservation importance. The proposal is therefore contrary to policies CC6, CC7, BE1 and PU6 of the adopted Maldon District Replacement Local Plan.
- 2 The proposed development would have a detrimental impact upon the living conditions of nearby residents and the wider area resulting in a loss of outlook to the detriment of visual amenity and potential noise and disturbance arising from the wind turbines and associated infrastructure. The proposal is therefore contrary to policies BE1 and PU6 of the adopted Maldon District Replacement Local Plan, and
- 3 The proposed development would lead to vibrations, noise and disruption from the construction traffic using the local road network to and from the site, particularly to Marsh Road, Burnham. The local road network would be subject to an excessive increase in vehicle movements, particularly from heavy goods vehicles where the local road network to the site is narrow and restricted. The proposal would therefore have a detrimental impact upon the residential amenities of properties all along the proposed routes for construction and materials traffic and would be detrimental to highway safety for pedestrian and vehicle users of the public highway. The proposal is therefore contrary to policies BE1, T2 and PU6 of the adopted Maldon District Replacement Local Plan).

### **Tillingham Parish Council**

The Parish Council object to this application for the following reasons:

- 1 The proposed wind farm development would have a detrimental impact upon the character and quality of the local landscape which is recognised for its natural beauty and tranquillity as a Special Landscape Area. The landscape is also recognised for its ecological and conservation importance. This proposal is therefore contrary to policies CC6, CC7, BE1 and PU6 of the adopted Maldon District Replacement Local Plan.
- 2 The proposed development would have a detrimental impact upon the living conditions of nearby residents and the wider area resulting in a loss of outlook to the detriment of visual amenity and potential noise and disturbance arising from the wind turbines and associated infrastructure. The proposal is therefore contrary to policies BE1 and PU6 if the adopted Maldon District Replacement Local Plan.
- 3 The proposed development would lead to vibrations, noise and disruption from the construction traffic using the local road networks to and from the site, particularly to Marsh Road Burnham. The Local road network would be subject to an excessive increase in vehicle movements, particularly from heavy good vehicles where the local road network to the site is narrow and restricted. As a result the proposal would have a detrimental impact upon the residential amenities of properties all along the construction route and would be detrimental to highway safety for pedestrian and vehicle users of the public highway. The proposal is therefore contrary to policies BE1, T2 and PU6 of the adopted Maldon District Replacement Local Plan.

- 4 In Vol.2 Appendices...Appendix 1.1 “Pollution Savings”... it is claimed that “every unit of electricity produced by the wind displaces a unit of electricity that would otherwise have been produced by a power station burning fossil fuel”. That surely ignores the power generated by nuclear energy and that generated from growing solar and water power sources. That we believe is an error in the justification argument put forward by RES.

### **Asheldham / Dengie Parish Council**

The Parish Council held a public display for residents of Asheldham and Dengie of the above planning application on 1<sup>st</sup> August and held a Parish Council meeting afterwards which was also attended by the public to discuss this application. Parish Members made their deliberations which took into account the various comments made by residents object to the above planning application on the following grounds:

- 1 It is against Maldon District Replacement Local Plan (November 2005) specifically in relation to planning policies:
- **BE1 Design of new development and landscaping**  
In that it would NOT be compatible with its surroundings, due to its scale and height and visual impact
  - **CC6 Landscape Protection**  
In that the natural beauty, tranquillity, amenity and traditional quality of the District’s landscape WOULD NOT BE protected, conserved and enhanced. The proposed development WOULD harm the landscape character in the locality, and the location, siting, design and materials are NOT appropriate for the landscape in which the development is proposed
  - **CC7 Special Landscape Areas** Dengie Marshes are designated a Special Landscape Area. The location, siting, design, materials and landscaping WOULD NOT conserve or restore the character of the area in which the development is proposed.  
It was also noted that the proposed site was close to a designated Coastal Zone which should be protected from unnecessary development
  - **PU6 Renewable Energy**  
The development WOULD have a significant visual impact on the appearance of the surrounding area, the countryside and the local landscape; there WOULD be an unacceptable level of noise
  - **T2 Transport Infrastructure in New Developments**  
The proposed development does NOT meet the requirements for safe access to and from the highway

In addition the Parish Council felt that there was now an adverse cumulative affect due to the approval of the Wind Farm developments at Hockley Farm, Bradwell and Middlewick Farm, Southminster which would be to the detriment of the area. The Parish Council also has concerns that the research by the developers on the impact on the local flora, fauna and wildlife had been played down and had not been given sufficient weight. The Parish Council also expressed concerns that the data on the impact on air traffic was out of date due to the approved increase in air traffic using Southend Airport.

### **Bradwell on Sea Parish Council**

Strongly objects on the following grounds:

- 1 There are only two roads on and off the Dengie Peninsula (B1010 and B1018) and the predicted abnormal load journeys of 6,403 and their return, will cause traffic chaos throughout the 12 month construction period. The narrow country lanes of the proposed routes A,B and C (para 10.4.4 page 276 ES volume II) past residential properties, shops and schools are all potential accident spots just waiting to happen. During a trial run traffic was backed up behind one of these vehicles for one and half hours. Emergency services would not be able to get through and the consequences of this could be fatal.
- 2 The cumulative impact of the already consented wind farm developments at Bradwell and Southminster, coupled with the announced National Policy Statement for Nuclear, will complete the transformation of the two roads mentioned above and the eastern end of the peninsula into an industrial area.
- 3 The application for Middlewick Farm, Southminster generated 406 letters of objection from residents who all live in the peninsula and 82 in support during the democratic planning stage.
- 4 The promised community funds will probably only benefit those parishes bordering the development, whereas the cumulative impact of the blighted landscape will have detrimental effect on the entire district.
- 5 An industrial development will always have a detrimental effect to property values. Power stations (wind and otherwise) and industrial sites do not make good neighbours.
- 6 At both Bradwell and Southminster wind farm public inquiries, the Government Inspectors recognised that there would be local dis-benefits from these developments including visual and noise but the area would adapt into a wind farm landscape.

**St Lawrence Parish Council** – Support.

**Steeple Parish Council** – No response.

### **Mayland Parish Council**

Object for the following reasons:

- 1 The proposed wind farm development would have a detrimental impact upon the character and quality of the local landscape which is recognised for its natural beauty and tranquillity as a Special Landscape Area. The landscape is also recognised for its ecological and conservation importance, particularly for its rich bird life including flagship species. This proposal is therefore contrary to policies CC6, CC7, BE1 and PU6 of the adopted Maldon District Replacement Local Plan.
- 2 The proposed development would have a detrimental impact upon the living conditions of nearby residents and the wider area resulting in a loss of outlook to the detriment of visual amenity and potential noise and disturbance arising from the wind turbines and associated infrastructure. The proposal is therefore contrary to policies BE1 and PU6 of the adopted Maldon District Replacement Local Plan.

- 3 The proposed development would lead to vibrations, noise and disruption from the construction traffic using the local road networks to and from the site, particularly to Marsh Road, Burnham.  
The local road network would be subject to an excessive increase in vehicle movements, particularly from heavy goods vehicles where the local road network to the site is narrow and restricted. As a result the proposal would have a detrimental impact upon the residential amenities of properties all along the construction route and would be detrimental to highway safety for pedestrian and vehicle users of the public highway. The proposal is therefore contrary to policies BE1, T2 and PU6 of the adopted Maldon District Replacement Local Plan.
- 4 Rural roads should not be widened to accommodate heavy goods vehicles, as this type of expansion would change the rural character of the Dengie Hundred for longer than the 25 years of the application.

Maldon District Council's policy PU6 on Renewable Energy appears weak and should address different types of renewable energy separately. As stated, this Wind farm proposal conflicts with this policy in that it will have a significant visual impact, generate unacceptable levels of noise and traffic, and have an adverse impact. MDC should develop policy for alternative renewable energy sources so these are encouraged over wind farms. For example solar panel farms work in any weather and are far less visually intrusive.

### **Latchingdon Parish Council**

Object strongly on the following grounds:

- 1 There are only two roads on and off the Dengie Peninsula (B1010 and B1018) and the predicted abnormal load journeys of 6,403 and their return, will cause traffic chaos throughout the 12 month construction period. The narrow country lanes of the proposed routes A,B and C (para 10.4.4 page 276 ES volumn II) past residential properties, shops and schools are all potential accident spots just waiting to happen. During a trial run traffic was backed up behind one of these vehicles for one and half hours. Emergency services would not be able to get through and the consequences of this could be fatal.
- 2 The cumulative impact of the already consented wind farm developments at Bradwell and Southminster, coupled with the announced National Policy Statement for Nuclear, will complete the transformation of the two roads mentioned above and the eastern end of the peninsula into an industrial area.
- 3 The application for Middlewick Farm, Southminster generated 406 letters of objection from residents who all live in the peninsula and 82 in support during the democratic planning stage.
- 4 The promised community funds will probably only benefit those parishes bordering the development, whereas the cumulative impact of the blighted landscape will have detrimental effect on the entire district.
- 5 An industrial development will always have a detrimental effect to property values. Power stations (wind and otherwise) and industrial sites do not make good neighbours.
- 6 At both Bradwell and Southminster wind farm public inquiries, the Government Inspectors recognised that there would be local dis-benefits from

these developments including visual and noise but the area would adapt into a wind farm landscape.

### **Althorne Parish Council**

Object to this application for the following reasons:

- The route chosen is not suitable for the additional traffic that would be generated and in particular the heavy goods vehicles
- There is a very limited passing space along Fambridge Road near the Church Hall in Althorne which would pose a particular hazard for pedestrians and vehicles
- The proposed night time traffic would cause disruption to the local households
- The additional traffic would be detrimental to the local environment and a danger to residents
- The proposed plans must include the reinstatement of any alternations to the existing traffic calming measure at The Endway

**North Fambridge Parish Council** – No response.

### **Purleigh Parish Council**

Recommends refusal on the following grounds:

- 1 The proposal will have a detrimental impact on the character, quality and visual amenities of the local landscape and surrounding area, part of which has been designated a Special Landscape Area. The proposal is therefore contrary to Policies CC6, CC7 and BE1 of the adopted Maldon District Replacement Local Plan.
- 2 The proposed development will have an adverse impact on the amenities of nearby residents by virtue of the potential noise and disturbance arising from the wind turbines, associated infrastructure and increased highway movements.
- 3 The local highways network will be adversely affected by the development, to the detriment of highway safety and the occupiers of properties and businesses along the construction route.
- 4 The economic case for the construction of a wind farm of this size is not sound, especially given the damage that its construction will cause to the local environment. This form of energy is unpredictable, incapable of delivering instant power, requires dedicated standby at all times and has a disproportionately large landscape footprint. There is strong evidence to suggest that the savings on CO<sub>2</sub> emissions from this type of development are exaggerated and therefore this is not the best way to generate a sustainable form of electricity.

The Parish Council also objects to being asked to comment on an application which contains ‘Draft’ pages and to the format of the plans (CD Rom, as opposed to paper) which put some Members at a disadvantage.

### **Cold Norton Parish Council**

Objects to the works proposed within the above application as it is the last remaining ‘wild’ areas and needs protecting – common local plan policy CC6 – landscape protection applies.

**Mundon Parish Council** – No response.

### **Stow Maries Parish Council**

Recommends refusal of the above application on the following grounds:

- 1 There is concern at the strobe effect of lighting to nearby residents caused by the turning of the blades of the turbines.
- 2 It is felt that nearby residents will suffer from noise pollution caused by the wind farm.
- 3 There are concerns about the efficiency of the wind farm and the amount of power it will produce in relation to the disruption caused to adjacent residents.
- 4 It is felt that there has been insufficient public consultation on this development.
- 5 It is felt that the proposed wind farm will cause considerable disruption to the environment in a sensitive area.

### **Woodham Walter Parish Council**

Object as the Parish are concerned to see another application in a similar area and feel that the results of Bradwell and the other Southminster application should be seen before approving any further developments of this nature. They also commented that it is regrettable that the success of the Bradwell site has risked a proliferation of similar projects in the Dengie Peninsula. The Parish are also concerned about the long-term plan for removing the turbines when they come to the end of their life cycle.

**Woodham Mortimer & Hazeleigh Parish Council** – No response.

### **Maldon Town Council**

The Town Council objects to this application for the following reasons:

- 1 The proposed wind farm development would have a detrimental impact upon the character and quality of the local landscape which is recognised for its natural beauty and tranquillity as a Special Landscape Area. The landscape is also recognised for its ecological and conservation importance. This proposal is therefore contrary to policies CC6, CC7, BE1 and PU6 of the adopted Maldon District Replacement Local Plan.
- 2 The proposed development would have a detrimental impact upon the living conditions of nearby residents and the wider area resulting in a loss of outlook to the detriment of visual amenity and potential noise and disturbance arising from the wind turbines and associated infrastructure. The proposal is therefore contrary to policies BE1 and PU6 of the adopted Maldon District Replacement Local Plan.

- 3 The proposed development would lead to vibration, noise and disruption from the construction traffic using the local road networks to and from the site, particularly to Marsh Road, Burnham. The local road network would be subject to an excessive increase in vehicle movements, particularly from heavy goods vehicles where the local road network to the site is narrow and restricted. As a result the proposal would have a detrimental impact upon the residential amenities of properties all along the construction route and would be detrimental to highway safety for pedestrian and vehicle users of the public highway. The proposal is therefore contrary to policies BE1, T2 and PU2 of the adopted Maldon District Replacement Plan.
- 4 The accumulative effect of the three wind farm sites will be detrimental to the environment of residents who live in the area. The Town Council could not see any data regarding the accumulative effect.

**Heybridge Parish Council** – No response.

**Langford & Ulting Parish Council**

Object to this application due to the cumulative impact that this development, when added to the two wind farms already approved on the Dengie peninsula, will have on the rural roads in the Maldon District Council area. In addition, the Parish Council is in favour of offshore wind farms. The Parish Council does not support their siting in the rural countryside, in this case particularly, an area with Special Landscape value.

**Wickham Bishops Parish Council** - No response.

**Little Braxted Parish Council**

Object for the following reasons:

- 1 Wind farms are inefficient
- 2 Wind farms are unsightly
- 3 This wind farm would have a detrimental effect on residents over a large area
- 4 Wind farms are proliferating and this one in particular would contravene at least four of the policies contained in the Maldon District Replacement Local Plan.

Please ensure that this application is refused.

**Great Braxted Parish Council** – No response.

**Goldhanger Parish Council**

Objects to the above application on the following grounds:

- 1 The detriment to the local landscape and visual amenity far outweighs the minor national benefit of lower carbon emissions.
- 2 The investigation into issues of noise / vibration has yet to be concluded and it is therefore unreasonable to consider further installations in close proximity to houses until that time.

### **Tolleshunt Major Parish Council**

Objects on the following grounds:

- 1 If this application is granted it is felt that it will result in over-development of this unique landscape, resulting in an excessive number of wind farms in an environmentally sensitive location.
- 2 The site is in an area of outstanding natural beauty, and this would be a major development at an inappropriate site.
- 3 The construction of the wind farm will cause considerable disruption to large numbers of local people for a lengthy period.
- 4 The Parish Council questions whether the efficiency of this wind farm will outbalance the disruption caused both during its construction and subsequent operation.

### **Tolleshunt Knights Parish Council**

The Parish Council recommends that this application is refused. It is felt that a further wind farm in this area is not viable, will be a visual intrusion, and the noise associated with wind farms will be damaging to the amenities of neighbouring occupants. The Council is not convinced that it will make a positive contribution to energy supplies given the intrusion to residents in the area

### **Tolleshunt D’Arcy Parish Council**

Consider the wind farm is unlikely to be seen from the parish and they therefore have no comments to make on the application

**Tollesbury Parish Council** – No comments to make.

**Little Totham Parish Council** – No response.

### **External**

#### **Essex County Highways**

The Highway Authority recommends that permission be refused for the following reasons:

- 1 The modification of the existing highway to allow for the transportation of the abnormal loads associated with the development proposal has not been demonstrated to the satisfaction of the Highway Authority.

Therefore the application does not comply with policies DM1 General Policy, DM19 HGV Movement and DM20 Construction Management contained within the Highway Authority’s Development Management Policies, adopted as County Council Supplementary Guidance in February 2011.

#### **Informative**

To date extensive discussion has taken place with the applicants regarding the modification of the existing highway to allow for transportation of the abnormal loads

associated with the proposal including detailed pre-application discussions and a dry run with a wind turbine component carrying vehicle. These discussions are ongoing.

### **Essex County Footpath / Public Rights of Way**

None of the structures are close to public rights of way in the area and it would appear that access to the turbines during their construction will not affect the footpaths in the vicinity either. Therefore no objection to the proposal.

### **Environment Agency**

Having reviewed the documents as submitted, including the Environmental Statement and wish to make the following comments:

#### **Flood Risk**

Having considered the information submitted the Environment Agency confirm that we have no objection to the application on flood risk grounds. However, we would like to draw your attention to the following additional permissions which will be required before any works can commence, irrespective of any planning permission which may be granted.

There are a number of ordinary watercourses which cross the site and a couple of main rivers too. It should be noted that any works which could affect the flow of an ordinary watercourse will require prior written consent for us, which is considered separately to any planning permission granted.

Any works within 9 metres of the main river will require formal written consent from us also. This includes any crossings of the rivers or any roads which run alongside, and within 9 metres of, any designated main river.

Please note that we are generally opposed to the culverting of watercourses/rivers and bridges should be installed wherever possible. It will need to be demonstrated that no habitats will be affected as a result of the works and this will need to be supported with ecological surveys at the time of application. Please note that there may be further ordinary watercourses which do not show on our map and any crossings of these will still require our written consent, regardless of whether they are identified on the plan or not

#### **Pollution Control**

All works must be undertaken to minimise the risk of pollution to the environment. The Environment Agency's Pollution prevention guidelines will provide further guidance. These are available to view at: <http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx>

Vehicles' loading or unloading bays and storage areas involving chemicals, refuse or other polluting matter shall not be connected to the surface water drainage system.

Any facilities, above ground, for the storage of oils, fuels or chemicals (if required during the construction phase) shall be provided with adequate, durable secondary

containment to prevent the escape of pollutants. The bunded area shall be designed, constructed and maintained in order that it can contain a capacity not less than 110% of the total volume of all tanks or drums contained therein. All filling points, vents, gauges and sight glasses should be bunded. Any tank overflow pipe outlets shall be directed into the bund. Associated pipework should be located above ground and protected from accidental damage. There shall be no gravity or automatic discharge arrangement for bund contents. Contaminated bund contents shall not be discharged to any watercourse, land or soakaway. The installation must, where relevant, comply with the Control of Pollution (Oil Storage) (England) Regulations 2001 and the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 and as amended 1997.

All drums and small containers used for oil and other chemicals shall be stored in bunded areas that do not drain to any watercourse, surface water sewer or soakaway.

### Ecology

The Environment Agency agree with the conclusions of the ecology studies in relation to this application. There should be minimal impact on any water related habitats and species, providing development is carried out as planned. We support the enhancement opportunities recommended.

### **Natural England**

Natural England considers that wind energy developments, appropriately designed and sited, play an important part in a low carbon, more efficient and sustainable energy system, which is needed to tackle climate change. Therefore, whilst supportive of the principle of wind energy developments, our comments below seek to ensure that the impacts to the natural environment have been fully identified, to provide the necessary assurance and confidence that the Middle Wick wind farm proposal is sustainably sited.

#### *Nature Conservation – European Sites*

##### *Consultation under Regulation 61(3) of the Habitats Regulations 2010*

The application site is in the vicinity of the Dengie Special Protection Area (SPA) and Ramsar site. The application site is also in the vicinity of the Crouch and Roach Estuaries, Foulness, Colne Estuary, and Blackwater Estuary SPAs and Ramsar sites. These SPAs form components of the Mid-Essex Coast SPA, and are varyingly notified for their significant aggregations of breeding and wintering birds, including assemblages of waterfowl each exceeding 20,000. These assemblages include golden plover and lapwing, found in notable numbers at the development site. The location of the proposal in relation to these European and Ramsar sites means that the application must be determined in accordance with the requirements of the *Habitat Regulations* in particular

Regulations 61 and 62. Listed Ramsar sites as a matter of policy should receive the same protection as designated SPAs. We have some concerns regarding how the Environmental Statement has assessed impacts to SPA interest features found on or close to the development site, and the accuracy of some of the population data used (e.g. table 6.6), as this appears to be out of date. For example, paragraph 6.9.93 states that “while there is no evidence that the golden plovers recorded are part of the

wintering bird fauna of the identified Natura 2000 sites it is constructive to assume that they may have been derived from the nearest SPA for which this species is part of the designated interest.” Whilst the surveys themselves may not have identified any particular flight lines used by birds between the site and the nearest SPA, the relatively small distance in our view requires this assumption to be made. It is also important when dealing with European protected sites to adopt a precautionary approach, a key feature of the Habitats Regulations, and although we are pleased that this “assumption” has been made for the purposes of the impact assessment, we would have preferred a stronger recognition. Nonetheless, we do agree that it is difficult to assign the populations of SPA qualifying bird species to any individual SPA, in view of their high mobility. We therefore consider that the baseline population figures against which the collision related impact should be measured should be that for the mid-Essex Coast SPA. We took a similar approach to impact assessment for both the Bradwell and Middle Wick wind farms.

Among the waterfowl recorded at the site, the ES also recognises only golden plover as part of the SPA network, whereas lapwing in particular (and other waterfowl) should also receive this status, as they contribute to those sites which qualify as SPAs on account of their regular use by over 20,000 waterfowl (amongst other features). On this point some of the figures used in table 6.6 are incorrect, as the Dengie, Crouch and Roach Estuaries, Foulness, Colne Estuary, and Blackwater Estuary all qualify under this criterion (which, being an assemblage, does not exhaustively list every component species). Nonetheless, we note the precautionary inclusion of lapwing in section 6.16.

We are satisfied that the survey methodology, effort levels, and collision risk modelling represent best practice, and have no further comments to make on these. With the above points clarified, we turn to the impacts themselves, and in particular highlight the concentrations of lapwing and golden plover, and their frequent flights at rotor height. The collision risk modelling has calculated, for the 2005-062 surveys, rounded collision figures of (and presumed mortality) four lapwing and eight golden plover, using an avoidance rate of 95%<sup>3</sup>. Whilst we accept that these figures are not significant, in our view it would have improved clarity if a further table was included setting out the increase in baseline mortality against the mid-Essex coast SPA population baseline, providing a percentage figure. A similar table could also be used for the in-combination assessment (see below for further comments). It is clear however that, alone, the proposed development is not likely to have a significant effect on the mid-Essex coast SPA.

#### *In-combination Effects (cumulative impact)*

The Habitats Regulations also require that the test of whether the development will have a likely significant effect on the European sites is applied *in-combination* with other plans or projects. With reference to paragraph 6.15.4, we do not consider that this approach to cumulative effects is suitably precautionary, particularly in view of the assumptions previously made and noted above. Whilst we recognise the scale of movements likely to occur (and hence advise a baseline using mid-Essex coast SPA rather than a single SPA), in our view the distance between the development site and the nearest SPA (Dengie) does justify the precaution that the birds observed on the site may contribute towards the SPA population. Consequently, an in-combination assessment should be undertaken to clearly demonstrate that the proposal will not result in likely significant effects in combination with other wind farms around the

mid-Essex coast area. We suggest that this includes predicted mortality from other wind farm developments such as Middle Wick, Bradwell, and Earls Hall Farm (Clacton), using comparable collision risk modelling calculations.

Natural England advises Maldon District Council to defer determination of this planning application until the proposed development has been considered in combination with other wind farm projects in the area (as defined above), in order to determine whether the proposal will cause likely significant effects in combination with other projects. The findings of this in-combination assessment will determine whether an Appropriate Assessment is required under the Habitats Regulations.

Nature Conservation – Sites of Special Scientific Interest  
Consultation under Section 28I(2) of the *Wildlife and Countryside Act 1981* (as amended)

The conservation features under consideration for the European and Ramsar sites are also the features of interest for which the component SSSI Sites of Special Scientific Interest are notified. As such, Natural England's advice on the European and Ramsar sites also applies in relation to the SSSIs. There are also a number of additional features of interest exclusive to the SSSIs, however Natural England is satisfied that the additional interest features will also not be harmed by the proposed development.

Protected Species

Natural England has produced standing advice for protected species, and we refer to you this advice in the first instance. If you have further specific questions on protected species having considered our standing advice, please contact us again. Our standing advice can be found at the link below:-

<http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

As a guide however, the effects of the proposed wind farm appear limited to protected species, (including to bird species not covered by the protected site status), although the Council should ensure that mitigation measures in particular for water voles is secured by a suitably worded planning condition.

We also welcome the biodiversity enhancements proposed in the ES, which should also be secured with a suitably worded planning condition. We express some caution in the increase in extent of rough grassland habitats around the wind farm. Whilst this will improve foraging habitat for barn owl, it may attract kestrels which have been known to suffer disproportionate collision where this habitat is placed too close to turbine bases. This possible negative effect should be reviewed as part of the monitoring programme.

Monitoring

Natural England welcomes the proposed monitoring programme for birds, both breeding and wintering. Whilst surveys of distribution of breeding and wintering birds can offer insights into displacement effects, and the efficacy of enhancement measures, they do not measure collision. Our preference therefore is that the monitoring should also include carcass searches, in order to validate the collision risk

predictions of the assessment models. We suggest that a suitably worded planning condition is used to secure a monitoring programme, the details of which can be agreed between the applicant, planning authority, and Natural England (and potentially other parties) in due course.

### Landscape

We draw the Council's attention to the effects of the proposal on local landscape character. We refer you to our landscape position statement as an initial reference at: [http://www.naturalengland.org.uk/Images/Landscape-position\\_tcm6-14796.pdf](http://www.naturalengland.org.uk/Images/Landscape-position_tcm6-14796.pdf)

We advise that you consider impacts on landscape in light of the Essex Landscape Character Assessment, Essex County Council's Essex Coast Landscape Character Assessment (in particular the Dengie Coastlands section), and Maldon District Council's own Landscape Character Assessment, chapter D8 "Dengie drained estuarine marsh". The Council will need to take a view on whether the benefits of the proposal outweigh the significant visual effects of the Turncole wind farm (and in combination with the Bradwell and Middle Wick wind farms), and the existing power station.

In commenting on the landscape effects of the proposal, we have also used the *Greater Thames Estuary* National Character Area 81 as a reference point. Key landscape features of the area include arable farmland on former reclaimed marsh, a sense of huge sky, tranquillity, and panoramic views across the marshland and out to sea. The openness and tranquillity of the landscape largely contributes to its high sensitivity to change. Clearly in such an open, flat landscape, any vertical structure will be highly prominent, breaking the skyline, and for wind turbines there little opportunity for landscape mitigation. Nonetheless several factors mitigate against an otherwise high visual impact.

Whilst clearly visible, the turbines do not break or interrupt any significant feature of the skyline, and very open landscapes also have a greater capacity for wind turbine developments. There are recognised landscape character factors which increase the degree to which wind energy can be accommodated. These include the scale of the landscape, the landform, landscape pattern and complexity, settlement and man-made influence, visual horizons, inter-visibility with adjacent landscapes, and perceptual aspects (sense of remoteness, tranquillity). The Dengie Flats comprises a large scale landscape, and is lacking in strong topographical variety (landform). It also has non-distinctive horizons (although we accept that the lack of distinguishing horizons may itself be a feature), and is far from sensitive landscapes (e.g. AONB). With regards to perception, although the site lies within a man-made environment (reclaimed marshland), it is sparsely populated, and so may be considered remote and tranquil.

Considering all the above, on balance, our view is that the Dengie peninsula has a greater capacity to accommodate wind farm energy. Natural England therefore does not object to the proposal on landscape grounds. Our focus has on landscape has been at a high level, however, the planning authority should be mindful of impacts which may be significant at a local level.

## Conclusion

In conclusion, Natural England advises that this application is deferred until an in-combination assessment of the likely significant effects of the proposal and other wind farm projects is undertaken with respect to the mid-Essex coast Special Protection Area. However we do not object on protected species or landscape grounds.

## **RSPB**

Request further information on flight lines of key target species to show which way birds are most likely to be hit by turbines and this needs to be checked by both the RSPB and Natural England to make sure it corresponds with the conclusions of the EIA.

**Essex Wildlife Trust** – No response.

## **North East Essex Badger Group**

After careful examination of the documentation you have provided, it is noted that RES has only found one badger sett within the designated area. NEEBG notes that this sett is at some distance from the main turbine sites. Note that badgers are mobile and make new setts, they say that there would be a re-check done if planning permission is given. NEEBG are aware that there are many other setts in the area of Turncole and also the Middlewick proposed wind farm, and would be concerned about the disturbance that the number of vehicle movements would have. Need to know about possible night time transport of the larger parts along the Endway, Old Heath, and Marsh Road, as badgers have well used routes across the countryside, disregarding roads and traffic. There is also a concern that workers who had access to the site might pass on knowledge of setts to criminals – we note that the application does not refer in detail to the location of the set within the domain. There are concerns about the result of the closure of the badger sett near Holiwell Farm, the badgers from this sett will search for a new area, and could cause other badger groups to be displaced. This would have a knock-on effect, and could result in new setts being developed within the area designated for the development. NEEBG expect this factor to be taken into consideration when the re-evaluation of the area is made, which we support if the one sett on the site has is present and NEEBG have had the opportunity to verify this.

## **English Heritage**

No objections and recommend the application is determined in accordance with national and local policy guidance, and on the basis of your specialist conservation advice

## **Ministry of Defence**

No objection. The application is for 7 turbines at 126.5m to blade tip and has been assess using the grid references. The principal safeguarding concern of the MOD with respect to the development of wind turbines relates to their potential to create a physical obstruction to air traffic movements and cause interference to Air Traffic

Control and Air Defence radar installations. If permission is granted the MOD require information to tell them:

- The date construction starts and ends
- The maximum height of construction equipment
- The latitude and longitude of every turbine

This information is vital as it will be plotted on flying charts to make sure military aircraft avoid this area.

### **Civil Aviation Authority**

There is currently a high demand for CAA comment on wind turbine applications which exceeds the capacity of the available resource to respond to requests within the timescales required by Local Planning Authorities. The CAA has no responsibilities for safeguarding sites other than its own property, and a consultation by a Council is taken as a request for clarification of procedural matters. Councils are reminded of their obligations to consult in accordance with ODPM/DfT Circular1/2003 or Scottish Government Circular 2/2003, and in particular to consult with NATS and the Ministry of Defence as well as any aerodromes listed in Annex 3 of the above documents, as well as appropriate guidance and policy documentation. Should the Council be minded to grant consent to an application despite an objection from one of the bodies listed in the circular, then the requisite notifications should be made. In addition, consultation should be undertaken with any aerodrome particularly if it has lodged an unofficial safeguarding map with the Council, including local emergency service Air Support Units (e.g. Police Helicopter or Air Ambulance).

- There is an international civil aviation requirement for all structures of 300 feet (91.4 metres)\* or more to be charted on aeronautical charts.
- Any structure of 150 metres\* or more must be lit in accordance with the Air Navigation Order and should be appropriately marked. Smaller structures may also be required to be lit by aviation stakeholders particularly if they fall under Section 47 of the Aviation Act.
- Cumulative effects of turbines may lead to unacceptable impacts in certain geographic areas.

Should the Council still have a specific query the CAA will help in the clarification of aviation matters and regulatory requirements. Site operators remain responsible for providing expert testimony as to any impact on their business and the lack of a statement of objection or support from the CAA should not be taken to mean that there are no aviation issues, or that a comment from an operator lacks weight.

### **National Air Traffic Services (NATS)**

The proposed development has been examined from a technical safeguarding aspect and does not conflict with the NATS safeguarding criteria and therefore there are no objections.

### **London Southend Airport**

London Southend Airport wishes to object to the planning application, the Airport authority is currently working with the applicant to obtain a technical solution for the affects this proposal will have on the Primary Radar along with the Radar's design authority. The applicant is currently looking to commission a report which will clarify the specific issues this proposal will have on Southend's Primary Radar and hopefully identify appropriate mitigations. The Airport Authority must maintain its objection until this information becomes available and can be verified.

### **London Stansted Airport**

The proposed development has been examined from an aerodrome safeguarding perspective and does not conflict with safeguarding criteria. Therefore no objection to this proposal.

**Essex Air Ambulance Service** – No objection.

**OfCom** – No response.

### **Joint Radio Company (on behalf of British Gas and National Grid)**

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry and the Water Industry in north-West England. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal.

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, developers are advised to seek re-coordination prior to considering any design changes.

**Ramblers Association** – No response.

### **Fire and Rescue Service**

Access for the fire service is considered satisfactory. This type of development may contain areas where fire may occur, whether caused by an electrical fault or some other occurrence, a fire fighting supply within an acceptable distance of any such risk should be considered. As the nearest available fire fighting water supply is a fire

hydrant sited in Marsh Road, to the south of the site, further discussion on any possible risk should be considered.

**Port of London Authority** – No response.

**Crouch Harbour Authority** – No response.

**Maritime and Coastal Agency** - No response.

**Health and Safety Executive** – No response.

**Rochford District Council** – No response.

**Colchester Borough Council**

No comment to make. However the wind turbines will be visible from Mersea Island, and possibly elsewhere in this Borough, and in considering their impact your Council will obviously need to take account of the Visual Impact Assessment and Landscape Character Assessment.

**Network Rail** – No comments to make.

**British Telecom** - No response.

**Anglian Water** – No concerns and therefore no comment.

Internal

**Planning Policy and Economic Development** - Wish to state the following:

Strategic Objectives

The Replacement Local Plan (2005) includes strategic objectives to protect and enhance the coast and countryside, recognising the contribution of their intrinsic character and beauty and the diversity of their landscapes, heritage and wildlife, the wealth of natural resources and the character, ecology and economy of the District. It also aims to create a sustainable and accessible environment and to control development within the natural, man-made and statutory constraints that exist in and apply to the District.

The emerging draft Core Strategy (April 2009) aims to protect and enhance the distinctive built and natural environment of the District. The Core Strategy includes the objective to secure high quality new development supported by infrastructure, promoting a reduction in the use of resources, addressing the threat of climate change, improving energy and water efficiency and promoting the use of renewable energy. Additionally, it also includes the objectives to promote sustainable modes of transport and reduce journey miles undertaken by car throughout the District and ensure new development is either located away from high flood risk areas or is flood resilient when it is not possible to avoid such areas.

## Maldon District Replacement Local Plan Saved Policies

The application site is located outside the development boundaries. Saved policies S2, CON 7, CC6 and BE1 of the Maldon District RLP apply in this case.

Under Policy S2, outside development boundaries defined in the RLP, the coast and countryside will be protected for their own sake, particularly for their landscape, natural resources and areas of ecological, historical, archaeological, agricultural and recreational value.

According to Policy CON7, planning permission for windfarms within airport consultation areas will not be granted if the proposed development would have a detrimental effect on the safe operation of the relevant airport. As the subject site falls within the constraint maps of Southend Airport and that the proposed windfarm will be exceeding 90 metres in height, the Civil Aviation Authority and Southend Airport should be consulted.

Policy CC6 of the RLP relates to Landscape Protection. It states that the natural beauty, tranquillity, amenity and traditional quality of the landscape will be protected. Proposals in the countryside will only be permitted provided that no harm is caused to the landscape character in the locality; the location, siting, design and materials are appropriate for the landscape and the development is landscaped in order to protect and enhance the local distinctiveness and diversity.

Policy CC7 aims to protect the District's natural heritage of fine landscape. The subject site is within the Special Landscape Area of the RLP and identified as part of the Dengie Drained Estuarine Marsh in the Landscape Character Assessments Report 2006. As the area has high sensitivity to change, the report recommends that any new development should be of small scale, responding to historic settlement pattern, landscape setting and locally distinctive building styles. It is noted that reference has been made to the Essex Landscape Character Assessment in 2002, however, the Landscape Character Assessments Report 2006 provides a more up-to-date information specifically for the landscape character of the District. Any cumulative landscape and visual impacts resulting from the proposed development and the other permitted windfarms in the Dengie area should also be considered as part of the overall landscape and visual assessment.

Policy CC 11 of the RLP protects the defined Coastal Zone which has an open and rural character and saved policy CC1 of the Replacement Structure Plan defines the Coastal Protection Belt which aims to protect the rural and undeveloped coastline from development. As the proposed development falls within the Coastal Zone and the Coastal Protection Belt, the location, siting, design, materials and landscaping should not adversely affect the open and rural character of the area, its historic features and its wildlife.

The purpose of policy BE1 of the RLP is to ensure that the design of new development and landscaping is compatible with and or improves their surroundings. As the subject site falls outside of the defined development boundaries, the development should make a positive contribution to the landscape and open countryside while landscaping should be included as an integral part of the overall design.

Together with policies in Planning Policy Guidance (PPG) 13, Planning Policy Statement (PPS) 1 highlights the importance of accessibility to towns, services and facilities by public transport, walking and cycling. Policies T1 and T2 of the RLP list the transport related requirements for new development.

It is essential to ensure that the proposal will support sustainable development as highlighted in PPS1. Policy PU6 supports the development of renewable energy facilities provided that they would not generate unacceptable level of noise, have adverse or detrimental impacts on the surrounding area, the countryside or local landscape.

#### Regional Strategies (East of England Plan)

According to Policy ENV2 of the East of England Plan, the site falls within the Greater Thames Estuary countryside character areas. New development should respects and enhances local landscape character and secures mitigations measures where, in exceptional circumstances, damage to local landscape character is unavoidable.

The subject site also forms part of the Core Biodiversity Area and Biodiversity Enhancement Area. Policy ENV3 highlights that the region's wider biodiversity, earth heritage and natural resources should be protected and enriched through conservation, restoration, re-establishment and good management of key resources.

The development of new facilities for renewable power generation is supported by policy ENG2 with the aim of meeting the region's renewable energy target.

Under Policy WM6, development should be designed and constructed to minimise the creation of waste, make maximum use of recycled materials and facilitate the collection, separation, sorting, recycling and recovery of waste arising from the development and surrounding areas.

#### National Planning Policy considerations

According to PPS1, local authorities should promote development that creates socially inclusive communities including suitable mixes of housing as well as to protect and enhance the quality, character and amenity value of the countryside and urban areas as a whole.

PPS7 highlights the Government's objective to raise the quality of life and environment in rural areas through the promotion of thriving, inclusive and sustainable rural communities and through the promotion of good quality, sustainable development that respects and, where possible, enhances local distinctiveness and the intrinsic qualities of the countryside.

The Energy White Paper 2007 and the Energy Act 2008 highlight the Government's Strategy to move towards cleaner energy supplies and one of the key elements is to provide more support for low carbon technologies. PPS22 contains the key principles of planning for renewable energy including the need to promote and encourage the development of renewable energy resources and that significant weight should be

given to the wider environmental and economic benefits of renewable energy projects when determining planning applications.

PPS22 also states that renewable technologies may generate small increases in noise levels, but developments should be located and designed in such a way as to minimise increases in ambient noise levels. It also stipulates that 'the assessment and rating of noise from windfarms' ETSU guidance should be used to assess and rate noise from wind energy development. Further guidance on the assessment of noise is included within the companion guide to PPS22. The ES appears to demonstrate that noise measurements have been carried out in conformity with the ETSU guidance, and that the development will not generate an unacceptable increase in ambient noise levels or generate an excessive level of traffic. It is noted that there will be disruption to traffic and footpath users during the construction phase.

The designated Overarching National Policy Statement for Energy (EN-1) highlighted the Government's commitment moving to a secure, low carbon energy system. Part 5 of EN-1 provided a list of generic impacts which are relevant to all types of energy infrastructure, including the following:

- Air quality and emissions
- Biodiversity and geological conservation
- Civil and military aviation and defence interests
- Coastal change
- Dust, odour, artificial light, smoke, steam and insect infestation
- Flood risk
- Historic environment
- Landscape and visual impacts
- Land use including open space, green infrastructure and Green Belt
- Noise and vibration
- Socio-economic
- Traffic and transport impacts
- Waste management
- Water quality and resource

As the site falls within Flood zone 3a and wind turbines are classified as essential infrastructure, a Flood Risk Assessment and Exception test will be required under PPS 25 to demonstrate that the proposal provides wider sustainability benefits to the community that outweigh flood risk and that the development will be safe, without increasing flood risk elsewhere and where possible will reduce the overall flood risk. Surface water management should also be considered.

#### Other policy considerations

In addition, the following policies of the Core Strategy Regulation 25 Consultation Document (2009) are relevant:

- **Policy CS 1** – development proposals must reflect the local character, scale and capacity of settlements and contribute to sustainable development

- **Policy CS 2** – In the countryside, development will be restricted to certain uses in accordance with other policy requirements
- **Policy CS 19** – development should protect and enhance the natural environment and contribute to the green infrastructure network
- **Policy CS 21** – development proposals should be sympathetic to the particular character of the site and its surroundings with high quality design, appropriate construction methods and building materials as well as make the most efficient use of the site with regard to the size, position, orientation and space
- **Policy CS 23** – development proposals should address how potential environmental impacts are tackled and minimised. Sustainable Drainage Systems should also be incorporated to deal with surface water
- **Policy CS 24** – developments in Flood zones 2 and 3 will require a flood risk assessment taking account of future climate change
- **Policy CS 25** – development proposals should address potential transportation impacts

**Leisure** – No response.

**Conservation Officer** – Wish to make the following comments:

**Heritage Value**

The manors, halls and farms on the Dengie are historic buildings mostly associated with the prevailing agricultural land use on the reclaimed marshes. The marshes were largely reclaimed in the 17<sup>th</sup> century from tidal marsh land intersected by numerous creeks and shell banks. The larger manors, halls and farms are identified on the 1777 Chapman and André Map of Essex within ‘Southminster Marsh’ namely ‘*North Wick, Ray Wick* (probably Wraywick), *Mount Sale, Hollowell, Courts, West Wick, North Wick, Dengey Hall, New Hall, The Hall, Dummer Wick, Ratborrow*’ to name a few. The natural landscape therefore, is intrinsically linked to the historic built environment. The area is characterised by its open aspect and regular drainage channels. A row of farms (Bridgewick, Middlewick, the Mountsales, Deal Hall, Coney Hall, East Wick and Holliwell) are located on or close to the chenier (shell bank) in the centre of the marsh.

A change in national policy since Hockley and Middlewick proposals is publication of PPS5 Planning for the Historic Environment and the accompanying English Heritage Practice Guide both published March 2010. Main policy change relevant to this application is Policy HE1 Heritage Assets and Climate Change and Policy HE10 Additional Policy Principles Guiding the Consideration of Applications for Development Affecting the Setting of a Designated Heritage Asset.

**Affect of the proposal on the setting of listed buildings**

The setting of a listed building is not confined to its curtilage and the wider landscape setting must be considered. The wider landscape in this application is historic and intrinsically linked to the identified built heritage and historic land uses. Therefore, such development as 7 wind turbines and associated infrastructure within the historic,

natural landscape will have a significant impact on the setting of a number of listed buildings.

Setting is defined in Annex 2 to PPS5 as:

*The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.*

Conservation Principles, English Heritage 2008, “setting” is defined as the relationship between an historic asset and its surroundings in the present and the past, including the way that the place is perceived, experienced and valued by people today.

It is considered that this proposal and the two previous proposals (Hockley and Middlewick) impact negatively on the settings of listed buildings.

### Cumulative impact

The three recent proposals; Hockley Farm, Bradwell, Middlewick and Turncole are all within the 10km radius of impact detailed in this proposal and should be judged as a whole i.e. 7 at Turncole; 9 at Middlewick and 10 at Hockley.

The development proposed is not small scale. It is considered that the need for such development appears to outweigh its perceived negative impact on the given historic landscape and historic built environment (Appeal Decision – Bradwell Wind Farm Inquiry). It is difficult to argue against the ‘public benefit’ of the development with regard to mitigating the effects of climate change in relation to the conservation of the settings of listed buildings and the historic landscape (Policy HE1 PPS5).

### Archaeology

Following consultation with the ECC HEM Team at ECC for specialist archaeological advice regarding this application please find below the specialist advice:

The proposed development site has been archaeologically evaluated in support of the EIA process. The archaeological desk-top and trial-trenching has identified the location of a number of surviving archaeological deposits, including a Red Hill complex at TQ982977 and the historic farmstead at Old Turncole, and that there is the potential for further discoveries. Following detailed discussions an archaeological brief for further work was supplied to the developers by the Historic Environment Branch and has been submitted as part of the EIA. Archaeological deposits are both fragile and irreplaceable and any permitted development on site should therefore be preceded by a programme of archaeological investigation which should be secured by an appropriate condition attached to any forthcoming planning consent.

The area of the trenched Red Hill and the two Red Hills to the north (visible on GoogleEarth) is to be stripped and fully excavated, an area approx 250m long by the width of the road wide. This work is to take place after planning permission is granted but in advance of any construction work taking place on site. The remainder of the access-road and the temporary compound is to be archaeologically monitored during the construction phase and all archaeological features recorded and sampled. In those

areas where archaeological deposits are identified during this monitoring phase a meeting shall be held on site with the Historic Environment advisor and an appropriate mitigation strategy agreed to secure the recording of the archaeological deposits. Construction work will stop in that area until the mitigation methodology has been agreed and implemented (this may include further full-scale excavation).

All fieldwork should be conducted by a professional recognised archaeological contractor in accordance with the brief.

The following planning condition, which is in line with guidance given in PPS 5 (Planning for the Historic Environment) should be attached to any planning consent: Implementation of Archaeological Fieldwork Programme Condition:

- 1 No development including any site clearance or groundworks of any kind shall take place within the site until the applicant or their agents; the owner of the site or successors in title has secured the implementation of a programme of archaeological work from an accredited archaeological contractor in accordance with a written scheme of investigation which has been submitted to and approved in writing by the local planning authority. The development shall be carried out in a manner that accommodates the approved programme of archaeological work.

### Recommendation

In my opinion the 7 wind turbines and associated infrastructure will impact on the settings of a number of listed buildings in their immediate and wider historic landscape setting. These settings have not changed significantly since their foundation.

Since there are now 3 potential wind farms within a 10km radius in the identified historic context then perhaps the cumulative impact consideration has more weight.

Mitigation and positive benefits from such development for the community should be considered in the event of another wind farm development.

As windmills were used to drain the Dengie for land reclamation, a science based visitor centre could educate and interpret such development where the power of the wind has been harnessed for different reasons. Also the archaeology of the location could be investigated and interpreted as there are clear links between the former marshland and the Iron Age Camp at Asheldham and the Fort at Othona. The natural landscape inspired the duck decoy ponds (Scheduled Monuments) of 18<sup>th</sup>/19<sup>th</sup> century origin to trap wildfowl on a large scale that supported the economy and supplied the London Markets with food and feathers (for eiderdowns). This in turn could support tourism in the District.

### Environmental Health

Having reviewed the relevant matters in the Turncole Windfarm Environmental Statement Environment Health have the following comments to make:

## Hydrological Assessment

Much of this in particularly flood risk will need a consultation response by the Environment Agency.

Environmental Health's main concerns are the protection of private water supplies in the vicinity. The greatest risks to these are during the construction and decommissioning phases. The assessment appears very comprehensive with particular reference to the associated risks and in accordance with IEMA (Institute for Environmental Management and Assessment) guidelines.

Therefore conditions will need to be drafted based on the mitigation measures stated in tables 8.8, 8.9, 8.10 of the ES to prevent blockage and diversion of flow, prevention of turbidity and contamination and also to include monitoring and evaluation as stated in table 8.12 during and after these phases.

There does however need to be a statement relating to a response should the mitigation mechanisms fail.

## Acoustic Assessment

Initially the assessment identifies 8 properties that do not pass the noise criteria given by ETSU of 35 dB(A) at a windspeed of 8 m/s. However the full acoustic assessment show that despite the wind turbine noise exceeding the background levels at low wind speeds the location falls within the ETSU criteria.

Although accepted in PPS22 as the standard that should be used the ETSU-R-97 criteria was derived in 1996 and is subject to much controversy, not only due to its age that a number of other studies conducted since, but also that the standard suggests a higher noise limit at night (43 dB(A) than that of the day time (35-40 dB(A)). This is unlike any other noise standard which requires the opposite. The reason given is that the external amenity is more sensitive during the day whereas the levels of noise generated at night are likely to be attenuated by the structure of a dwelling such that it would not disturb sleep.

Whilst this may hold in some areas the background noise measured in the baseline assessment is as low as 17dB(A) at night, some 26dB(A) below the noise limit in ETSU. This is a significant impact especially as the ear is perceptible to changes in 3dB and a change in 10 dB represents an effective doubling of the loudness of sound.

Although ETSU still remains the guiding principles of the Noise Policy Statement for England 2010 (NPSE). Therefore the assessment should ensure that the criteria used to assess compliance should be evaluated alongside NPSE's significant observed adverse effect level (SOAEL). SAOEL is the significant observed adverse affect level referred to in the Noise Police Statement for England 2010. There is no generally defined SOAEL as it is acknowledged that this differs for different sources in different locations.

Therefore the applicant must make reference to this to ensure that the principles of NPSE are met.

The assessment, in paragraph 9.18.3 of the ES, states that “the government does not consider there will be a compelling case for further work into AM and will not carry out any research at this time”. However the report that this quote is taken from also states that “since AM cannot be fully predicted at present, and its causes are not fully understood we consider that it might be prudent to carry out further research to improve understanding in this area”. As this is a complex area of acoustics it is recommended that MDC employ the services of an environmental consultant to review the data provided in the acoustic assessment including a review of amplitude modulation (AM).

With regards to the construction and decommissioning phase previous permissions for such works have recommended the condition:

- Noise levels arising from construction works shall not exceed 55 dB  $L_{Aeq,15}$  mins (free-field) at the boundary of any residential premises.

This may appear to be quite stringent for construction site noise as the limit would be measured over a 12 hour. However it should be stated 55 db(A) is still in excess, in some cases, of 30 dB(A) above the background levels within proposed construction hours. Therefore a condition should also be applied to install noise mitigation measures such as bunds and barriers.

Following consideration of the noise consultant’s report Environment Health share the concerns in that the data suggests that there will a significant adverse affect on residents in the locality as predicted noise levels will be as high as 12 dB above the background levels at several properties at low windspeeds. This is during the nighttime. As such these adverse affects if realised may provide a significant observable adverse effect level (SOAEL) as defined by the Noise Policy Statement for England 2010 (NPSE).

The aims of the Noise Policy Statement for England 2010 are as follows:

The first aim of the Noise Policy Statement for England

*Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.*

The second aim of the Noise Policy Statement for England

*Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.*

The third aim of the Noise Policy Statement for England

*Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.*

Due to the nature of the development it appears that it will be impossible to reduce the predicted impact through conditions. In any other type of application Environmental Health would consider that the application is unsuitable for use.

The methodology in ETSU-R-97 rates the balance between loss of individual amenity and the wider need for renewable energy. It would appear therefore to hinge on whether the council can reconcile the ETSU balancing ethos and the Noise Policy Statement for England to avoid significant adverse impacts. It may also be considered that the proximity of the permitted Middlewick Wind Farm is enough to satisfy the “greater-good” ETSU test without the need for having to additional windfarm in the locality? The problem seems that objectors and detractors can select excerpts from the policies to suite.

Environment Health are therefore concerned about the significant margin above background noise level and would welcome a comment from the applicant on this. However at the very least in the event of permission being granted would want ETSU lower level daytime limit of 36 dB applied.

### **Tree Officer**

The part of this route that concerns me the most is the stretch from the junction of Burnham Road and Endway, through to the end of Old Heath Road. There are no specific details of what amendments will be needed to the road, but this is one of the district's attractive leafy lanes with several veteran trees along it. Most of the trees are in private ownership, and whilst some works would be acceptable, substantial works or tree removals would alter the character of this well used road. The canopy cover on both sides almost meets in the middle of the road in places and it is a very attractive stretch of road. The junction with Dairy Farm Road is particularly attractive and somewhat bendy. A large section of this lane is single carriageway, this is through the more heavily tree'd section. Amendments to the road to accommodate the development traffic for the wind farm may well change the whole character of this lane for ever. Can the possibility of transporting equipment by water be explored?

### **Emergency Planner**

Confirms that having inspected the application the Emergency Planner is satisfied that arrangements are included to warn staff involved in the construction and on going maintenance of the wind farm of the risks associated with flooding. Therefore have no further comments upon this application.

**River Baliff** – No response.

## **6. Letters of Representation**

Letters of objection: (*Approximate Numbers: 470*).

Great West Wycke Farmhouse Marsh Road Burnham-On-Crouch  
Vic Scott 2 Bull Close Southminster Essex  
Victoria Duce 12 Riverside Road Burnham-On-Crouch Essex  
Mr D O Duce 12 Riverside Road Burnham-On-Crouch Essex  
John Holland 22 Bouvel Drive Burnham-On-Crouch Essex  
Gordon Clarke 20 Church Road Burnham-On-Crouch Essex  
Bill Hollis White House Manor New Hall Lane Mundon  
Mrs YP Hall 17 Silver Road Burnham-On-Crouch Essex  
Mrs JL Cooper River View Cottage Brabant Road North Fambridge

Mr KP Cooper River View Cottage Brabant Road North Fambridge  
Marc Taylor London Southend Airport Co. Ltd. Southend Airport Southend On Sea  
Mrs S Bowen Newmans Farm House Marsh Road Burnham-On-Crouch  
A J Bowen Newmans Farm House Marsh Road Burnham-On-Crouch  
Harry Titcombe 9 Deveron Way Rise Park Romford  
Hilary & Richard Barends Glebe Farm Glebe Lane Dengie  
E P Dicker Landwick Farm Landwick Lane Dengie  
Geoffrey Cousins 16 Homefield Southminster Essex  
Mrs Jacqui Cousins 16 Homefield Southminster Essex  
Colin Smith 13 The Cobbins Burnham-On-Crouch Essex  
Mrs K Bills 28 Arcadia Road Burnham-On-Crouch Essex  
Mr J Bills 28 Arcadia Road Burnham-On-Crouch Essex  
A Dietz 11 Vicarage Meadow Southminster Essex  
Margaret Loft Ard Chroille 11 Burnham Road Southminster  
Mrs I F Beck 25 Station Road Southminster Essex  
V M Freshwater 3 Robinsons Close Southminster Essex  
Mr Peter J Sidgwick 9 Marlborough Avenue Tillingham Southminster  
Mrs J Shaw Maple Villa The Chase Southminster  
Lynn Woodard 11 North End Southminster Essex  
Derek Organ Trumlins The Chase Southminster  
Dr C R Nutt Bridge House 13 Church Road Burnham-On-Crouch  
A Downs 47 Queen Street Southminster Essex  
H Dawson 11 St Peters Field Burnham-On-Crouch Essex  
Chris Dawson 11 St Peters Field Burnham-On-Crouch Essex  
R A Norden 35 Station Road Burnham-On-Crouch Essex  
Michelle Sampson 64 Lavender Drive Southminster Essex  
Sheila Nutt Bridge House 13 Church Road Burnham-On-Crouch  
Mr D & Mrs K J I Lagden 45 Beauchamps Burnham-On-Crouch Essex  
Luis Grilo 15 North End Southminster Essex  
Harden Family 39 Beauchamps Burnham-On-Crouch Essex  
Mr & Mrs R Howes 26 Bouvel Drive Burnham-On-Crouch Essex  
Mrs C Higgins 27 North End Southminster Essex  
C Bartlett 9 Dukes Avenue Southminster Essex  
David Tasker 46 Queen Street Southminster Essex  
Mr J Glover 27 Bate Dudley Drive Bradwell-On-Sea Southminster  
Mr A L V Gooch 11 Kings Croft Southminster Essex  
J Thorneycroft 2 Kings Place Southminster Essex  
K J Brice 4 Crown Way Southminster Essex  
Mr C H Lambert Smugglers Rest Wonston Road Southminster  
T M Duffy Glenlore 2 Kings Road Southminster  
P, G P & B A Hines 2 Devonshire Road Southminster Essex  
Ms MJ Nichols 18 Coronation Road Burnham-On-Crouch Essex  
T Jones 19 Ash Grove Burnham-On-Crouch Essex  
W Jones Maplins 3 Maplins Garden Burnham-On-Crouch  
M Taylor 141 Station Road Burnham-On-Crouch Essex  
C Ashwell 22 Congreve Road Waltham Abbey EW9 1TL  
R Low 31 Alamein Road Burnham-On-Crouch Essex  
PA Varnes 26 Petticrow Quays Belvedere Road Burnham-On-Crouch  
K Lyndoe 26 Petticrow Quays Belvedere Road Burnham-On-Crouch  
Tracey Thornton 142 Holst Avenue Witham Essex  
Donna Leigh Kelleher 71 Chapel Road Burnham-On-Crouch Essex

Louise Brooks 2 Bishops Court Great Totham Road Wickham Bishops  
VA Meider 97 Tattersalls Chase Southminster Essex  
Rose Williams Flat 3 St Marys House High Street  
Gary Bigland 9 Van Diemens Road Chelmsford Essex  
Philip Bowman 54 Princes Road Burnham-On-Crouch Essex  
J Wright The Laurels 54 Princes Road Burnham-On-Crouch  
BH Oulds 26 Pippins Road Burnham-On-Crouch Essex  
S Baumber 95 Maldon Road Burnham-On-Crouch Essex  
P E & B Plumb 18 West House Estate Southminster Essex  
Sue Warren Corner Cottage The Quay Burnham-On-Crouch  
Linda Carter 166B Station Road Burnham-On-Crouch Essex  
Owen Ivor Pugh 12 Maldon Road Burnham-On-Crouch Essex  
Maisie Hill 124 Nipsells Chase Mayland Chelmsford  
G Ferguson Badnocks Farm Badnocks Chase Asheldham  
C I & N L Field Coney Hall Cottages Marsh Road Burnham-On-Crouch  
J Courtier 47 Glebe Way Burnham-On-Crouch Essex  
Mrs Philistia Marshall The Denery Scarletts St Lawrence  
J Hearne 16 The Leas Burnham-On-Crouch Essex  
Anthea Balmford Timbercot Waterside Road Bradwell-On-Sea  
Carol Milton 102 Maple Way Burnham-On-Crouch Essex  
Lynne Findlay Wellington Lodge Kings Road Southminster  
Mr B K Milton 102 Maple Way Burnham-On-Crouch Essex  
J Phillips 4 St Thomas Row Eastend Road Bradwell-On-Sea  
P N Burton 11 Ash Grove Burnham-On-Crouch Essex  
Mr J Crossland 47 Glebe Way Burnham-On-Crouch Essex  
Valerie 1 Glebe Way Burnham-On-Crouch Essex  
Sheila Barbara Austin 61 Winstree Road Burnham-On-Crouch Essex  
Martin Skiggs 21 High Street Southminster Essex  
Karen Skiggs 21 High Street Southminster Essex  
Raymond Hart 4 Rose Drive Southminster Essex  
Mrs S H Dodds 17 Vicarage Meadow Southminster Essex  
Mr M J Dodds 17 Vicarage Meadow Southminster Essex  
R & E Harvey Wills Cottage 2 Marlborough Avenue Tillingham  
Brian & Barbara Navin 7 Cripplegate Southminster Essex  
Terence McEvoy Hyfryd Lle Burnham Road Althorne  
P Crossland 47 Glebe Way Burnham-On-Crouch Essex  
Teresa Sanders Marsh View 66 Dunkirk Road Burnham-On-Crouch  
Nigel R C Newbury 13 Queen Street Southminster Essex  
B J Pegley 44 Buttercup Way Southminster Essex  
R A Francis Egypt Cottage 2 Winstree Road Burnham-On-Crouch  
J Whybro 15 Glebe Way Burnham-On-Crouch Essex  
J W Smith 26 Beauchamps Burnham-On-Crouch Essex  
S M A Russ The Old School House Southminster Road Mayland  
Mrs J Russ The Old School House Southminster Road Mayland  
D Marshall 12 Primrose Walk Southminster Essex  
Mrs D Hocken 18 Tiptree Grove Wickmeadows Wickford  
Mr K Hocken 18 Tiptree Grove Wickford Essex  
Heather Trundle Ringwood Southminster Road Burnham-On-Crouch  
Ian & Julia Foxwell 1 Roman Way Burnham-On-Crouch Essex  
Christine Payne 8 The Cobbins Burnham-On-Crouch Essex  
Dorothy & Harry Snary 25 The Cobbins Burnham-On-Crouch Essex

M Dukelow & D Carlin 51 The Leas Burnham-On-Crouch Essex  
 M Row Montsale Bungalow The Marshes Southminster  
 Mr Neil Yates Teal Croft Marsh Road Tillingham  
 Douglas Potter 21 Kings Court Kings Road Burnham-On-Crouch  
 Debbie Poynter 4 Eastwick Cottages Marsh Road Burnham On Crouch  
 Ann Barrett Bradwell Hall Lodge Maldon Road Bradwell-On-Sea  
 M Tucker High House 36 Green Lane Burnham-On-Crouch  
 Mike Tolhurst The Hollies Stoney Hills Burnham-On-Crouch  
 Mr & Mrs Sampson 64 Lavender Drive Southminster Essex  
 SJ Thorogood SIEGE PO BOX 9102 Southminster  
 Louise Cubberley 6 Rose Drive Southminster Essex  
 J Cowell Freshfields Steeple Road Southminster  
 Dennis Williams The Old Vicarage Vicarage Court Southminster  
 Georgina Williams The Old Vicarage Vicarage Court Southminster  
 Mrs C M Young Peacocks House The Street Woodham Ferrers  
 Mrs S Ward 67 Hutton Village Hutton Brentwood  
 Mr H F M Ward 67 Hutton Village Hutton Brentwood  
 T Lovegrove Kandymal Wyatts Green Road Brentwood  
 Mr S Richards 21 Vicarage Meadow Southminster Essex  
 Mrs C Cooch Sheepcotes Farm Sheepcotes Lane Southminster  
 R M Morris 25 Vicarage Meadow Southminster Essex  
 Pam Morris 25 Vicarage Meadow Southminster Essex  
 Sally Cooch 19 Vicarage Meadow Southminster Essex  
 V Sande 19 Vicarage Meadow Southminster Essex  
 Mrs J Richards 21 Vicarage Meadow Southminster Essex  
 Sue Lovegrove Kandymal Wyatts Green Road Brentwood  
 Matt Thirkle 8 Vicarage Court Southminster Essex  
 Mr J Camilleri 8 Vicarage Court Southminster Essex  
 Mrs P Camilleri 8 Vicarage Court Southminster Essex  
 Mrs M Thirkle 8 Vicarage Court Southminster Essex  
 Mr L N Thirkle 8 Vicarage Court Southminster Essex  
 April Neal 6 Vicarage Court Southminster Essex  
 Mrs L McCartney 2 Hill View Close Southminster Essex  
 R McCartney 2 Hill View Close Southminster Essex  
 Mr D Ransom 14A Pantile Hill Southminster Essex  
 Mrs J Ransom 14A Pantile Hill Southminster Essex  
 Mr J Dryden 7 Vicarage Court Southminster Essex  
 A R Bennett Little Acres Scotts Hill Southminster  
 T Manser 2 Worcester Close Mayland Chelmsford  
 D Chinnick 50 Stifford Clays Road Grays Essex  
 T G Nibbs Global House 20 Eastern Road Romford  
 Linda Knight 26 Bramwoods Road Chelmsford Essex  
 Linda Clements 49 Birch Lane Stock Ingatstone  
 S Green 70 Spurgate Hutton Brentwood  
 Sharon Ball 21 Wistaria Close Pilgrims Hatch Brentwood  
 J Kippin 35 Pulpits Close Hockley Essex  
 A D Cook 31 St Andrews Road Boreham Chelmsford  
 Miss S Dryden 20 Congreve Road Waltham Abbey Essex  
 E Franklin 26 Robertson Drive Wickford Essex  
 Mr T Lamb 25 Honey Brook Waltham Abbey Essex  
 Mr & Mrs Mason Barn Mead Ashlyns Lane Bobbingworth

L Lewis Crouch View Fambridge Road Althorne  
 Ian D & Nancy J Crisp 2 Fernlea Road Burnham-On-Crouch Essex  
 Mrs Evans 37 Glendale Road Burnham-On-Crouch Essex  
 R Cutts 1 Redward Cottages Marsh Road Burnham-On-Crouch  
 D Cutts 1 Redward Cottages Marsh Road Burnham-On-Crouch  
 Pauline Hallanzy 1B Glebe Way Burnham-On-Crouch Essex  
 Mr & Mrs M Matthews Carmarlin York Road Burnham-On-Crouch  
 Mrs E Armstead & Mr R Lymer 1 Mill Grange Burnham-On-Crouch Essex  
 B Griffiths 1 The Cobbins Burnham-On-Crouch Essex  
 Mrs P G Hibbard 63 Roundhills Waltham Abbey Essex  
 Sue Timcke Wing Cottage 48 Queen Street Southminster  
 J & E C Risle 28 The Cobbins Burnham-On-Crouch Essex  
 B J Stables 20 The Cobbins Burnham-On-Crouch Essex  
 Mrs A M Jones 3 The Cobbins Burnham-On-Crouch Essex  
 Gwendoline Strickson 13 East Ham Crescent Brentwood Essex  
 T J Hibbard 5 Parkfields Roydon Essex  
 Mrs Ruth Bridge 12 Glendale Road Burnham-On-Crouch Essex  
 Derek Allen 11 Pinnars Close Burnham-On-Crouch Essex  
 Vivienne Allen 11 Pinnars Close Burnham-On-Crouch Essex  
 Patricia Pye Sunnyhill 7 Oakwood Court Althorne  
 Mrs N Thrope 2 Marsh Road Burnham-On-Crouch Essex  
 Glenn Hackney 1 Glebe Way Burnham-On-Crouch Essex  
 Mr G Morkham 4 Badgers Keep Burnham-On-Crouch Essex  
 Dr Patricia Bowton 5 Compass Gardens Burnham-On-Crouch Essex  
 Hazel Hart 11 East End Road Bradwell-On-Sea Southminster  
 A K Hart 4 Sheepcotes Lane Southminster Essex  
 Patricia Hart 4 Sheepcotes Lane Southminster Essex  
 J F & Myra Travers Cherry House Station Road Southminster  
 Mick Cumming 44 Lavender Drive Southminster Essex  
 Mrs J York 1 Crown Way Southminster Essex  
 M E Pinch Wheatfield 1 Church Road Burnham-On-Crouch  
 Victoria Hobday 7 Kings Road Southminster Essex  
 Christina Vaughan 36 Kings Road Southminster Essex  
 M Fitch High View Lodge Old Heath Road Althorne  
 Marjorie Pooley Stonegate Southminster Road Burnham-On-Crouch  
 Anne Young 7 Badgers Keep Burnham-On-Crouch Essex  
 Ruth Van Schagen 43 Beauchamps Burnham-On-Crouch Essex  
 P M Lewis Hollybrook Hall Old Heath Road Southminster  
 Brian G A Rawlings 10 Barnmead Way Burnham-On-Crouch Essex  
 Catherine Newcombe Chantilly North Street Tillingham  
 Roger And Hilary Allen Holliwell Farmhouse Marsh Road Burnham-On-Crouch  
 John And Niobe Finn Burnham Hall Southminster Road Burnham-On-Crouch  
 Terence M. McEvoy Hyfryd Lle Burnham Road Althorne  
 J Nordon 35 Station Road Burnham-On-Crouch Essex  
 Mr PB Whiting West Glen Southminster Road Burnham-On-Crouch  
 A Onslow 1 New Moor Cottages Northwycke Southminster  
 Mr AR Horner 1 West Ley Burnham-On-Crouch Essex  
 Mr & Mrs P.O Duce 85 Station Road Burnham-On-Crouch Essex  
 Michael & Ann Moerel Longshore York Road Burnham-On-Crouch  
 Mr & Mrs Bentley 55 New Moor Crescent Southminster Essex  
 Zoe Bridges 2 D'Arcy Close Burnham-On-Crouch Essex

Philip Bridges 2 D'Arcy Close Burnham-On-Crouch Essex  
Mrs Christine Dobby 1 Mayland Hill Cottages Mayland Hill Mayland  
RJ & PA Barrett Hillcrest House Stoney Hills Burnham-On-Crouch  
Stephen Jennings 21 Mill Road Burnham-On-Crouch Essex  
David Rozzee 5 Cobbins Grove Burnham-On-Crouch Essex  
Robert Innes 8 Rose Drive Southminster Essex  
Mr PB Whiting West Glen Southminster Road Burnham-On-Crouch  
Derek & Vivienne Allen 11 Pinnars Close Burnham-On-Crouch Essex  
Chairman Of Seige Pip Thorogood Northwycke Farm Northwycke Southminster  
Peter Giles Littlemead 1 Marsh Road Burnham-On-Crouch  
Irene Prentice 12 Regents Court Kings Road Burnham-On-Crouch  
J Prentice 12 Regents Court Kings Road Burnham-On-Crouch  
Mrs Mary Hyde 84 Dunkirk Road Burnham-On-Crouch Essex  
RC Hyde 84 Dunkirk Road Burnham-On-Crouch Essex  
Mrs Kay Mattison Belvedere House Belvedere Road Burnham-On-Crouch  
Roger Stringer 6 Albert Road Burnham-On-Crouch Essex  
G & JS Wallis 2 Sheepcotes Lane Southminster Essex  
Mr JR Deacon 7 Hermes Drive Burnham-On-Crouch Essex  
Marion Glaze 19 Kings Farm Meadow Tillingham Southminster  
Dianne Dibben 38 Kings Road Southminster Essex  
Janet Josephine Brickwood 7 Primrose Walk Southminster Essex  
PD Dodd 19 Lytton Road Heath Park Romford  
J Andrews 5 Witney Road Burnham-On-Crouch Essex  
R Evans 12 Bouvel Drive Burnham-On-Crouch Essex  
D A W Cornwall 17 Woodside Southminster Essex  
S Andrews 5 Witney Road Burnham-On-Crouch Essex  
D Kench 19 St Marys Road Burnham-On-Crouch Essex  
A Connor Sunnybanks Sandpit Lane Burnham-On-Crouch  
G C Baker 2 The Brambles Southminster Essex  
J Baker 2 The Brambles Southminster Essex  
A R Heel 33 High Street Burnham-On-Crouch Essex  
Mr M Coulson 43 Woodside Southminster Essex  
J Champion 3 Queen Street Southminster Essex  
A R Sutherby 22 Queen Street Southminster Essex  
E Bowser 14 Devonshire Road Southminster Essex  
N & A Smith 23 Primrose Walk Southminster Essex  
Gary Baker Andora 65 Latchingdon Road Cold Norton  
Barry Chapman Fairview Stoney Hills Burnham-On-Crouch  
Thomas Chapman Fairview Stoney Hills Burnham-On-Crouch  
Bob Calver 27 Fernlea Road Burnham-On-Crouch Essex  
Mrs Jane Burgess 25 Mill Road Burnham-On-Crouch Essex  
D. G. Palmer 27 Station Road Tiptree Colchester  
Alan Victor Lake 16 Chelmer Way Burnham-On-Crouch Essex  
J Hughes 7 Bouvel Drive Burnham-On-Crouch Essex  
Paula Holt 21 Pantile Hill Southminster Essex  
TL Jones 17 Winstree Road Burnham-On-Crouch Essex  
CJ Petrie The Limes 42 Crouch Road Burnham-On-Crouch  
Mrs P Allbush Adrar Cottage 9A Station Road Southminster  
Lindsay Mills 4 Wick Farm Road St Lawrence Southminster  
EB Moore 3 Charlotte Way Witham Essex  
JB White Melita York Road Burnham-On-Crouch

Steven White 32 Western Road Burnham-On-Crouch Essex  
 J Wilkes Lilac Trees 5 Marsh Road Burnham-On-Crouch  
 Jill Wilkes Lilac Trees 5 Marsh Road Burnham-On-Crouch  
 G Wiggins 5 Smyatts Close Southminster Essex  
 John Mecoy 16 Lilian Road Burnham-On-Crouch Essex  
 Grace White White Gables 6 Marsh Road Burnham-On-Crouch  
 HM More 3 Charlotte Way Witham Essex  
 M Down 18 Church Road Burnham-On-Crouch Essex  
 John Down 18 Church Road Burnham-On-Crouch Essex  
 B Thomas Court Farm House Bridge Wick Lane Dengie  
 Mrs C M Cullen West Wick Bungalow Marsh Road Burnham-On-Crouch  
 John Saunders 6 Leslie Park Burnham-On-Crouch Essex  
 T J Pankhurst 30 Kings Road Southminster Essex  
 J A Yates Teal Croft Marsh Road Tillingham  
 B D Johnson 4 Kings Place Southminster Essex  
 J Oyler Ratsborough Farm Burnham Road Southminster  
 R B Owen 22 Lavender Drive Southminster Essex  
 Peter Anderson 57 Lavender Drive Southminster Essex  
 Claire Prior 27 King Edward Avenue Burnham-On-Crouch Essex  
 Connie Prior 27 King Edward Avenue Burnham-On-Crouch Essex  
 Kimberley Prior 27 King Edward Avenue Burnham-On-Crouch Essex  
 Mr Robin Prior 27 King Edward Avenue Burnham-On-Crouch Essex  
 G Knott & S Davis-Knott 53 Buttercup Way Southminster Essex  
 A Young 7 Badgers Keep Burnham-On-Crouch Essex  
 Anthony A R Pluckrose 43 South Street Tillingham Southminster  
 Anne E Pluckrose 43 South Street Tillingham Southminster  
 Miss Jean Thorogood Primley Lodge Grange Road Tillingham  
 Valerie Sutton 4 Cobbins Chase Burnham-On-Crouch Essex  
 E W Stephenson 1 Englefields Tillingham Southminster  
 Mark West 6 Sunnymead Flats Orchard Road Burnham-On-Crouch  
 J Whiterod 109 Leslie Park Burnham-On-Crouch Essex  
 Les Talbot Byways York Road Burnham-On-Crouch  
 J Morton 1 Witney Road Burnham-On-Crouch Essex  
 A Gray 10A South Street Tillingham Southminster  
 Eddie Clay 74 High Street Burnham-On-Crouch Essex  
 R Brown 46 Crouch Road Burnham-On-Crouch Essex  
 D Fudge 15 Coombe Road Southminster Essex  
 N Gullen 4 Glendale Road Burnham-On-Crouch Essex  
 E Goodwin 3 Woodside Southminster Essex  
 Mr E Iffland 7 Woodside Southminster Essex  
 Mr & Mrs G Littlechild 5 Station Cottages Hall Road Southminster  
 David Stevens 33 Lavender Drive Southminster Essex  
 Mr Geoffrey Owen Caedmon Southminster Road Burnham-On-Crouch  
 Ms Karen Waygood Caedmon Southminster Road Burnham-On-Crouch  
 A J North 37 Hillside Road Burnham Essex  
 Mr P J Sutton Southminster House 5 Kings Road Southminster  
 Stephen Greene 25 Lavender Drive Southminster Essex  
 Carol Cashmore 26 Falklands Road Burnham-On-Crouch Essex  
 J G Box 34 Worcester Road Burnham-On-Crouch Essex  
 R Bryant The Manse Brook Road Tillingham  
 Bryony Bibby 48 Crown Way Southminster Essex

Christine Giles Littlemead 1 Marsh Road Burnham-On-Crouch  
 I Cuberley 6 Rose Drive Southminster Essex  
 B Kentish 11 Buttercup Way Southminster Essex  
 M Stevens Rose Inn Burnham Road Southminster  
 Diane Duval 1 Ratsborough Chase Southminster Essex  
 Paul Potten 7 Pantile Court Pantile Hill Southminster  
 B Jayasekara Elm Farmhouse Maldon Road Burnham-On-Crouch  
 Sam Bundy 50 Stifford Clays Road Grays Essex  
 Keith Jayasekara 2 Smyatts Close Southminster Essex  
 Paul Foley 60 Cherry Orchard Southminster Essex  
 J Foley 60 Cherry Orchard Southminster Essex  
 Sharren Hanley 23 Queen Street Southminster Essex  
 Mrs S Royce Bssk North End Southminster  
 Jamey Royce Bssk North End Southminster  
 L C Richards 21 Vicarage Meadow Southminster Essex  
 Mrs L J Dryden 7 Vicarage Court Southminster Essex  
 Mr J Ward 5 Vicarage Court Southminster Essex  
 Mrs D Ward 5 Vicarage Court Southminster Essex  
 Alan Hibbard 6 Vicarage Court Southminster Essex  
 J Cubbon 37 Mill Road Burnham-On-Crouch Essex  
 Alexander Neal 6 Vicarage Court Southminster Essex  
 Vivien Neal-Hibbard 6 Vicarage Court Southminster Essex  
 C Swallow Nairobi Old Heath Road Southminster  
 Ms Susan Powl Clearview The Endway Althorne  
 S J Longson 46 Beauchamps Burnham-On-Crouch Essex  
 J Savage 28 Church Road Burnham-On-Crouch Essex  
 Stephen Cooper 18 Devonshire Road Southminster Essex  
 Fenner Family 6 The Endway Althorne Chelmsford  
 Patricia Wood 5 Roman Way Burnham-On-Crouch Essex  
 M J McClellan 1 Red Brick Cottages The Endway Althorne  
 M Yardley 9 Oakley Close Chingford London  
 The Occupier 9 Oakley Close Chingford London  
 P Yardley 17 Sunny Way St Lawrence Southminster  
 D Yardley 17 Sunny Way St Lawrence Southminster  
 B Stephens 17 Sunny Way St Lawrence Southminster  
 V Yardley 9 Oakley Close Chingford London  
 The Occupier 36 Bryant Link Chelmsford Essex  
 The Occupier 385 High Street Stratford London  
 Harold Spanton 2 Bushy Avenue South Woodford Essex  
 M Spanton 2 Bushy Avenue South Woodford Essex  
 Barbara Turner 6 Hermes Drive Burnham-On-Crouch Essex  
 Carole Tookey 21 Kings Croft Southminster Essex  
 Sally Browne Orchardside Scotts Hill Southminster  
 Emily Lovell 28 Hillside Road Southminster Essex  
 Mr K McClean 165 The Maples Harlow Essex  
 Eileen Hopcraft 46 Maple Way Burnham-On-Crouch Essex  
 Helen Fisher Bridgewick Farm Bridgewick Road Dengie  
 Brian Neal The Bungalow 12 Pantile Hill Southminster  
 Mrs C Lake 16 Chelmer Way Burnham-On-Crouch Essex  
 A McCracken 11 Primrose Walk Southminster Essex  
 R M Longson 46 Beauchamps Burnham-On-Crouch Essex

D Willsmer-Dean 15 Lavender Drive Southminster Essex  
 SJ Thorogood Northwycke Cottages Northwycke Southminster  
 Mrs A T Wodhams 1 Northwycke Cottages Northwycke Southminster  
 G A Wodhams 1 Northwycke Cottages Northwycke Southminster  
 Mr IM Milligan 1 Bate Dudley Drive Bradwell-On-Sea Southminster  
 Mr Michael Peach 40 Church Road Burnham-On-Crouch Essex  
 E Cutts 1 Redward Cottages Marsh Road Burnham-On-Crouch  
 P Glover 27 Station Road Southminster Essex  
 Kathleen Carnell 25 Primrose Walk Southminster Essex  
 Y K Maher 142 Station Road Burnham-On-Crouch Essex  
 J A J Churchill 16 Lavender Drive Southminster Essex  
 T Allgood 49 Buttercup Way Southminster Essex  
 David Allgood 49 Buttercup Way Southminster Essex  
 M & N Mills 4 Robinsons Close Southminster Essex  
 Sheila Nicholson Wycliffe 12 Kings Road Southminster  
 Priors Boatyard Quayside The Quay Burnham-On-Crouch  
 Honor McFarlane Hidden Cottage 69 High Street Burnham-On-Crouch  
 Peter McFarlane Hidden Cottage 69 High Street Burnham-On-Crouch  
 John Body 21 Cherry Orchard Southminster Essex  
 Jacqueline Body 21 Cherry Orchard Southminster Essex  
 D A Newcombe Fairview 8 Kings Road Southminster  
 Vincent Lomas Canterbells 10 Queen Street Southminster  
 Mr Alan Fieldman 15 Homefield Southminster Essex  
 Carol & John Lione 14 Pantile Hill Southminster Essex  
 Steven Sharpe 17 Lavender Drive Southminster Essex  
 Denise Heriot 5 Primrose Walk Southminster Essex  
 PC Devono 23 The Cobbins Burnham-On-Crouch Essex  
 J Devono 23 The Cobbins Burnham-On-Crouch Essex  
 Mary Hart 4 Rose Drive Southminster Essex  
 Dianne Innes 8 Rose Drive Southminster Essex  
 S A Lucy 5 Vicarage Meadow Southminster Essex  
 L Winters 23 Woodside Southminster Essex  
 Mr & Mrs G Rouse Yale Cottage 38 Mill Road Burnham-On-Crouch  
 Annette Sandford 34 New Moor Crescent Southminster Essex  
 Duncan Kay 21 Cripplegate Southminster Essex  
 Maureen Kay 21 Cripplegate Southminster Essex  
 Terry & Hazel Carter 10 New Moor Close Southminster Essex  
 Joy A Smith 5 Coombe Road Southminster Essex  
 Mr & Mrs Hayward 28 New Moor Crescent Southminster Essex  
 M Georgiou 48 New Moor Crescent Southminster Essex  
 Daphne Munson 30 Queenborough Road Southminster Essex  
 L & J Hill 8B North End Southminster Essex  
 J Swankie Homestead Southminster Road Burnham-On-Crouch  
 D C Neale 12 Sheepcotes Lane Southminster Essex  
 Maureen Jeffery 5 Orchard Close Southminster Essex  
 George T Jeffery 5 Orchard Close Southminster Essex  
 DW Terry 43 Maple Way Burnham-On-Crouch Essex  
 C Champion 16 Devonshire Road Burnham-On-Crouch Essex  
 ML Young 58 Orford Crescebnt Springfield Chelmsford  
 L Tomlinson 11 Mayne Crescent Springfield Chelmsford  
 J Robson 89 Burnham Road Hullbridge Essex

MA Doggett 121 Station Road Burnham-On-Crouch Essex  
 Mrs J Newby 6 Bower Close Romford Essex  
 Ann Fagg Mistral New Road Burnham-On-Crouch  
 Diane Lystor 47 Chapel Road Burnham-On-Crouch Essex  
 Cristina Franchi 21 Granville Terrace Burnham-On-Crouch Essex  
 Peter Argall 21 Granville Terrace Burnham-On-Crouch Essex  
 Terry Saunders 115 Maldon Road Burnham-On-Crouch Essex  
 Frederick Ayley Wraywick Cottage The Marshes Southminster  
 Kathleen Lee 10 Chandlers Burnham-On-Crouch Essex  
 Mrs Valerie Hatcliff 24 Green Lane Burnham-On-Crouch Essex  
 Heather Halverson 42 Epping Way Witham Essex  
 Lesley More Great West Wycke Farmhouse Marsh Road Burnham-On-Crouch  
 Steven Brock Great West Wycke Farmhouse Marsh Road Burnham-On-Crouch  
 Andrew More 49 Rectory Chase Doddinghurst Brentwood  
 David Onyons 14 Church Street Maldon Essex  
 Thomas Barnard Rhomas Manor Road Dengie  
 M E Bowton 5 Ramblers Way Burnham-On-Crouch Essex  
 Maureen L Cousins 12 Poplar Grove Burnham-On-Crouch Essex  
 James Cousins 12 Poplar Grove Burnham-On-Crouch Essex  
 R Hughes 45 Pippins Road Burnham-On-Crouch Essex  
 J Hughes 45 Pippins Road Burnham-On-Crouch Essex  
 M Thorpe 119 Glendale Road Burnham-On-Crouch Essex  
 Brian Thorpe 119 Glendale Road Burnham-On-Crouch Essex  
 The Occupier 13 Chapel Road Burnham-On-Crouch Essex  
 W Taylor 22 Kings Road Romford RM1 2SS  
 Amanda Saunders 115 Maldon Road Burnham-On-Crouch Essex  
 CA Parrish 6 Coastguard Cottages Mill End Bradwell-On-Sea  
 Kim Varnes Kimberley Franklin Road North Fambridge  
 S Topping The Brambles Bradwell Wick Maldon Road  
 James Brewster 58 Verbena Close South Occendon Essex  
 S Pavett 50 Mowbery Gardens Loughton Essex  
 V Cockett 29A Wickbeech Avenue Wickford Essex  
 P Brown Fieldway Bradwell Wick Maldon Road  
 K Laban 20 Lampits Hill Avenue Corringham SS17 7NY  
 R King 12 King Edward Avenue Burnham-On-Crouch Essex  
 J Faulkner 3 Normandy Avenue Burnham-On-Crouch Essex  
 D Munro 6 Bower Close Romford Essex  
 S Robson Caravan 15 Riverside Caravan Park Canewden  
 J Dover 6 Hester Place Burnham-On-Crouch Essex  
 D Mason 24 Oxley Gardens Stanford Le Hope Essex  
 DW Doggett 121 Station Road Burnham-On-Crouch Essex  
 The Occupier 6 Bower Close Romford Essex  
 V Manning 21 Kings Road Burnham-On-Crouch Essex  
 W Grainger 2 Warwick Court Station Road Burnham-On-Crouch  
 Clive Byford 111 Shrub End Road Colchester Essex  
 Jill Shawking 20 Winstree Road Burnham-On-Crouch Essex  
 Mrs Deacon 48 Orchard Road Burnham-On-Crouch Essex  
 PS Galbraith 9 Warwick Court Station Road Burnham-On-Crouch  
 P Dixon 12 Belvedere Road Burnham-On-Crouch Essex  
 CG Campbell Carbell Lodge Wood Lane Colchester  
 Mrs Berwick Annes Florist 124 Station Road Burnham-On-Crouch

TC Trimby Heathland Frating Road Ardleigh  
Mary Dover 6 Hester Place Burnham-On-Crouch Essex  
Susan Skeens 3 Western Road Burnham-On-Crouch Essex  
E Cannings 38 Pippins Road Burnham-On-Crouch Essex  
BJ Blanks 5 Kilnwood Lane Romford RM4 1PE  
SL Canning 38 Pippins Road Burnham-On-Crouch Essex  
Cocoi Florin 23 Providence Burnham-On-Crouch Essex  
G Campbell Carbell Lodge Wood Lane Fordham Heath  
Graham Starr 16 Providence Burnham-On-Crouch Essex  
David Rickers 26 Maldon Road Burnham-On-Crouch Essex  
Valerie Rickers 26 Maldon Road Burnham-On-Crouch Essex  
L S Goater 4 Pippins Road Burnham-On-Crouch Essex  
M Rudd 3 Pippins Road Burnham-On-Crouch Essex  
Mrs K T Waddams 15 Vicarage Meadow Southminster Essex  
Janet Thorogood Northwycke Cottages Northwycke Southminster  
Jim And Sally Ross 51 Lavender Drive Southminster Essex  
Miss E A Hipgrove 7 Lavender Drive Southminster Essex  
Mr R E Hipgrave 7 Lavender Drive Southminster Essex  
Mrs H A Hipgrave 7 Lavender Drive Southminster Essex  
Mr G R Hipgrave 7 Lavender Drive Southminster Essex  
Stephen King 9 Kings Croft Southminster Essex  
Irene Fleming 10 The Cobbins Burnham-On-Crouch Essex  
Mr David Papineau Riverview Waterside Road Bradwell-On-Sea  
Mr Christopher Cater 7 Oyster Cottages Tinnocks Lane St Lawrence  
R F Hunt 8 Devonshire Road Southminster Essex  
Mrs J A Knight 5 Felix Road Stowupland Stowmarket  
Ms Valerie Baker 65 Latchingdon Road Cold Norton Essex  
Mr Peter Bateman Wraywick Farnhouse Marsh Road Southminster  
Susan Stone 32 Mount Road Benfleet Essex  
VI Brockett Bitch Hunters Cottage Burnham Road Southminster  
John Brockett Bitch Hunters Cottage Burnham Road Southminster  
Michael Moss 19 Fairway Drive Burnham-On-Crouch Essex  
Jane Moss 19 Fairway Drive Burnham-On-Crouch Essex  
Wayne Toussaint 16 Providence Burnham-On-Crouch Essex  
E King 88 Maple Way Burnham-On-Crouch Essex  
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Nick Gordon 20 Princes Road Burnham-On-Crouch Essex  
P Sydney 2A Linden End Haddenham Nr Ely  
W Berwick 124 Station Road Burnham On Crouch Essex  
JA Shrouder 2 Witney Road Burnham-On-Crouch Essex  
A Argent 4 Mildmay Road Burnham-On-Crouch Essex  
Brian Ibell 95 Kings Head Hill Chingford E4 7JG  
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B Hooper 7 West Ley Burnham-On-Crouch Essex  
Mrs J E A Basham 52 Mount Road Benfleet Essex  
Peter Basham 52 Mount Road Benfleet Essex  
Roma Willett 34 Western Road Burnham-On-Crouch Essex  
L A Turner 6 Glebe Way Burnham-On-Crouch Essex  
Lynn & John McHugh 14 Pippins Road Burnham-On-Crouch Essex

The Occupier 36 Bryant Link Chelmsford Essex  
 BJ Prickett 34 Glebe Way Burnham-On-Crouch Essex  
 AF Maples 26 Fairway Drive Burnham-On-Crouch Essex  
 M Robinson 83 Leslie Park Burnham-On-Crouch Essex  
 B Savage 34 Leslie Park Burnham-On-Crouch Essex  
 Frances Savage 34 Leslie Park Burnham-On-Crouch Essex  
 Zoe Wood 29 Queens Road Burnham-On-Crouch Essex  
 Danny Martin 42 East Hanningfield Road Rettendon CVommon Essex  
 J Murray 51 Chapel Road Burnham-On-Crouch Essex  
 Jill Rich 72 High Street Burnham-On-Crouch Essex  
 RW Davidson 3 Caidge Row East End Road Bradwell-On-Sea  
 Harry Ledgerton 26 New Moor Crescent Southminster Essex  
 Janet Ledgerton 26 New Moor Crescent Southminster Essex  
 Samantha Ryan 26 New Moor Crescent Southminster Essex  
 Gordon Baker 2 The Brambles Southminster Essex  
 CB Lund Glenwood 10A Bartlett Close Mayland  
 SV Venables Ferndale Latchingdon Road Cold Norton  
 HJ Dukelow 1 Stokes Hall Cottages Burnham Road Althorne  
 J H Doo 33 Newnham Green Maldon Essex  
 S Curran 28 Queenborough Road Southminster Essex  
 Mr R Smith Ashmore 4 Marsh Road Burnham-On-Crouch  
 S Fulton Tulgey Wood Queenborough Road Southminster

Main reasons for objection:-

- Impact of scale and size (127m) of turbines on the landscape – highly visible
- Detrimental visual impact on character and quality of local landscape, designated as Special Landscape Area
- Blighting the peace and tranquility of the Dengie Marshes
- Industrialisation of green belt
- Contrary to local (BE1, CC6, CC7, PU6 & T2) and government policies
- Adverse impact on wildlife (ecology and conservation) - particularly birds, bats and badgers
- Impact on local flora and fauna
- Safety of local wildlife – particularly migrating birds (especially at Wallasea Island, which is being developed as a habitat or migrating birds)
- The surveys of wintering and migrating birds are out of date – up-to-date surveys should be required
- Cumulative impact with other wind farms on landscape and local residents
- Detrimental impact on living conditions of nearby residents from potential noise and disturbance
- Wind turbines too close to a number of dwellings and the settlement of Southminster
- Impact on visual amenity of local residents
- Impact on local residents caused by flickering affect, and lights on turbines (due to being in Southend Airport flight path)
- Impact on quality of life and health of local residents (particularly children) - sound and infrasound

- Noise data submitted by RES in ES not adequate – projected rather than actual
- Noise will carry over the flat landscape
- Cumulative impact (up to 30 turbines) on health of residents
- Impact on TV, wireless broadband and mobile phones of local residents – (business use and pleasure)
- Potential loss of old trees and hedges for road widening schemes
- Impact on amenity of local residents of construction traffic using local road networks – particularly vibrations, noise and disturbance
- Impact of construction traffic on health of local residents due to dirt, dust, noise and vibrations
- Impact of users of public footpaths and cycle paths in the vicinity
- Impact of HGVs on local road network as is narrow and restricted (e.g. March Road) – safety of pedestrians (particularly children) and other vehicular users of the public highway
- Impact on road network – repairs will be needed to highway
- Developer should be encouraged to use rail and waterways network for the transportation of components
- Impact of construction traffic on public services/ bus routes, emergency services and nearby schools
- Radar interference and technical problems with planes coming into Southend Airport
- Wind energy is unsustainable and unreliable – per unit produced it has a greater carbon footprint than a Nuclear Power Station (e.g. to build and produce a wind farm = very great amount of emissions)
- Wind energy inefficient – operate at an average of below 25% of designated output
- There will be a need to collect electricity at one point for all the farms
- Too many transmission wires needed over the district
- Wind energy is uneconomical means of generation – no compelling evidence produced to suggest otherwise
- Case for continued development of wind farms has not been proven economically, socially or environmentally
- Millions of pounds of taxpayers money has been spent on wind farms but only contribute 1% of electricity we need
- UK legally obliged by EU to meet renewable sources targets (30% by 2020) – no UK wind turbine companies so foreign companies being subsidized by UK taxpayers money
- Wind turbines should be placed off shore and away from residential dwellings
- Future emissions when wind turbines reach end of 25 year life span – decommissioning cost
- Danger/ hazard caused by wind turbines e.g. risk of fire
- Wind turbines should be built off-shore
- Need to research other forms of renewable energy
- Local resistance to proposals – Localism Bill

- Government bending planning rules to push wind turbine schemes through undemocratically
- No benefit to local residents in terms of employment, therefore no economic benefit to the area or UK
- Sum of annual community fund of £25,000 not enough to compensate for financial and amenity loss to the community
- Dengie area is already contributing to its share of energy production through the new nuclear power station at Bradwell – this small area should not be subject to such intense energy production
- Loss of agricultural land
- Breach of local peoples human rights
- Decrease in private property values
- Negative impact on tourism to the area
- MDC must strengthen local plan in order to provide greater resistance to proposals – as other decisions have been overturned by Planning Inspectorate
- Doubts over climate change science

Letters of support: (*Approximate Numbers: 270*)

Anita Church 15 New Road Burnham-On-Crouch Essex  
 Dawn Churchyard 15 New Road Burnham-On-Crouch Essex  
 Paul Cooper 15 Cedar Grove Burnham-On-Crouch Essex  
 Miss G Docwra 3 West Ley Burnham-On-Crouch Essex  
 Ms L Thain 40 Princes Road Burnham-On-Crouch Essex  
 Ann Allen 1 Providence Burnham-On-Crouch Essex  
 E Briggs 9 Princes Road Burnham-On-Crouch Essex  
 Mrs S Ross 68 Lilian Road Burnham-On-Crouch Essex  
 J Leforgeais 11 Hornet Way Burnham-On-Crouch Essex  
 Kelvin Coles 53 Melbourne Avenue Chelmsford Essex  
 Mr & Mrs L J Whent Lonicera Southminster Road Burnham-On-Crouch  
 Sarah Warren 8 Orwell Way Burnham-On-Crouch Essex  
 Martin Whitehead 58 The Leas Burnham-On-Crouch Essex  
 Mrs H Thurlow 23 Eastern Road Burnham-On-Crouch Essex  
 A E Thurlow 23 Eastern Road Burnham-On-Crouch Essex  
 Rev Tony Jones 13 Glebe Way Burnham-On-Crouch Essex  
 Suzanne Brewer 20 Chelmer Way Burnham-On-Crouch Essex  
 Sarah Prendergast 22 Ely Close Southminster Essex  
 Mrs D Elliott 22 Princes Road Burnham-On-Crouch Essex  
 Jane Morris Broomfield Tillingham Road Asheldham  
 Mark Palmer 33 North Street Southminster Essex  
 Victoria Griffiths 47 Maple Way Burnham-On-Crouch Essex  
 C Smith 37 North Street Southminster Essex  
 A Brady 38 Buchanan Way Latchingdon Chelmsford  
 L Kowalczyk 43 Anchorage View St Lawrence Southminster  
 P Yeldham 7 Station Road Southminster Essex  
 Amy Mullan 2 Robinsons Close Southminster Essex  
 Mrs M Clark 2 Spells Close Southminster Essex  
 Sandra Jackson 31 Wick Farm Road St Lawrence Southminster

Miss K Kenzitt 7A North End Southminster Essex  
Tacye Dewick 1 Brook Farm Cottages Bridgewick Road Dengie  
Dawn Morton 31 Crown Way Southminster Essex  
T Samson St Judes 19 Burnham Road Southminster  
Mrs Martin 28 Pumpmead Close Southminster Essex  
B O'Connor 5 Blackwater Close Burnham-On-Crouch Essex  
Michael Lambert 45 New Moor Crescent Southminster Essex  
Colin Barker 107 Tattersalls Chase Southminster Essex  
Aaron Barker 34 North Street Southminster Essex  
Colin Leaper 31 Mill Road Burnham-On-Crouch Essex  
P Stinson 40 Bate Dudley Drive Bradwell-On-Sea Southminster  
Andromeda Kumara 78 Glendale Road Burnham-On-Crouch Essex  
Patti Kyrnza 36 West Ley Burnham-On-Crouch Essex  
Melvin G Rowe-Clark 5A Fernlea Road Burnham-On-Crouch Essex  
Mrs L Grogan 2 Maple Way Burnham-On-Crouch Essex  
Paul Crawley 23 Winstree Road Burnham-On-Crouch Essex  
Claudia Brown 12 Blackwater Close Burnham-On-Crouch Essex  
Sean Griffiths 30 Hillside Road Southminster Essex  
J May 41 Glebe Way Burnham-On-Crouch Essex  
L Van Eeden 5 Glendale Road Burnham-On-Crouch Essex  
L Barker 2 Sunnymead Flats Orchard Road Burnham-On-Crouch  
Ann Hammond Acacia House 80A Maldon Road Burnham-On-Crouch  
L Sadler 18 Poplar Grove Burnham-On-Crouch Essex  
R Dangerfield 13 Chestnut Close Burnham-On-Crouch Essex  
Catherine Dangerfield 13 Chestnut Close Burnham-On-Crouch Essex  
Josie Dines 24 West Ley Burnham-On-Crouch Essex  
C Newcombe The Railway Hotel 12 Station Road Burnham-On-Crouch  
Pauline Allen 3 Writtle Walk Basildon Essex  
Mr R Kahl 47 Winstree Road Burnham-On-Crouch Essex  
Victoria Jackson 14 Petticrow Quays Belvedere Road Burnham-On-Crouch  
L Calver 3 Brook Lane Asheldham Essex  
Brendan Beal 125 Tattersalls Chase Southminster Essex  
Linda Sutherland 5 New Moor Crescent Southminster Essex  
Marc Milton 102 Maple Way Burnham-On-Crouch Essex  
Sheri Warren 29 New Road Burnham-On-Crouch Essex  
S Tisbury 8 Kenilworth Place Basildon Essex  
Tisbury Creeksea Place Caravan Park Ferry Road Burnham-On-Crouch  
Courtney Hedges Glenwood 10A Bartlett Close Mayland  
R F Hammond Acacia House 80A Maldon Road Burnham-On-Crouch  
P Candler 15 The Leas Burnham-On-Crouch Essex  
Julie Forrest 10 North Street Southminster Essex  
Mr R Rutter 16 New Moor Crescent Southminster Essex  
Donna Warman 5 Ascot Mews Southminster Essex  
D Christie 111 Tattersalls Chase Southminster Essex  
Tatiana Seinesone 3 Pantile Court Pantile Hill Southminster  
L K Barclay 5 New Moor Close Southminster Essex  
D Siggers 60 New Moor Crescent Southminster Essex  
C Rowlands 43 Mill Road Burnham-On-Crouch Essex  
S J Marshall 52 Station Road Burnham-On-Crouch Essex  
S Leaper 31 Mill Road Burnham-On-Crouch Essex  
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Mr T Wheeler 28 West Avenue Althorne Chelmsford  
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K J Haynes 27 Cornwall Road Pilgrims Hatch Brentwood  
Brian Scrivener 136 Station Road Burnham-On-Crouch Essex  
Doreen Brand 7 Rose Crescent Clacton On Sea  
Alan Brand 7 Rose Crescent Clacton On Sea  
K Mitchell 17 Worcester Road Burnham-On-Crouch Essex  
Emma Jackson 41 Alamein Road Burnham-On-Crouch Essex  
Danielle Dale 55 The Leas Burnham-On-Crouch Essex  
Glynnis Dye 5 Chapel Road Burnham-On-Crouch Essex  
Mrs A Guntrip 66 Lavender Drive Southminster Essex  
Gene Martin 18 New Moor Crescent Southminster Essex  
T Fairhall 22 Cripplegate Southminster Essex  
Rutter 16 New Moor Crescent Southminster Essex  
Tracie Selfe 33 North Street Southminster Essex  
Mrs M A Farr 32 Anchorage View St Lawrence Southminster  
Mrs G A Rolfe 42 Glebe Way Burnham-On-Crouch Essex  
G A Howard 46 Princes Road Burnham-On-Crouch Essex  
Leda Skeens St Cuthberts 40 Chapel Road Burnham-On-Crouch  
J Forsyth 30 The Street Latchingdon Chelmsford  
Jade Josephine 7 Eastern Road Burnham-On-Crouch Essex  
C Chapman 6 Chestnut Close Burnham-On-Crouch Essex  
Margaret Smith Wick Farm Cottage 22 Wick Road Burnham-On-Crouch  
Carla Dowling 23 Marsh Road Burnham-On-Crouch Essex  
The Occupier 21 Hillside Road Burnham On Crouch Essex  
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The Occupier 9 Blackwater Close Burnham-On-Crouch Essex  
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Carolyn Cole 39 Mildmay Road Burnham-On-Crouch Essex  
Dean Ferguson Fambridge Yacht Haven Church Road North Fambridge  
Jade Coleman 107 Glendale Road Burnham-On-Crouch Essex  
A Poyser 18 Mildmay Road Burnham-On-Crouch Essex  
Glen Keefe 21 Crouch Road Burnham-On-Crouch Essex  
Miss Alex Abbott 24 Maldon Road Burnham-On-Crouch Essex  
Mr Richard Argent 38 West Ley Burnham-On-Crouch Essex  
Shannon Reeve 24 Glendale Road Burnham-On-Crouch Essex  
Lionel Crowie 11 New Road Burnham-On-Crouch Essex  
Sean Allen 44 Pippins Road Burnham-On-Crouch Essex  
Karen Forbes 88 Station Road Burnham-On-Crouch Essex  
Antony Healey 29 Princes Road Burnham-On-Crouch Essex  
Mrs EA Yeldham 5 Dammerwick Cottages Marsh Road Burnham-On-Crouch  
Kasey Coppin 6 Normandy Avenue Burnham-On-Crouch Essex  
B Weidenaver 2 Pantile Court Pantile Hill Southminster  
S Newberry 22 Beauchamps Burnham-On-Crouch Essex  
Reggie Powell 27 Tern Close Mayland Chelmsford  
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V McConnell 10 Church Road Burnham-On-Crouch Essex  
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BM Smith 16 Holly Close Burnham-On-Crouch Essex  
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Yvonne Blackery 3 Winstree Road Burnham-On-Crouch Essex  
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Mrs A M McOstrich 58 Leslie Park Burnham-On-Crouch Essex  
Mr B M McOstrich 58 Leslie Park Burnham-On-Crouch Essex  
R Otley 26 Winstree Road Burnham On Crouch Essex  
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Daniel Allott 24 West Ley Burnham-On-Crouch Essex  
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Debbie Campbell 25 Worcester Road Burnham-On-Crouch Essex  
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William Weidenauer 2 Pantile Court Pantile Hill Southminster  
G Gibson 3 Blackwater Close Burnham-On-Crouch Essex  
Tania Ward 19 Pippins Road Burnham-On-Crouch Essex  
Mark Fogg 74 Lilian Road Burnham-On-Crouch Essex  
Rita Coleman 16 Pippins Road Burnham-On-Crouch Essex  
Lee Freeman 22 Crown Way Southminster Essex  
Rufus Cripwell 28 Mersea Fleet Way Braintree Essex  
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The Occupier Lower Farm Steeple Road Mayland  
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Valerie Burrows 11 Russet Way Burnham-On-Crouch Essex  
Lauren Fay Argent 38 West Ley Burnham-On-Crouch Essex  
Chris Andrews 37 Fairway Drive Burnham-On-Crouch Essex  
Mrs S Lea 21 Dragon Close Burnham-On-Crouch Essex  
India Lea 21 Dragon Close Burnham-On-Crouch Essex  
Jacquie Becken 2 Kings Road Burnham-On-Crouch Essex  
W Johnson 36 Worcester Road Burnham-On-Crouch Essex  
Ian Hicrons 14 Princes Road Burnham-On-Crouch Essex  
Andrew Hamilton 17 Wick Road Burnham-On-Crouch Essex  
Mrs C Brummer 134 Station Road Burnham-On-Crouch Essex

M Bartlett 12 Chapel Road Burnham-On-Crouch Essex  
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Caroline Duffy 12 Lower Anchor Street Chelmsford Essex  
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Dr Frances Haddock 44 Princes Road Burnham-On-Crouch Essex  
Mrs K Smith Goodacre Wick Road Burnham-On-Crouch  
Mrs A S Cracknell 6 Glendale Road Burnham-On-Crouch Essex  
Tanya Wright Crosshaven Devonshire Road Burnham-On-Crouch  
Maria Garcia 9 Cripplegate Southminster Essex  
Wessels Van Vuuren 5 Glendale Road Burnham-On-Crouch Essex  
Graeme Ward 19 Pippins Road Burnham-On-Crouch Essex  
Mrs Hookins 9 Debden Way Burnham-On-Crouch Essex  
Mrs D A Hailstone 42 Arcadia Road Burnham-On-Crouch Essex  
Lynsey Preedy 36 Devonshire Road Burnham-On-Crouch Essex  
Wendy Carroll 19 Lilian Road Burnham-On-Crouch Essex  
Sean Keefe 21 Crouch Road Burnham-On-Crouch Essex  
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Lucy Edmunds 4 Beresford Avenue East Twickenham Middlesex  
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Ruth Walsh 60 Eastern Road Burnham-On-Crouch Essex  
Anne Reynolds 52 Leslie Park Burnham-On-Crouch Essex  
D Hemmings 25 Stebbing Court Chapel Road Burnham-On-Crouch  
Mr K G E Cox 37 Cherry Orchard Southminster Essex  
G A Musto 37 High Street Burnham-On-Crouch Essex  
Mrs M Y Nash 20 Wembley Avenue Mayland Chelmsford  
Ann Wells 93 Goldhanger Road Heybridge Maldon  
Sally Sampson 1 Stebbing Court Chapel Road Burnham-On-Crouch  
The Occupier 2 Coronation Road Burnham-On-Crouch Essex  
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Pennie Argent 38 West Ley Burnham-On-Crouch Essex  
Anthony Bacon Flat 2 30 Essex Road Burnham-On-Crouch  
Tim Harder 27 Park Road Brentwood Essex  
Sandra Whitlie 11 Sheerwater Close Burnham-On-Crouch Essex  
John Counsel 63 Glebe Way Burnham-On-Crouch Essex  
Angela Gosling 55 Station Road Southminster Essex  
P Ashley 9 Station Road Southminster Essex  
Jo Woolley 36 Cherry Orchard Southminster Essex  
S Bird 12 Stammers Court Burnham Road Southminster  
Lisa Ellis 10A Station Road Burnham-On-Crouch Essex  
Sharon Lacey 8 Ely Close Southminster Essex  
Janice Ford Flat 2 Regents Court Regents Close  
Sarah Sawyer 27 North Street Southminster Essex  
S Finch Batts Farm Batts Road Steeple  
Mrs Jo Lewis 57 Cherry Orchard Southminster Essex  
R L Eplett Asheldham Hall Hall Road Asheldham  
R Hockey 2 Highlands Hill Mayland Chelmsford  
Lesley Bender 35 Pantile Hill Southminster Essex  
Pam Chapman Dunvegan Coombe Road Southminster

S J Holmes 15 Queenborough Road Southminster Essex  
 David Hunt 21 New Moor Crescent Southminster Essex  
 L Creswell 51 Coombe Road Southminster Essex  
 Lynn Salisbury 24 Tattersalls Chase Southminster Essex  
 Cara Homer 18 Hester Place Burnham-On-Crouch Essex  
 Gary Poyntz 21 Glendale Road Burnham-On-Crouch Essex  
 Carol W Jones 15 Hillside Road Burnham-On-Crouch Essex  
 Mrs J Morgan 4 Sheerwater Close Burnham-On-Crouch Essex  
 Samuel Cooper Furlong Farm Bradwell  
 Mrs S Moore 5 The Brambles Foxhall Road Southminster  
 S A Smith 7 Blackwater Close Burnham-On-Crouch Essex  
 Tom Knight Careza 27 Pumpmead Close Southminster  
 M Freeman 50 High Street Southminster Essex  
 Helen Gok 40 Crown Way Southminster Essex  
 Bethany Ellis Brown 2 Garden Fields Steeple Essex  
 Rebecca Kirby 24 Cripplegate Southminster Essex  
 James Stokes 18 West Ley Burnham-On-Crouch Essex  
 Charlene Moss 15 The Belvedere Burnham-On-Crouch Essex  
 Tessa Clifton 12 Brockenhurst Way Bicknacre Essex  
 A M Barden 77 Tattersalls Chase Southminster Essex  
 E Hamilton Lyndale Cold Norton Road Purleigh  
 A Robinson 31 Queenborough Road Southminster Essex  
 Ben Gibson 3 Blackwater Close Burnham-On-Crouch Essex  
 Matthew Bundy 12 Orchard Road Southminster Essex  
 Sylvia Baxter Coach House Tillingham Hall North Street  
 Avis McDonald 121 Glendale Road Burnham-On-Crouch Essex

Main reasons for support:-

- Every area should have own wind farm to produce their own renewable energy
- The wind farm will displace around 15,000 tonnes of carbon dioxide during each year of its operation life
- The turbines will provide electricity for around 7,585 homes, or 31% of the annual consumption for householders in Maldon District Council area
- Wind power is sustainable – oil, coal, gas and uranium will eventually run out;
- Wind farm will help us become less dependent on imported fuels
- Wind power helps improve the UK's energy security
- Wind power reduces the need for new expensive nuclear power stations that leave a toxic legacy of radioactive waste
- Operational wind power doesn't produce emissions of acid rain gases, carbon dioxide, or particulate matter unlike convention power generation;
- Wind turbines look attractive
- Do not consider them to detract from the countryside
- Feel wind turbines add to the landscape
- Wind turbines are not noisy
- Is safer and lasts longer than alternatives
- Wind power is good and should be encouraged
- More attractive than a nuclear power station

- This site is appropriate for a wind farm
- The widening of Old Heath Road and Marsh Road will be a permanent benefit to the area
- More renewable energy needed in the country and this area
- Benefits to the environment
- We have to use our natural resources
- Long term benefits outweigh short term inconveniences
- Ecologically sound
- Contributes to a healthier future for all
- Wind farms are economical
- Helps to reduce electricity bills
- Climate change is the greatest threat facing our planet, and urgent action is needed on the issue – renewable technology solutions are needed
- Impact on environment is far more important than aesthetics
- Around 80% of the population support wind power
- Preferable to another nuclear power station
- Wind farms safer than nuclear power stations
- We need all forms of renewable energy
- Land based wind farms are cheaper than those built at sea
- Sustainable energy essential for our children’s wellbeing
- Several European countries already generate around 20% of their electricity from wind power – UK can do the same
- Have seen them in Holland and think they can begin to have a certain charm
- Have seen them in other areas of the country and seem to cause no harm
- Changes in landscape caused by wind farms are nothing in comparison with the potential changes climate change would bring
- Significant financial benefits to local area

**7. Assessment of Proposal**

**Policy Issues**

**i) National Government Guidance**

- PPS1 Delivering Sustainable Development
- PPS Planning and Climate Change – Supplementary Guide to PPS1
- PPS5 Planning and the Historic Environment
- PPS7 Sustainable Development in Rural Areas
- PPS9 Biodiversity and Geological Conservation
- PPG13 Transport
- PPS22 Renewable Energy and The Companion Guide
- PPS23 Planning and Pollution Control
- PPG24 Planning and Noise

- PPS25 Development and Flood Risk and the Best Practice Guide
- Draft National Planning Policy Framework
- The Localism Bill

ii) **Regional Level – The East of England Plan (The Regional Spatial Strategy)**

SS1 Achieving Sustainable Development

ENV2 Landscape Conservation

ENV3 Biodiversity and Earth Heritage

ENG1 Carbon Dioxide Emissions and Energy Performance

ENG2 Renewable Energy Targets

**Essex and Southend on Sea Replacement Local Plan**

CC1 Undeveloped Coast: Coastal Protection Belt

iii) **Relevant Development Plan Policies**

Maldon District Replacement Local Plan

- **S2 - Development Outside Development Boundaries** - Outside the defined development boundaries the coast and countryside will be protected for their own sake
- **CON1 - Development in Areas at Risk from Flooding** - Development will only be permitted subject to strict criteria/circumstances to avoid the risk of life/property from flood risks
- **CON5 - Pollution Prevention** - Development having an adverse impact on the environment by means of pollution will be refused
- **CON7 - Development affecting airports** – Developments of wind farms require consultation with the relevant airport for safety reasons
- **CC1 - Development Affecting an Internationally Designated Nature Conservation Site** - Development affecting a site of nature conservation will not be permitted unless exceptional circumstances apply subject of rigorous examination
- **CC2 - Development Affecting a Nationally Designated Nature Conservation Site** - Development affecting a site of nature conservation will not be permitted unless exceptional circumstances apply subject of rigorous examination
- **CC3 - Development Affecting Locally Designated Nature Conservation Sites** – Seeks to protect areas designated as nature conservation sites
- **CC5 – Protection of Wildlife at Risk on Development Sites** – Seeks to protect animals, plants and habitats on sites subject to development through the use of mitigation measures
- **CC6 - Landscape Protection** - The natural beauty and quality of the landscape shall be protected, conserved and enhanced
- **CC7 - Special Landscape Areas** - Within SLA's permission will not be given unless the development conserves or enhances the character of the area
- **CC10 - Historic Landscape Features** – Policy seeks to protect historic landscape features such as protected lanes and hedgerows
- **CC11 - The Coastal Zone** - Development will only be permitted if it requires a coastal location and its impact upon the rural open character is minimal

- **BE1 - Design of New Development and Landscaping** - Development will only be permitted if it is compatible with its surroundings and meets defined criteria
- **BE13 - Development in Conservation Areas** - Will only be permitted if design is of high standard with respect to surrounding buildings, spaces and views
- **BE16 - Extensions, Alterations and Additional Buildings in the Curtilage of Listed Buildings** - Will only be permitted if satisfied that the proposal will not harm the character or setting of the Listed Building
- **BE17 - Preservation of Sites of Nationally Important Archaeological Remains and their Settings** - Development will not be permitted if it fails to preserve the archaeological value and interest of the remains or their settings
- **BE18 – Control of Development at a Site of Local Archaeological Value** - Development will not be permitted if it impacts upon local archaeological value
- **T1 – Sustainable Transport and Location of New Development** – New development will be expected to be located in defined development boundaries and achieve sustainability and highway safety throughout
- **T2 - Transport Infrastructure in New Developments** – New development will be expected to achieve sustainability and highway safety throughout
- **T6 - Improvement to Pedestrian Facilities** – Will require improvements to footways adjacent to the site
- **T8 - Vehicle Parking Standards** - New development will be expected to meet the adopted parking standards
- **PU6 - Renewable Energy** – Development of renewable energy facilities will be permitted provided subject to a number of considerations such as landscape and visual impact, noise, traffic, ecology, and adjoining properties.

**iv) Maldon District Local Development Plan**

The Council agreed the approach for progression and production of a Local Development Plan for the Maldon District on 21 July 2011. This follows the reforms being introduced to the planning system by the Government, including the Localism agenda, and subsequent discussions with elected Members. The Local Development Plan will be based largely upon the existing draft Core Strategy document, but there will be amendments and additions to certain aspects of the Plan.

Once adopted, the Maldon District Local Development Plan will ultimately supersede the saved policies of the Maldon District Replacement Local Plan (2005). Until the draft Local Development Plan is agreed by Council and published for public consultation, the Maldon District Core Strategy Regulation 25 Consultation document (April 2009) provides the latest published emerging local planning policies for the District. However, the policies included within the document may be subject to change and can only be given limited material weight in reaching decisions on planning applications due to their unadopted status. The following policies are considered relevant to this application:

- CS1 Creating Sustainable Development
- CS2 Development in the Countryside

- CS19 Protection and Enhancement of Natural Heritage
- CS20 Protection and Enhancement of Built Heritage
- CS21 Design of New Development
- CS23 Environmental Impact of New Development
- CS24 Flood Risk
- CS27 Infrastructure and Services

v) **Other Material Considerations**

National:

- Directive 2009/28/EC of the European Parliament and Council
- The Climate Change Act 2008
- The Energy White Paper: Our energy future - creating a low carbon economy (2003)
- Renewable Obligations (2002)
- The Energy Review (2006)
- UK Renewable Energy Strategy (2009)
- Draft National Policy Statements on Renewable Energy EN-3
- Coalition Government - Open Source Planning Green Paper June 2010
- The Localism Bill (December 2010)
- 'Dear Chief Planning Officer' Letter on The Localism Bill and the Planning Reform Measures in the Localism Bill (December 2010)
- Wind Turbines (Minimum Distances from Residential Properties) Bill
- National character assessments for the Greater Thames Estuary and Northern Thames Basin areas
- Wind Energy and the Historic Environment – English Heritage (2005)
- Department of Trade and Industry - ETSU report 'The Assessment and Rating of Noise from Wind Farms'
- Noise Policy Statement for England March 2010
- World Health Organisation 'Night noise for guidelines for Europe' 2006
- The Conservation (Natural Habitats etc) Regulations 1994
- Wildlife and Countryside Act 1981
- English Heritage 'Wind Energy and the Historic Environment'
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Regional level document

- 'Placing Renewables in the East of England' by ARUP

Local Documents

- Maldon District Council Energy Strategy 2004-2011
- Maldon District Council Environment and Climate Change Strategy 2009
- Middlewick Appeal Decision May 2011
- Bradwell Appeal Decisions September 2007 and January 2010

- Essex County Council - Essex Landscape Character Assessment
- Local Development Framework landscape character assessments

## 8. Principle of Development

### 8.1 **The Environmental Statement**

8.1.1 The proposal falls within category 3(i) of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. It exceeds both the size thresholds of more than 2 turbines and with the hub height of any turbine being more than 15m in height. It is considered that due to the size of the wind turbine structures the development impacts upon the countryside and coastal zone having a significant environmental effect. For these reasons an Environmental Impact Assessment (EIA) was required.

8.1.2 Under the Regulations the procedure for undertaking an EIA normally requires the submission of an application for a request for a Screening Opinion (to decide whether an EIA is required), or a request for Scoping Opinion (to identify the content and methodology for inclusion in the ES). Both procedures involve consultation and adoption by the local planning authority. The ES identifies that the applicant had no reason to submit a Screening Opinion as it was identified through category 3(i) of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations that an EIA would be required. The request for a Scoping Opinion (SOR/MAL/10/00226) was considered, determined and adopted by the Council in August 2010. The ES submitted accompanying this application follows the adopted 2008 Scoping Opinion albeit with slightly different chapter headings.

### 8.2 **The Policy Position and Need for Renewable Energy**

8.2.1 The issue of climate change and its association with global warming effects from human activity, including the burning of fossil fuels, is well established. The UK Government believes that climate change is the greatest long term threat facing the world (Planning Policy Statement - Planning and Climate Change).

8.2.2 The International Panel on Climate Change (IPCC) was set up in 1988 to investigate world climate change implications and a number of reports have been produced outlining the likely implications. Such reports have led to the formulation of climate change policy at International and European levels. Already a number of measures have been implemented at the national level in order to meet the above target through the Renewables Obligation (2002) and the Renewable Energy Strategy (2009). The United Kingdom is required by a European Directive to secure 15% of its energy supplies from renewable sources by 2020 with the Renewable Energy Strategy 2009 setting out how this should be met. It has a target that 30% of electricity demand should be met from renewable sources by 2020. The Energy White Paper 2007 and the Energy Act 2008 highlight the Government's Strategy to move towards cleaner energy supplies and one of the key elements is to provide more support for low carbon technologies. The designated Overarching National Policy Statement for Energy (EN-1) highlighted the Government's commitment moving to a secure, low carbon energy system.

- 8.2.3 The UK has been identified as the largest wind energy resource in Europe, with 40% of the continent's potential wind resource. Therefore this application seeks a wind farm to make use of this renewable resource.
- 8.2.4 In December 2010 The Localism Bill was published and sets out a series of proposals with the potential to achieve a substantial and lasting shift in power away from central government and towards local people through the provisions of neighbourhood planning. The Bill includes: new freedoms and flexibilities for local government; new rights and powers for communities and individuals; reform to make the planning system more democratic and more effective, and reform to ensure that decisions about housing are taken locally. In February 2011 the High Court ruled, in connection with the Cala homes appeal decision that the intended abolition of Regional Strategies as set out in the Localism Bill can be taken into account as a material consideration.

### **8.3 National Planning Position**

- 8.3.1 In July 2011 the Department for Communities and Local Government (DCLG) published the draft National Planning Policy Framework (NPPF), which will form the centrepiece of national planning policy when the full version is released next year. Its purpose is to set out the Government's economic, environmental and social planning policies for England as well as its vision for sustainable development. It aims to streamline the planning system and introduce a "*Presumption in Favour of Sustainable Development*" unless '*adverse impacts of allowing the development would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework*'.
- 8.3.2 From the National Planning Policy Framework and relevant to the principles of this application there is a section on climate change which supports the delivery of renewable and low-carbon energy. Paragraph 153 of the Framework advises that when determining planning applications, local planning authorities should apply the '*presumption in favour of sustainable development*', '*not require applicants for energy development to demonstrate the overall need for renewable or low-carbon energy*', '*approve the application if its impacts are (or can be made) acceptable*'; and '*Once opportunity areas for renewable and low-carbon energy have been mapped in plans, local planning authorities should also expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying opportunity areas*'.
- 8.3.3 Once the full version of the National Planning Policy Framework is published, it will replace all of the 25 Planning Policy Statements (PPS), Planning Policy Guidance (PPG) notes and the 15 Minerals Planning Statements which currently form national planning policy. Until the National Planning Policy Framework (NPPF) is adopted the current set of Planning Policy Statements (PPS), Planning Policy Guidance (PPG) notes form the primary national planning policy position and therefore the draft National Planning Policy Framework only has limited weight at this stage.
- 8.3.4 Planning Policy Statement - Planning and Climate Change (PPSPCC), which is a supplementary document to PPS1 was published in December 2007 and identifies the fundamental importance on delivering sustainable development and shaping sustainable communities by introducing low carbon technologies to reduce carbon emissions and stabilising climate change. PPSPCC advises local planning authorities

that applicants should not be required to demonstrate the overall need for renewable energy and its distribution, nor question the energy justification for a particular location. PPS22 requires local planning authorities to ensure any local approach to protecting landscape is consistent with PPS22, that criteria based policy is developed in line with PPS22, and that suitable areas for renewable energy are identified. For determining planning applications PPS22 advises local planning authorities and applicants to consider landform, layout, building orientation, massing and landscaping; delivering a high quality local environment; recognising the opportunities for wildlife and people; and providing for safe and attractive walking and cycling opportunities.

- 8.3.5 The more recent PPS22 expands upon Planning Policy Statement 22: *Renewable Energy* (PPS22, 2004) and explicitly takes precedence over other Planning Policy Statements where there is any difference in emphasis on climate change. PPS22 states how renewable energy developments can contribute to the government's sustainable development strategy.
- 8.3.6 PPS22 indicates 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. PPS22 indicates that the wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.
- 8.3.7 PPS22 indicates that the Regional Spatial Strategy (RSS), or more recently changed to as the Regional Strategy (RS), should include criteria-based policies which can be applied across a region or sub-region and that where appropriate targets may be disaggregated into sub-regional targets. The *Companion Guide to PPS22* offers practical advice on the implementation of the PPS. It includes a section setting out key issues for considering onshore wind farms providing guidance to local authorities how to determine such applications. The guide indicates that when submitting a planning application developers should be able to demonstrate that the project meets the requirements of applicable development plan policies (including Regional policies), does not compromise the reasons behind any relevant area designation and addresses the issue of visual impact, and where relevant cumulative visual impact. The guide advises that in determining an application, planning authorities must assess the case for each project put forward and come to an objective view on the range of matters which are outlined in this report.
- 8.3.8 As regards landscape and visual effects the *Companion Guide to PPS22* indicates that proposals should be assessed objectively. It indicates that some areas in England are experiencing much interest from renewable energy developers and that cumulative effects have become a factor in the determination of applications. In these circumstances a base plan of existing wind farms, permitted developments and applications received within a defined radius should be produced in order that their overall effect may be assessed. Members are already aware of the planning permissions for wind farm developments at Hockley Farm in Bradwell and Middlewick Farm in Southminster. Notwithstanding this information the proposal should be determined on its own merits.

## **8.4 Regional Planning Position**

- 8.4.1 At the end of May 2010 the Coalition Government announced the intention to abolish Regional Strategies and return decision making powers on housing and planning to local councils. However, until Regional Strategies are abolished and any transitional arrangements put in place local authorities. The East of England Plan forms the Regional Spatial Strategy (RSS). The Secretary of State's decision of 6 July 2010 to revoke Regional Spatial Strategies was legally challenged in the High Court by Cala Homes (south) Ltd v Secretary of State for Communities and Local Government. In November 2010 the High Court quashed the Secretary of State's decision of 6 July 2010 to revoke Regional Spatial Strategies as unlawful and in effect reinstate the Regional Spatial Strategy. Therefore the Regional Spatial Strategy forms part of the Development Plan and a material consideration in the determination this application. However the High Court judgment makes it clear that planners can take into account the Government's intention to abolish regional strategies as a material consideration.
- 8.4.2 The East of England Plan (EEP) through policy SS1 seeks to bring about sustainable development by, among other points, helping to meet obligations on carbon emissions. The EEP includes a chapter on carbon dioxide and renewable energy. There are two policies relevant to the consideration of this application. These are ENG1 Carbon Dioxide Emissions and Energy Performance and Policy ENG2 Renewable Energy Targets. ENG1 sets out the contribution the region is expected to make reducing carbon emissions. Policy ENG2 supports the development of renewable power generation and sets a target of 4250 Megawatts installed capacity by 2020. The Megawatt production proposed by this application therefore seeks to partly contribute to the Region's renewable energy production.
- 8.4.3 The report on the East of England Sustainable Development Round Table *Making Renewable Energy a Reality – Setting a Challenging Target for the Eastern Region* 2001 set a renewable energy target for Essex of 9% by 2010 including 478 GigaWatt hours from onshore wind. The targets were reviewed in *Placing Renewable in the East of England* a report for the East of England Assembly in February 2008, with the revised Regional targets for onshore wind energy of 1065MW by 2020 with a waymark at 2015 of 852MW. The existing capacity in the Region at December 2007 was estimated to be 450MW. At the time of writing there was no installed onshore capacity in Essex although three wind farms have planning permission. The report describes the Greater Thames Estuary (including the Dengie peninsular) as having 'Medium Landscape Sensitivity' with a potential maximum wind farm typology of 4-12 turbines. Taking into account the Bradwell and Middlewick wind farms there is already consent for a total of 19 turbines and this proposal seeks to add another 7 to this total for the Dengie peninsular.

## **8.5 Local Planning Position**

- 8.5.1 Local Plan Policy PU6 Renewable Energy is the main policy relevant to the proposal.
- 8.5.2 The pre-ambles to the policy states that the District Council will encourage proposals for renewable energy schemes and that Maldon, as a coastal district, has a greater potential to exploit the wind than any other source of renewable energy. Support has to be tempered by the importance of the coastline in visual and nature conservation terms. Assessment of the visual impact of a proposal must take account of the likely

numbers of people who may be affected as well as the scale of the proposal both in terms of individual components and overall impact in relation to the surrounding landscape. Renewable technologies may generate small increases in noise levels and should be located and designed in such a way to minimise increases in ambient noise levels. It is also necessary to determine the impact upon ecology and conservation.

8.5.3 Policy PU6 Renewable Energy states that proposals for the development of renewable energy facilities will be permitted provided they would not:

- a) have a significant impact on the appearance of the surrounding area, the countryside or local landscape; and
- b) i) generate an unacceptable level of noise or traffic; or  
ii) have an adverse impact upon areas of ecological, architectural, landscape, historical or conservation importance; or  
  
iii) have a detrimental impact upon the adjoining properties and landholdings

8.5.4 The Local Development Framework - Core Strategy has no specific policies for renewable energy but a number of policies refer to climate change and improving energy efficiency through new developments. Chapter 5 of the Core Strategy through paragraphs 5.3.2 & 5.3.3 addresses climate change and renewable energy.

8.5.5 In August 2004 Maldon District Council adopted its Energy Strategy 2004-2011. This sets out the Council's vision of a future in which the District has a safe and secure energy supply, in which the energy system of the District does not contribute to increased climate change, in which the residents of the District do not suffer from fuel poverty, and in which locally available sources of renewable energy are a significant part of the energy mix. The Energy Strategy indicates that 10% of Maldon's electricity should be locally-generated through renewable sources by 2010 and it encourages the production of sustainable energy within existing planning policies. More recently, 2009, Maldon District Council Environment and Climate Change Strategy 2009 states the potential risks posed by climate change are also driving policy makers to consider, and reduce environmental impacts, with a strong focus on reducing carbon dioxide emissions (CO<sub>2</sub>) and improving energy efficiency.

## **8.6 Electricity Production**

8.6.1 It is recognised that the UK has an annual increase in electricity consumption over the last 10 years and with increased housing stock and population this will increase demand. This combined with the current fossil and nuclear generation plants approaching the end of their productive life only highlights the need. According to the Department of Trade and Industry the average annual electricity consumption for the East of England region is 5000 kWh per year. The proposed wind farm would help contribute towards the UK Renewables Obligation and the more recent Renewable Energy Strategy targets. To supply the national grid with electricity a Renewables Obligation Certificate (ROC) is issued to an accredited generator (this wind farm) for eligible renewable electricity generated within the United Kingdom and supplied to customers within the United Kingdom by a licensed electricity supplier. One ROC is issued for each megawatt hour (MWh) of eligible renewable output generated.

8.6.2 The proposal would lead to the displacement of fossil fuel powered electricity and would therefore reduce the quantity of pollutants in the atmosphere, with the most

significant being reduced carbon dioxide. Nationally and internationally this would help achieve the legally binding reduction obligations from the Kyoto Protocol and Climate Change Act.

## **8.7 Overall**

- 8.7.1 Based on the above there is a clear and evident need for developing renewable energy resources both nationally and in this region to reach the identified renewable energy targets. The development of such renewable energy sources would provide electricity and would help tackle climate change by reducing the need for burning of fossil fuels. However these benefits need to be considered on balance with any adverse impacts in accordance with the National Planning Policy Framework.

## **9. Cumulative impact**

- 9.1 Towards the east coast of the Dengie peninsular there are two consented wind farm developments at Hockley Farm in Bradwell (Bradwell wind farm) and Middlewick Farm in Southminster (Middlewick wind farm). Whilst development has yet to commence on these wind farms both represent on shore wind farm projects which need to be considered as part of the cumulative impact of wind farm developments on the Dengie peninsular and the wider Maldon District.
- 9.2 For the Middlewick wind farm development this planning permission was granted on appeal on 19 May 2011 and is a site that lies to the northern side of the road known as the Marshes, which is a road between both wind farm sites. The Middlewick wind farm is a consented development for nine wind turbines (125m high) with associated infrastructure. When measured from the plans submitted the distance between the nearest turbine on the Middlewick wind farm (Turbine T3) to the nearest turbine on the Turncole site (Turbine T7) would measure approximately 1.4km. The road known as the Marshes would in effect transect both wind farms and there would be properties which would be affected by both wind farms. These matters are considered below in the 'impact upon living conditions of residents' section of this report.
- 9.3 The other consented wind farm development is the Hockley Farm in Bradwell on Sea would comprise of 10 turbines (121m high) with associated infrastructure. The Bradwell wind farm was granted planning permission on appeal on 25 January 2010. The Bradwell wind farm site is approximately 9.5km (5.9 miles) to the north east of the application site. From areas along the east coast of the Dengie peninsular there would be vantage points where all wind farm developments would be viewable.
- 9.4 With regard to off shore wind farms, the Gunfleet Sands wind farm is approximately 28km (16 miles) from the Turncole application site and is approximately 11km (7 miles) to the south east of Clacton. When weather conditions permit the Gunfleet Sands wind farm can be seen from the locations around the Turncole site and along the east coast of the Dengie Peninsula. However due to the distances involved it is considered that any cumulative impact would not be significant. Another operational off shore wind farm is the Kentish Flats wind farm which is 28km (18 miles) north of the Kent coast from Herne Bay. The Kentish Flats wind farm development is to some extent screened by the land mass which is Foulness Island to the southern side of the River Crouch. Given the distances to these offshore wind farms there would be no significant negative cumulative impacts.

## **10. Landscape and Visual Impact**

10.1 The landscape character and visual appearance of the area consists of reclaimed marshland which is mainly flat and low-lying. The majority of the marshes are between 1 – 2m above sea level (AOD). There are a number drainage ditches in the area. The area is sparsely settled with scattered farm buildings and cottages. There are public rights of way in the area comprising of footpaths, cycle routes and bridleways. The surrounding land uses are mainly agricultural comprising of farm holdings and fields. There are few trees/vegetation in the area. The roads serving the area are one and half width carriageways. In addition to considering the impact upon the landscape consideration needs to be given the seascape as the site is viewable from the River Crouch and the east coast of the North Sea.

10.2 To assist officers in the assessment of landscape and visual impact the Council appointed a landscape consultant to provide expert advice. The advice given has been included in this section of the report.

### **10.3 Policy Context and Landscape Designations**

10.3.1 The national policy context identifies that the Planning Policy Statement - Planning and Climate Change (PPSPCC) seeks to ensure any local approach to protecting landscape and townscape is consistent with PPS22 and does not preclude the supply of any type of renewable energy other than in the most exceptional circumstances.

10.3.2 PPS22 states that of all renewable technologies, wind turbines are likely to have the greatest visual and landscape effects. However, in assessing planning applications local authorities should recognise that the impact of turbines on the landscape will vary according to the size, number of turbines, and the type of landscape involved. These impacts may be temporary if conditions are attached to planning permissions which require the future decommissioning of turbines. PPS22 also states that planning authorities should also take into account the cumulative impact of wind generation projects in particular areas.

10.3.3 Further assistance on landscape character is identified in the Companion Guide to PPS22 which defines landscape character as a distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape. Character makes each part of the landscape distinct, where particular combinations of geology, landform, soils, vegetation, land use, field patterns and human settlement contribute to a particular sense of place. For determining planning applications PPS22 states that landscape and visual effects should be assessed on a case by case basis and that proposed developments should be assessed using objective descriptive material and analysis wherever possible.

10.3.4 PPS7 advises that planning authorities should continue to ensure that the quality and character of the wider countryside is protected and, where possible, enhanced.

10.3.5 The regional level report titled ‘Placing Renewables in the East of England’ by ARUP indicates an overall need for about 500 wind turbines in the region. Interestingly the report describes the Greater Thames Estuary, which includes the Dengie Peninsula as having a ‘medium landscape sensitivity’ with a potential maximum wind farm

typology of 4 – 12 turbines. The Bradwell permission has approved 10 turbines and the Middlewick permission has approved another 9 turbines to the Dengie Peninsula landscape creating 19 turbines split between areas towards the north east tip and the south half of the peninsula. If this application were to be approved the total number of turbines would reach 26 on the Dengie Peninsula.

- 10.3.6 At the County level saved policy CC1 from the Structure Plan seeks the protection of undeveloped coastal area with any development not adversely affecting its open and rural character.
- 10.3.7 At the local level Local Plan policies CC6 on Landscape Protection, CC7 on Special Landscape Areas (links to Maldon Landscape Character Assessments (MLCA)) and CC11 on The Coastal Zone are all applicable. Each of these policies seeks to protect the countryside and the coastal zone having regard its landscape character. In terms of Landscape Designations this site falls within a Special Landscape Area and the Coastal Zone as defined on the Local Plan Proposals Map. Policy PU6 Renewable Energy states that renewable energy facilities will be permitted provided they would not have a significant visual impact on the appearance of the surrounding area, countryside or local landscape; and have an adverse impact upon the landscape. The pre-ambule to policy PU6 states that an assessment of the visual impact of a proposal must take account of the likely numbers of people who may be affected as well as the scale of the proposal.

#### **10.4 Landscape Character Documentation**

- 10.4.1 The site falls within two national character assessments areas, which are the NCA81 Greater Thames Estuary and NCA11 Northern Thames Basin.
- 10.4.2 Essex County Council had commissioned a report to review the Essex Landscape Character Assessment (ELCA) and a report was produced in 2003. The most relevant character profile for the application site is the F3 Dengie & Foulness Coast. Outside of the application site but also contributing to the landscape character are the areas of the E1 South Essex Farmlands, F2 Crouch & Roach Farmland, and F4 Blackwater Estuary.
- 10.4.3 The site falls within two Special Landscape Areas which are the Dengie Marshes and the Crouch-Roach Marshes. Given the scale of the development the proposal could be argued to also impact upon the Blackwater Colne Estuary and the Upper Crouch Special Landscape Areas. Through the Local Development Framework landscape character assessments have been undertaken for the Maldon District. These comprise of the Maldon Landscape Character Assessments (MLCA) and the Maldon District Historic Environment Characterisation Project (MDHEC). However, the ES does not refer to these landscape character assessments and therefore has not considered this additional layout of descriptive material which identifies the landscape character distinctions at a local level.
- 10.4.4 In the MLCA the site falls into the same district level landscape character area as the Middlewick Wind Farm. This is district LCA D8: Dengie Drained Estuarine Marsh and the site identifies the key landscape characteristics as including ‘mostly arable farmland on reclaimed marsh’, ‘a sense of huge sky’, ‘sound of birds’, ‘tranquillity’, ‘panoramic views’, ‘the absence of trees except around isolated farms’, and the

‘absence of settlements’. The assessment of the visual character has a ‘strong sense of being windswept and desolate’. The LCA D8 then lies alongside and overlapping with the related LCA D7: Bradwell Drained Estuarine Marsh, which will be the host landscape character area for the Bradwell Wind Farm. Together they form the highly distinctive reclaimed marshes at the end of the Dengie Peninsula and make up the general extent of the Dengie Marshes SLA. They are uniquely remote and isolated when compared to other drained marshes on the Essex coast. As such this area as a whole should be regarded as highly sensitive landscape and a limited resource.

10.4.5 Natural England’s Policy on Wind Energy states that it is important to appreciate that there are almost always opportunities to avoid, reduce or minimise potential impacts through good site selection, responsive design and other mitigation measures. Natural England has provided advice on landscape impact in their consultation response.

## 11. Seascape Documentation

11.1 The assessment of seascape character has broadly followed the Maritime Ireland Interreg 1994 – 1999 Guidance ‘Guide to Best Practice in Seascape Assessment’ (GSA) which covers extensive section of the coastline where there is an overriding common defining characteristic such as coastal orientation or landform. At the national level the Greater Thames Estuary National Seascape Unit identifies characteristics for the area based on marine, coastal and hinterland components. Regionally the seascape character is split into areas and the Maldon Peninsula and North Thames Estuary are most relevant for describing the character of this site.

### 11.2 The ES Assessment of Landscape and Seascape Impact

11.2.1 The ES assessment has considered the impacts of the development upon the existing site and surroundings and has considered the cumulative impact of a number of wind farms. The ES details the findings from the Environmental Impact Assessment through the construction, operational and decommissioning stages. The methodology employed for the landscape impact assessment of the ES considers many factors. The ES scores sensitivity and magnitude scales using a points approach. For sensitivity this is considered as three points: high, medium and low; and for magnitude scales uses: high, medium, low and negligible. The ES has summarised the landscape and seascape impact as follows:

Landscape Assessment				
Area	Approximate Distance from Site	Sensitivity to Development	Magnitude of Operational Effect	Significance of Effect
National Landscape Character Areas				
Greater Thames Area (81)	Falls within this area	Medium	Medium	Moderate
North Thames Basin (111)	1km	Medium	Negligible	Minimal
County Level Landscape Character Areas				
Dengie and Foulness Coast (F3)	Falls within this area	High	High - Medium	Major – Moderate

South Essex Farmlands (E1)	1.5km	Medium	Low	Moderate – Slight
Crouch and Roach Farmland (F2)	2km	High	Negligible	Minimal
Blackwater Estuary (F4)	8.5km	High	Negligible	Minimal
North Blackwater and Colne Coastal Farmlands (F5)	10km	High	Negligible	Minimal
<b>Site Level Landscape Character</b>				
Site Landscape	Falls within this area	High	High	Major
<b>Special Landscape Areas</b>				
Dengie Marshes		High	Medium	Major – Moderate
Crouch – Roach Marshes	<2km	High	Low	Moderate
Blackwater – Colne Estuary	6km	High	Negligible	Minimal
Upper Crouch	5km	High	Negligible	Minimal
Woodham Scarp	15km	Not assessed as no indivisibility with the site		
Chelmer – Blackwater Ridges	18km	Not assessed as no indivisibility with the site		
<b>Coastal Designations</b>				
Coastal Zone		High	Medium - Low	Moderate

#### Seascape ES Assessment

<b>Area</b>	<b>Approximate Distance from Site</b>	<b>Sensitivity to Development</b>	<b>Magnitude of Operational Effect</b>	<b>Significance of Effect</b>
Tendring Peninsula	12km	Medium – Low	Negligible	Minimal
Mersea Island and Estuaries	12km	Medium	Negligible	Minimal
Maldon Peninsula		Medium - High	Medium	Moderate
North Thames Estuary	3km	Not assessed		

### 11.3 Assessment of ES findings

11.3.1 The ES records a major-moderate landscape impact significance within the central areas of the county ELCA F3 (Dengie & Foulness Coast) and major for what is regarded as the site landscape character. On this basis it would be fair to assume that a major landscape impact significance would have been recorded for the Maldon LCA

D8 Dengie Drained Estuarine Marsh if that study had been referenced as well. In these assessments the effects of the wind farm are related to the characteristics of the local landscape for example at para 5.8.17 of the ES text volume it states *‘The wind farm development would exert a strong visual presence in the landscape and would likely become one of the defining physical characteristics of the character area’*. Also at para 5.8.18 it states that *‘the more perceptual and aesthetic qualities may be altered by the proposed development. In particular the sense of remoteness and isolation (created in part by an absence of development) may be seen to be compromised by the proposed development’*.

11.3.2 It is clearly accepted that wind farm development will have significant effects on the character of the landscape in the Dengie marshes. This was also recognised in the earlier cases of Bradwell and Middlewick. However, as both of those proposals have been allowed on appeal, this alone is clearly not considered to outweigh the other sustainability benefits of wind energy development. In principle, there is no significant difference between the Turncole proposal and the Middlewick proposal in terms of their solus effects (as an individual wind farm) on the local landscape. The critical difference is of course the potential for a further degree of cumulative effects and the different nature of those effects due to the proximity of Turncole Wind Farm to the Middlewick Wind Farm.

11.3.3 The ES judges the seascape quality to be high and the impact upon the Maldon Peninsula to be medium to high. Given the distance from the coast, which varies between 2km and 4km, the wind farm would have an impact upon the seascape but the impact of this wind farm alone does not raise any objections.

#### 11.4 The ES Assessment of Cumulative Landscape and Seascape Impacts

11.4.1 The proposed wind farms cumulative impacts have been assessed in regard to the following wind farms: Middlewick (1.3km), Bradwell (8km), Gunfleet Sands (22km) and Kentish Flats (23km), and with regard to the County level Landscape Character Assessment (ELCA). The summary of the cumulative effects are as follows:

Area	Approximate Distance from Site	Sensitivity to Development	Magnitude of Cumulative Operational Effect	Significance of Cumulative Effect
Dengie and Foulness Coast (F3)	Falls within this area	High	Medium	Major – Moderate
South Essex Farmlands (E1)	1.5km	Medium	Low - Negligible	Slight - Minimal
Crouch and Roach Farmland (F2)	2km	High	Negligible	Minimal
Blackwater Estuary (F4)	8.5km	High	Negligible	Minimal
North Blackwater and Colne Coastal Farmlands (F5)	10km	High	Negligible	Minimal

## 11.5 Assessment of ES Cumulative findings

- 11.5.1 The ES records major-moderate significance of cumulative effect for the central areas of county ELCA F3 (Dengie & Foulness Coast) when Turncole is combined with Bradwell. In this scenario the relatively low number of turbines in both developments and the distance apart are considered to limit the cumulative impact. Then in combination with Middlewick as well, the additional cumulative effect of Turncole, added to the other two, is regarded to be of a reduced moderate significance. The assertion here is that Turncole Wind Farm would be assimilated into a landscape which already supported two other wind farms. So on one hand the distance apart and number of turbines seems to be important to controlling the significance of cumulative landscape effects, and Turncole in combination with Bradwell is acceptable. Yet when Middlewick is brought into the equation, very close to Turncole and the total number of turbines is higher by a factor of 50%, it is presented as acceptable because the landscape already has two other wind farms. There seems to be some confusion of logic and contradiction in these statements. Nevertheless, to get an idea of the overall cumulative effect it is necessary to consider all of these additional cumulative effects in a summation rather than isolating them in the way presented.
- 11.5.2 In order to judge the acceptability of these cumulative landscape effects in terms of some thresholds of acceptable change, conserving the integrity of the landscape's key characteristics should be considered the policy objective. This stance is promoted as this landscape is recognised by its SLA designation as a particularly valued landscape in its current form.
- 11.5.3 In the case of the Dengie marshes the key characteristics of remoteness, tranquillity and isolation have already been identified as elements particularly vulnerable to wind farm developments. They are all potentially compromised when within the strong influence of a wind farm. This was considered during the Middlewick case and in isolation the effects were not considered harmful or extensive enough to substantiate a landscape character impact reason for dismissing the appeal. One has to assume that wind farms can generate harmful enough landscape effects in this context to justify a refusal, otherwise the assumption would be that this landscape could be covered with wind farm turbines and it would not be unacceptably harmed. If this were not a landscape of recognised value or wind farm development were found not to compromise any key aspect of its character, perhaps this would be the case. This clearly isn't the case, so the assumption has to be that the character modifying effects of the Bradwell and Middlewick Wind Farms were not found to be harmful over a large enough proportion or continuous enough to compromise the overall conservation stance for this valued landscape. Using this logic one might describe the relationship between the Bradwell and Middlewick or Bradwell and Turncole Wind Farms (one or other of Turncole and Middlewick, not both together) as one where they are far enough apart that the Dengie marshes landscape can accommodate them as two isolated features within the general spread of the marshes landscape and thus the marshes landscape character is conserved as the overall setting. Rather than the overall setting becoming one were the characterising effects of the wind farms join to the extent that compromises the integrity of any of the landscapes key characteristics.
- 11.5.4 The spatial relationship between Turncole and Middlewick Wind Farms would be very different to that between either of these two and the Bradwell Wind Farm. It is

also the case that both Turncole and Middlewick are within the same Maldon LCA (D8) whereas Bradwell is within Maldon LCA (D7). In these circumstances the cumulative landscape effects are quite different to any relationship between either of these two and the Bradwell Wind Farm to the north. Although they would clearly be two separate wind farm developments, the space between them would not be substantial enough to allow the intrinsic characteristics of the Dengie marshes to prevail as a setting for these wind farms to be features within. A large area of wind farm landscape would be created. In fact the extent of this characterising influence, by way of significant reduction in the remoteness, isolation and tranquillity key characteristics, would extend for all or the vast majority of the D8 landscape character area. Combined with the Bradwell Wind Farm it could be argued that this would also extend for the whole of the reclaimed marshes landscapes at the end of the Dengie peninsula.

- 11.5.5 In these circumstances the tightly defined and limited nature of this landscape area makes the Dengie marshes particularly vulnerable to cumulative effects that may not be the same for the very much larger areas of similar landscape in Cambridgeshire and Lincolnshire, for instance. As such it seems apparent that this landscape does not have capacity for all of these developments and cannot satisfactorily accommodate them without compromising its overall character. As this character is recognised as valued and important by the SLA designation, this provides a justifiable reason for refusal. This is an appropriate threshold approach to the consideration of cumulative landscape impact assessment; the integrity of this landscape area would be compromised and this development would exceed its threshold of capacity for accommodating wind farm development.
- 11.5.6 With regard to seascape, the site falls within an area defined through policy CC11 on the Coastal Zone which seeks to protect the open and rural character of the area, and views into and out of the area. Where the land meets the coast it is flat and open in nature with a limited number buildings in the area with big skies and a desolate feeling. The impact upon the seascape, due to distance, is not considered to be as significant when compared to the landscape impact as the cumulative impact of the Middlewick and Turncole are away from the coast. Other offshore wind farms are distant from the site and located in a different direction to the Middlewick and Turncole so would not directly impact cumulatively upon the seascape areas nearest these two wind farms.

## **11.6 The ES Assessment of Visual Impact**

- 11.6.1 The visual analysis has been undertaken using theoretical visibility analysis known as the Zone of Theoretical Analysis which is a computer based modelling process using digital terrain information from the Ordnance Survey and displays results using wireframes and photomontages. The analysis considers the impact upon visual receptors which include residents, visitors, the travelling public and workers. The impact upon the outlook from residential properties is assessed in the impact upon living conditions of residents section.
- 11.6.2 The ES includes 15 different viewpoints used as part of the assessment through photomontages to show the visual impact of the wind farm. These viewpoints are taken from within a 30km study area. These are taken from the closest positions

extending out to various locations and the ES as analysed these as stated in the table below:

V P	Location	Approx. distance from the site	Direction from the site	Principal Receptor	Magnitude of Visual Effect	Significance of Visual Effect
1	Marsh Road	2.2km	West	Residents	Low	Moderate
2	Twizzlefoot Bridge	2.9km	West	Motorists	High	Major - Moderate
3	Footpath east of Southminster	2.8km	West	Residents	Medium	Major - Moderate
4	Church of St James Dengie	3.8km	North	Visitors to Church	High - Medium	Major - Moderate
5	B1021 south of Tillingham	5.3km	North	Walkers	Low	Moderate
6	Bridgewick Road	3km	East	Residents	Medium	Major to Moderate
7	St Peter's Church Bradwell	11.10 km	North	Walkers	Low	Moderate
8	Canewdon	8.3km	South West	Walkers	Low	Slight
9	Coastal footpath Wallasea Island	3.4km	South	Walkers	Medium - High	Major - Moderate
10	Heybridge Basin	14.10 km	North West	Residents	Negligible	Minimal
11	Goldhanger	12.9km	North West	Walkers	Negligible	Minimal
12	Tollesbury Marina	12.5km	North	Walkers	Negligible	Minimal
13	West Mersea	14.9km	North	Beach Users	Low - Negligible	Slight
14	Point Clear	20km	North East	Walkers	Negligible	Minimal
15	Jaywick from seawall	20.6km	North East	Walkers	Negligible	Minimal

## 12. Visual Effects Assessment

- 12.1 The ES text volume sets out a general assumption that the visual effects of the turbines will be marked and far reaching across the flat and open Dengie peninsula landscape. At para 5.8.73 it states that the turbines '*will be widely visible in the largely flat and undeveloped landscape of the Dengie peninsula*', and goes on to say that '*The movement of the blades will also tend to draw the eye towards the development*'. This is in line with the findings of the preceding Bradwell and

Middlewick Wind Farm cases and assumes that the magnitude of visual impacts will be quite striking from many locations.

- 12.2 For the operational phase of the development the most significant impact of the proposal would be the introduction of the tall vertical turbine structures in this low lying flat landscape where the existing buildings form isolated structures and the landscape is dominated by agricultural fields and the drainage ditches which define some of the field boundaries. The permanent buildings/areas associated with the infrastructure of the turbines would form ancillary buildings to the development and given their scale these would have negligible impact when compared to the turbine structures.
- 12.3 Immediately at the site the impact of the turbines would be significant albeit at ground level the horizontal outlook at eye level would be perceived towards the lower parts of the turbine towers and their bases. Nevertheless the sheer scale of the turbines and the views skywards towards the blades and nacelle would be immense. The movement of the blades further emphasises the scale of the structures and would draw attention to the structures. The footprint of each turbine is relatively small in the context of the large arable fields in the surroundings so this would not result in any harmful visual impacts.
- 12.4 The only other tall structure at the site would be a metrological mast which would appear as a more slimline structure of differing scale when compared to the scale of the wind turbines. The metrological mast would be positioned within the site area of the turbine layout and the base of the structure would be most visible at eye level. Within the site the sub station building would not have any harmful visual impacts.
- 12.5 In the ES text there is a heavy reliance on the viewpoint references and this requires careful scrutiny before accepting the overall findings. For instance at Viewpoint 1 from Marsh Road, to the north-east of Burnham-on-Crouch, the particular position chosen for the photograph results in a small group of houses in the foreground obscuring much of the wind farm, which is not helpful and appears to have been chosen to limit the impact of the wind farm. This is not considered a helpful viewpoint and such concerns had previously been raised with the applicant in respect of this viewpoint and viewpoints 3, 5 and 6 prior to this application being validated. Officers suggested that these viewpoint locations are re-considered to provide a realistic photomontage to show the impact of the turbines. The applicant's response to this concern was *'that the wind farm will not always be in full view because there are obstructions throughout the landscape in the form of trees, bushes, houses, pylons, farm buildings and this is represented by the photomontages in the ES. It is therefore reasonable to include views that have partial obstructions as this best represents how the wind farm will be viewed after construction. Each photomontage is accompanied by a wireline which allows one to predict the magnitude of the wind farm's visual effect if there were no obstructions in that view, therefore we do not think that additional photos from locations with potentially less screening (should they actually be available from the agreed viewpoint locations) would provide you with any additional information'*. The ES for the Middlewick Farm case also assessed views from Marsh Road near to the northern edge of Burnham-on-Crouch, but the location chosen for the Middlewick viewpoint was more representative of the open nature of the road with more unobstructed views out into the Dengie marshes. In the circumstances the magnitude of visual change recorded for this location is likely to be

underestimated. As an illustration of this, other views of a similar nature and distance have been judged to receive visual effects of a higher magnitude with no other understandable justification for the difference. Accordingly, the visual impact significance from this location should be regarded as major-moderate, rather than moderate.

- 12.6 The visual impact views into the area would change as would the outlook from many of the nearby dwellings in this sparsely built up area. From the nearby village of Southminster and from much of Burnham the wind farm would not be visible unless you are along the eastern edge of these settlements as the buildings within the settlement have a close knit urban layout and along with vegetation would screen the wind farm. For the northerly smaller villages of Dengie and Asheldham, where the buildings and dwellings are mainly located along the road side, there are potential views of the turbines from properties.
- 12.7 After the viewpoint assessment the ES goes on to consider visual effects from particular categories of visual receptor, including the public rights of way network and roads in the vicinity; residential visual receptors are considered separately in the residential outlook section. It is notable that the local footpath network including footpaths 18, 24 and the coastal path along the sea wall are recorded as receptors that will experience significant visual impact from the wind farm development.
- 12.8 As noted for the landscape effects assessment, the visual effects from this wind farm will be very similar in overall nature to that predicted for the Middlewick wind farm case and they were found to be acceptable. However, the particular spatial relationship with the Middlewick Wind Farm will lead to particular cumulative visual effects.

## 12.9 The ES Assessment of Cumulative Visual Impact

- 12.9.1 A selection of 11 viewpoint locations was used to assess the cumulative impact of operational and consented wind farms within a 30km radius study area. This includes cumulative consideration of the Middlewick, Bradwell, Gunfleet Sands and Kentish Flats wind farms. The selected viewpoints used are the same as those mentioned above. The methodology used to assess the impact considers the 'combined visibility', which is when the observer is able to see two or more developments from one viewpoint, and the 'sequential effects', which occurs when the receptor has to move such as travelling along road. The summary table below is the ES assessment of the cumulative visual effects for the combined visibility.

<b>V P</b>	<b>Location</b>	<b>Approx. distance from the site</b>	<b>Direction from the site</b>	<b>Principal Receptor</b>	<b>Magnitude of Cumulative Visual Effect</b>	<b>Significance of Cumulative Visual Effect</b>
1	Marsh Road	2.2km	West	Residents	Low - Negligible	Slight
2	Twizzlefoot Bridge	2.9km	West	Motorists	Medium	Moderate

3	Footpath east of Southminster	2.8km	West	Residents	Low	Moderate
4	Church of St James Dengie	3.8km	North	Visitors to Church	Medium	Moderate - Major
5	B1021 south of Tillingham	5.3km	North	Walkers	Low - Negligible	Slight
6	Bridgewick Road	3km	East	Residents	Low	Moderate
7	St Peter's Church Bradwell	11.10 km	North	Walkers	Negligible	Minimal
8	Canewdon	8.3km	South West	Walkers	Negligible	Minimal
9	Coastal footpath Wallasea Island	3.4km	South	Walkers	Low	Moderate
13	West Mersea	14.9km	North	Beach Users	Negligible	Minimal
15	Jaywick from seawall	20.6km	North East	Walkers	Negligible	Minimal

12.9.2 The sequential effects considers the principal vehicle routes of the B1021 which connects Bradwell Waterside with Burnham, the B1010 between Burnham and Woodham Mortimer and the B1018 between Cold Norton and Southminster, and Marsh Road Burnham which runs to the south of the site. The ES notes that the B1010 and B1018 are significant as they provide the main vehicular access onto the Dengie Peninsula. From this sequential assessment it is recognised that Marsh Road leading east of Burnham considers the cumulative effects to be high and the sensitivity to change for the motorist to be major-moderate. Other routes near the wind farm offer glimpses of the wind farm from certain vantage points but topography and vegetation offer screening and the impact of the wind farm lessens as distance increases.

## 12.10 Cumulative Visual Effects Assessment

12.10.1 Of the static viewpoints VP1 at Marsh Road near Burnham-on-Crouch, VP4 at St James Church Dengie and VP6 at Bridgewick offer the clearest indicators of significant cumulative visual effect. These viewpoints illustrate that there are locations where the array widths of Middlewick and Turncole Wind Farms will combine in the scene to occupy a wide proportion of the view. In fact at VP4 the two wind farms will occupy the whole of the available view of the Dengie marshes. In recognition of this the para 5.10.49 of the ES text volume states: *'The introduction of the Turncole development in combination with Middlewick would result in turbines being prominent across almost the full sector of a view which is framed by mature trees and telegraph poles/wires in the foreground'*. In VP1 the convenient positioning of the houses in the foreground partially obscures the combined effect of Middlewick and Turncole Wind Farms together. The composition of VP6 with the Middlewick

Wind Farm in the far right of the frame and a wide open landscape to the left tends to underplay the combined array width of both wind farms in the scene. There will also be some closer locations and locations more equidistant from the two wind farms where the combined array widths will add up to considerably more than this. Clearly there is scope for significant cumulative effects on static visual receptors across a wide area of land. This includes road users, walkers, cyclists, horse riders and farm workers; all of which, and in particular the walkers, cyclists and horse riders, being sensitive to and appreciative of the special visual qualities of the area.

- 12.10.2 With regard to sequentially cumulative visual effects the ES assesses some local roads including Marsh Road Burnham-on-Crouch, but fails to specifically assess Hall Road Southminster and Hall Road Asheldham. These along with connecting roads between them encircle and divide the Middlewick and Turncole development areas and will receive sequentially cumulative visual effects to a similar degree of significance, or greater.
- 12.10.3 Unfortunately the ES also fails to assess sequentially cumulative visual effects for footpaths within the Dengie marshes areas and most significantly this includes the sea wall path from Burnham-on-Crouch to Bradwell. The sea wall path is the very definition of a subject for sequential cumulative visual assessment. It is a notable tourist route recognised for its qualities in literature and the high point of ones experience of the area. Its elevated and panoramic open views also make it particularly susceptible to sequentially cumulative effects.
- 12.10.4 The ES provides assessed levels of significance for the cumulative visual effects of Turncole if added to Middlewick and Bradwell Wind Farms. This records moderate significance levels for the static viewpoints 2, 3, 6 and 9; also for the St Peters Way sequential receptor. It also records major-moderate significance levels for static viewpoint 4 (Church of St James, Dengie) and the sequential views along Marsh Road near Burnham-on-Crouch. Additional major-moderate significance levels should be assumed for the sequential experiences from Hall Road Southminster and Hall Road Asheldham, together with other rural routes within a couple of kilometres of the Middlewick and Turncole sites. Also the sequential experience along the sea wall path and other nearby footpaths should be regarded as major-moderate significance. It would also be fair to assume that there are a few static viewpoint locations, not illustrated, that by virtue of closer proximity and/or more equidistant position to the two wind farms, would experience major cumulative visual impact significance.
- 12.10.5 With major being the highest possible level of significance allowable on the scales in this ES and that a 2km band applied to the combined areas of Turncole and Middlewick would cover practically the entirety of the D8 area of the Dengie marshes. If you add a 2km zone around the Bradwell Wind Farm this would, in combination, mean that the vast majority of the reclaimed marshes landscape at the end of the Dengie peninsula may be affected to the maximum recordable visual impact level. This means that whilst exploring or visiting this area the wind farms would dominate and overpower the visual experience of the whole area.

### **13. Construction and Decommissioning Stages**

13.1 For the construction stage of the development the landscape and visual impact would be subject to an evolving change as work progresses on the construction of each turbine. The temporary construction areas and associated infrastructure would result in a change to the landscape character introducing construction vehicles, noise and people into this tranquil area. The decommissioning stage would result in the removal of all structures and would restore the landscape to its current appearance.

#### **13.2 Overall**

13.2.1 In arriving at an overall conclusion to this section it is necessary to consider the policy position and landscape designations, the appeal decisions for Middlewick and Bradwell wind farms, and the landscape/seascape and visual impact of this application alongside the cumulative impact upon the east coast of the Dengie peninsula. Consideration also needs to be given to the 25 year lifetime of both wind farms and their removal after the expiry of their permission. Nevertheless it is considered that the cumulative landscape and visual impact of this wind farm development in combination with the Middlewick wind farm development would have a detrimental impact upon the landscape character and visual amenities of this area, which is recognised as a designated Special Landscape Area. The proposal would therefore be contrary to Local Plan policies and is therefore considered unacceptable.

### **14. Impact upon living conditions of residents**

14.1 When assessing the impact upon living conditions of residents it is generally considered that the greater the separation between turbines and dwellings the less likely is it that there will be unacceptable effects in relation to outlook and noise.

14.2 The approximate nearest turbine to building distances around the wind farm site are listed as follows: Turncole Farm (750m), Broadward Farm (780m), West Wycke Farm and Bungalow (800m), New Bungalow (800m), Poultry Farm (800m), Great West Wick Farm (830m), East Wick Cottages no.1 to 4 (1km to 1.08km), Redward Cottages (1.02km), Wraywick Cottage (1.05km), Montsale Bungalow (1.16km), New Montsale (1.25km), Old Montsale (1.3km) and Wraywick Farm (1.35km). In addition there are 14 residential properties located within 2km of the proposed wind farm. Please note that Turncole Farm has a financial interest in the wind farm development.

#### **14.3 Outlook**

14.3.1 Intrinsically linked with the Landscape and Seascape section of this report the visual impact of the proposal would need to be assessed in respect of outlook from residential properties.

14.3.2 The outlook from private residential properties is normally assessed as part of regular visual impact assessment work. Nevertheless, in planning terms private outlook is not normally a determinative factor. Perhaps when many properties share the same outlook it can be regarded as something of public amenity value, but otherwise effects on private outlook are not likely to be given much weight in a planning decision. However, this matter has been explored at inquiry for many wind farm cases and, in theory at least, it is accepted that the effects of a wind farm could cause such serious

harm to living conditions at a property that it would be widely regarded as an unattractive and unsatisfactory place to live and this would not be in the public interest. This was first set out in a 2009 appeal decision for the Enifer Downs wind farm proposal. Since the Enifer Downs inquiry, terms such as ‘overbearing’ and ‘oppressive’ have become commonly used as a way of expressing the types of threshold of harm that might give rise to the effects on an individual property being seen as unacceptable. However, the ES methodology goes one step further and by precedent cases asserts that this threshold is only likely to be breached where properties are within 1km of the wind farm. Individual circumstances must be taken into account and applying a tight distance limit to the consideration of residential outlook should be avoided. This may be particularly important in cases such as this where cumulative effects are likely to occur.

- 14.3.3 For this application the nearest properties around the wind farm would be subject to changes to their existing outlook. It could be said that those properties further a field would also result in a change to their outlook. Inevitably the closer the property is to the wind farm the more likely that outlook would be affected. For properties with habitable rooms and garden areas facing towards the wind farm these would experience the most change. The Ordnance Survey maps of the area, aerial photography and site visits to the wind farm area reveal that almost all of the properties have elevations that would provide them with an outlook of the wind farm. Some properties have gardens which allow for an outlook towards the wind farm.
- 14.3.4 The dedicated residential amenity section in the ES deals with the assessment of residential outlook. This uses viewpoint references from the main visual assessment section and in some cases supplements this with additional photography and wireframe modelling work for the property in question. The assessment work also responds to some specific site survey work, though this is limited to external observation or even observation limited to what may be determined from public vantage points. The most disappointing aspect is that not every property has a dedicated viewpoint photograph and wireframe, so for some there is no assistance or illustrative substantiation for the assessed effect on outlook. Notably this applies to Turncole Farm, Wraywick Farm and Middlewick Cottages.
- 14.3.5 The ES has undertaken an assessment of residential properties in the area and recognises that a small number of properties will experience uninterrupted clear views of the turbines from principal living areas and outdoor spaces. These properties are Great West Wycke Farm, East Wick Cottages and Broadward Farm but the ES considers that these changes would not be dominant or overbearing. Other properties are reported in the ES as likely to experience partial screening of the turbines from vegetation and outbuildings within the properties of West Wycke Farm, West Wycke Bungalow, East Wick Cottages (1&2), Redward Cottages, New Bungalow and Broadward Farm. For properties beyond 1km radius of the wind farm there would be varying degrees of screening afforded by tree cover and vegetation with two exceptions, which are the properties of Rumbolds and Old Montsale which have a more open aspect and are likely to have direct or oblique views of the turbines. The ES determines that that overbearing views are not likely to occur from the properties of Rumbolds and Old Montsale.
- 14.3.6 A small number of properties, immediately to the north and south of the wind farm, the broader east-west spread of the turbines will result in a wider array width being

apparent and they will occupy a larger proportion of the horizon in the available view. Otherwise, the separation distances to nearby properties and the nature of their outlook is comparable to the Middlewick wind farm and it is fair to assume that an inspector may come to the same conclusion that none of these properties would suffer overbearing or oppressive visual effects to an extent that would render them unsatisfactory places in which to live. So when considering this wind farm in isolation from any others this would not seem to be a determinative factor in the consideration of the case.

- 14.3.7 When compared to the Bradwell and Middlewick appeal decisions the distances from the turbines at the application site to the nearest properties is similar. For example the Middlewick wind farm nearest independent dwellings to nearest turbine distance is 855m from Turncole Farm and Brook Farm, and for the Bradwell wind farm the nearest independent dwelling of Munkins Farm to the nearest turbine would be 630m. For Bradwell the distance is much less than both the Middlewick wind farm and this application. For instance the nearest independent dwellings to nearest turbine distance are as follows: Broadward Farm 780m, West Wycke Farm and Bungalow, New Bungalow and Poultry Farm are all 800m, and Great West Wick Farm is 830m. The Inspector from the Bradwell appeal decision considered there would be no unacceptable overbearing or dominating impact upon the nearest properties. Similarly whilst this proposal would have some impact upon nearby residential properties but the impact would not be overbearing or sufficiently dominating to cause significant material harm to residential amenity from just one standalone wind farm.

#### **14.4 Cumulative Outlook**

- 14.4.1 The cumulative outlook from properties in the area needs to be considered in the event that both the Middlewick wind farm and this application's wind farm are constructed. A small number of properties sandwiched between and around the edges of both wind farm developments will experience a cumulative impact upon outlook. Disappointingly the applicant's ES provides does not provide a cumulative assessment of residential outlook. This is a serious omission and requires some detailed consideration.
- 14.4.2 Of the residential properties assessed, within the normal residential amenity section of the ES, six are considered to be candidates for consideration of significant cumulative effects. These are: Turncole Farm, Broadward Farm, Wraywick Farm, Rumbolds, Montsale Bungalow, and Middlewick Cottages.
- 14.4.3 Turncole Farm lies directly between the Middlewick and Turncole sites. The frontage of this property faces directly towards the Middlewick Wind Farm and has little in the way of perimeter screening. The rear aspect and private gardens of this property face directly towards the Turncole Wind Farm and again there is limited perimeter screening. In both directions the wind farms would be less than 1km away. To the front Middlewick Wind Farm would occupy approximately 50 degrees angle of view and to the rear Turncole Wind Farm would occupy around 95 degrees. Both main aspects of the house would be affected to a high degree. In these circumstances the level of impact on the outlook from this property has increased considerably from that assessed for one wind farm alone and it seems fair to suggest that this should be regarded as stepping over the threshold of acceptability and will render this property

an unsatisfactory place in which to live. This property is financially involved with the wind farm but if this were to be sold off separately or let out other occupiers would experience these issues. There are no planning controls that can require the current occupiers to remain at this property for the duration of the wind farm's lifetime.

- 14.4.4 Broadward Farm lies in a very similar position to Turncole Farm between the two wind farm schemes. It too has an open frontage that looks directly towards the site of the Middlewick Wind Farm and a rear aspect that is orientated towards the Turncole Wind Farm. There are habitable rooms in both front and rear elevations and the rear garden area faces the Turncole wind farm. The Turncole Wind Farm would occupy 83 degrees of the rear aspect outlook and Middlewick Wind Farm would occupy 40 degrees of the front outlook. As with Turncole Farm it is considered that this could be argued to create a property that would be so affected that it would become an unsatisfactory place to live.
- 14.4.5 Wraywick Farm lies approximately 1.35km to the north of the Turncole site and less than a kilometre to the west of Middlewick Wind Farm. This property has a general frontage orientation to the south-west and rear to the north-east. However, it also has a substantial garden area with conservatory that enjoys a broad outlook arcing from east to south and both sets of turbines would be taken into this panorama. The Middlewick turbines would occupy approximately 45 degrees of the easterly aspect and the Turncole turbines would occupy around 55 degrees of the southern aspect. This cumulative impact affecting the main garden area of this house may seem quite extreme but on the precedence of the Bradwell and Middlewick cases the view may be taken that this property still has optional garden spaces that are not so affected by the wind farms and as such it would not be considered an unsatisfactory place in which to live.
- 14.4.6 Rumbolds lies approximately 1.6km to the west of Turncole Wind Farm and over 2km from Middlewick. Although both would be visible in the same important rear aspect of this property, the distances involved and the fact that the property has ample amenity space all round, including other aspects away from the wind farms, this property is not likely to be considered unsatisfactorily affected.
- 14.4.7 Montsale Bungalow lies around 1.15km to the north-east of Turncole Wind Farm and about 1km to the south of Middlewick Wind Farm. It has a north-south orientation and its main open countryside view is away from both wind farms to the south. Other aspects are relatively screened and as such although the location would experience significant cumulative effects from the two wind farms, it is unlikely that this property would be considered unsatisfactorily affected from a residential outlook point of view.
- 14.4.8 The Middlewick Cottages lie around 0.75km to the south-east of the Middlewick Wind Farm site and around 1.6km to the northeast of the Turncole site. This pair of semi-detached properties have a frontage aspect to the south and rear aspect to the north. Both aspects are quite open. Middlewick Wind Farm will occupy the left hand side of views to the rear and Turncole will be visible but some way over to the right in views from the front. Whilst both aspects of these properties will be affected and the cumulative visual effects will be significant, it is unlikely that they will be considered to be of an extent that renders the properties unsatisfactory places in which to live.

14.4.9 It is considered reasonable to assume that the two properties that lie immediately between the two wind farm schemes can be argued to be at risk of extreme cumulative effects on their outlook that would make them be commonly regarded as unacceptable places in which to live. All of the other properties outlined above will experience significant cumulative effects but not to the extent that it would be considered unacceptable in planning terms.

## **15. Noise**

15.1 Assessment of noise needs to be considered in accordance with national and local planning policies as well as any other material considerations. To assist officers in the assessment of noise the Council appointed a noise consultant to provide expert advice in addition to the internal consultation with MDC's Environmental Health service.

### **15.2 Policy Position**

15.2.1 PPG24 (Planning and Noise) acknowledges amongst other things that much development of essential infrastructure will generate noise and provides that the planning system should not place unjustifiable obstacles in the way of such development although it must not cause unacceptable noise or disturbance. The policy also states that a change of 3 dB(A) is the minimum perceptible under normal conditions, and a change of 10 dB(A) corresponds roughly to halving or doubling of loudness of sound.

15.2.2 PPS22 (Renewable Energy) and the PPS22 Companion Guide specifically refers to the consideration of the ETSU-R-97 report 'The Assessment and Rating of Noise from Wind Farms' when dealing with planning applications for wind farms. The ETSU-R-97 report was produced for the Department of Trade and Industry and describes a framework for the measurement of wind farm noise and gives indicative noise levels calculated to offer a reasonable degree of protection to wind farm neighbours without placing unreasonable restrictions on wind farm development or adding unduly to the costs and administrative burdens on wind farm developments or planning authorities. ETSU-R-97 is a methodology that rates the balance between the loss of amenity of individual neighbours and the need for renewable energy in the wider public interest.

15.2.3 The current ETSU-R-97 practice is through the application of noise limits at the nearest noise sensitive properties measured externally from the property. ETSU-R-97 advises that noise levels should be no more than 5 dB(A) above the prevailing background noise level or within 35 – 40 dB(A) background noise levels during the daytime hours and 43 dB(A) during the night time conditions. Unlike any other form of noise control measures the ETSU-R-97 guidelines allows for a higher noise impact during the night than the day. The reason for this is that the ETSU-R-97 assumes that people are likely to be within their dwellings/buildings with doors and windows shut at night as opposed to being in their gardens or having windows open during the daytime. ETSU-R-97 therefore considers that amenity would be more affected during daytime hours and therefore requires a lower permissible noise level during the day. For properties with a financial interest in the wind farm the noise limits can be increased to 45 dB(A) for both daytime and night time. In this instance this would be the Turncole Farm dwelling closest to the proposed wind farm. These measurements

seek to protect amenities primarily from noise from the turbines and their operating machinery in the nacelle such as the gearbox for controlling the blade operations.

- 15.2.4 The ETSU-R-97 guidelines have been subject to much criticism since they were produced in 1997 and even recent appeal decisions for wind farm developments in other areas of the country have considered other legislation in respect of noise. However, from this Council's point of view the Bradwell and Middlewick appeal decisions form material considerations and for both decisions the ETSU-R-97 guidelines were applied following PPS22's guidance.
- 15.2.5 In March 2010 the government published the Noise Policy Statement for England which is also a material consideration. The document seeks to clarify the underlying principles and aims in existing policy documents, legislation and guidance that relate to noise. This Noise Policy Statement for England (NPSE) should apply to all forms of noise including environmental noise, neighbour noise and neighbourhood noise. The document suggests a more sustainable approach to dealing with noise issues and has been heavily influenced by European law. The Government's noise policy aims to avoid significant adverse impacts on health and quality of life, mitigate and minimise adverse impacts on health and quality of life, and, where possible, contribute to the improvement of health and quality of life.
- 15.2.6 Turning to the Local Plan, policy PU6 on (Renewable Energy) states that proposals for development of renewable energy facilities will be permitted provided they would not (amongst other things) generate an unacceptable level of noise or have a detrimental impact upon adjoining properties or landholdings. Also relevant for consideration is Local Plan policy CON5 (Pollution Prevention) which states that development having an adverse impact on the environment by means of pollution release to land, air etc will be refused. All developments will be expected to minimise their impact on the environment by adopting environmental best practice and implementing the necessary pollution prevention measures.

## **16. The ES Assessment**

- 16.1 The methodology used in the ES follows the PPS22 guidance using the ETSU-R-97 criteria and has used British Standard BS 5228 for noise control on construction sites. Twenty five properties were considered in the ES methodology where noise levels predictions from the wind farm were made. The ES reports that 17 of these 25 properties were below the ETSU-R-97 35dB(A) limit. Eight properties do not pass the simplified noise criteria and therefore full acoustic assessments were carried out. The simplified noise criteria is the noise limit to 35dB(A) up to wind speeds of 10m/s at 10m height. The ES shows that six locations were chosen for this testing and these include Great West Wycke Farm, Turncole Farm, Broadward Farm, Montsale Bungalow, West Wycke Bungalow and 4 East Wick Cottages. The ES does not explain why eight sites were not used but the sites chosen show a geographical spread and there are more than one property located at some of these sites. The acoustic assessments comprised of sound level metres housed in weatherproof enclosures at a height of 1.5m above ground level and the measuring was carried out continuously between February and April 2010. These sites were agreed with the Council's Environmental Health dept.

16.2 The results for day time readings at the properties assessed showed that noise levels were within the ETSU-R-97 limits between 35 dB(A) to 40 dB(A). A small number of properties experienced levels above 37dB(A) at a wind speeds above 8m/s but this takes into account increased background noise levels increase due to windier conditions. For night time levels the noise predictions were within the 43dB(A) ETSU-R-97 limit until wind speeds reached 10ms when this would go beyond the limit for four properties. Overall the ES the noise level predictions from the operation of the wind farm to be 38.2 dB(A) or below at all wind speeds for all properties.

### **16.3 Assessment of the ES findings**

16.3.1 The principle sources of noise from the development derive from the turbine blades rotating in the air and from internal machinery such as the gearbox in the nacelle (hub) and the generator on the ground level. The nacelle is insulated to minimise noise radiation but will create noise above the background noise level during periods of limited wind. This is caused by the need for the machinery within the nacelle to assist in turbine rotation. When conditions are right for increased wind speed the prevailing background noise would be dominated by the wind masking any noise from the turbine nacelle.

16.3.2 The blades are designed to minimise noise as much as possible whilst allowing for optimised power transfer from the wind. Other sources of noise can be from low frequency noise and vibrations.

16.3.3 It is important to establish a clear baseline of existing noise. This is done by measuring background noise levels at representative locations and plotting them against wind speed measured on the development site. The applicant has done this by carrying out background noise monitoring at six locations. At low wind speeds background noise levels are dominated typically by non-wind noise such as distant traffic. But at higher wind speeds day and night noise levels should be the same because they depend on the wind. The background noise levels at all the sites reveal distant traffic and similar typical activity noise during the day. This puts an average lower limit on the background noise level of about 25dB(A) during the day but about 20dB(A) at night. The variation in background noise levels on sites generally is due to the degree of shelter that properties have and the amount of noise generating vegetation. The six sets of measurements are very consistent with each other as would be expected on flat land such as this where measurement locations are very similar. Furthermore the background noise levels are generally similar to the Middlewick data though they average about 3dB(A) higher during the day at middle wind speeds where the margin over background noise is usually greatest. The data is only about 1dB(A) higher than the Middlewick data at night.

16.3.4 The noise levels of the turbine at surrounding properties has been calculated by the noise consultant who considers that the turbine noise levels have been calculated generally in accordance with best practice, except that they are considered to have been calculated slightly low in the ES. The noise consultant advises that turbine noise can vary slightly depending on what manufacturer of turbine is used, which is unknown at this point. With these types of applications such matters are generally dealt with through planning conditions but the developer would need to ensure the chosen turbine complies with the noise limit conditions which would be attached to any planning permission.

- 16.3.5 ETSU-R-97 compares the turbine noise with a level 5dB(A) above background noise unless background noise levels are low when it sets a lower limit. The day time lower limit can be anywhere between 35dB(A) and 40dB(A) and the night time lower limit is 43dB(A). During the day the lower limit is determined by the number of properties in the vicinity, the size of the wind farm (in effect) and the level of the background noise. This wind farm, compared with others, has a moderate number of neighbouring properties, is a moderate size but has very low background noise levels. Background noise levels during the day of 29dB(A) at 6m/s and 33dB(A) at 8m/s are unusual but this is due to remote tranquillity of this area. Accordingly it is considered that the lower day time limit should be in the lower part of the range and, ideally, 35dB(A). ETSU-R-97 provides for higher levels of turbine noise to be permitted at houses where the occupier has a financial involvement in the wind farm. It is considered that the proposal fails to meet the ETSU-R-97 day time noise level when the lower limit is set at 35dB(A) at the New Bungalow, Poultry Farm and West Wycke Bungalow. It does meet the day time level if the lower limit is set at 36dB(A). Nevertheless the ETSU-R-97 day time limit is achieved which requires the limits to be within 35 to 40dB(A). This assessment uses the average of all six background noise levels as the baseline for assessment. All properties meet the ETSU-R-97 night time level.
- 16.3.6 In addition to the ETSU-R-97 criteria the noise consultant has also applied the British Standard used for rating industrial noise affecting mixed residential and industrial areas which is BS4142. This standard states that a *difference of around 10dB(A) or higher indicates that complaints are likely. A difference of around 5 dB(A) is of marginal significance.* As an indication of what might be considered as a significant increase in ambient noise it could be considered that if the turbine noise level was likely to give rise to complaints then this would constitute a major loss of amenity. The following criteria set out in BS4142 describes the levels of significance:
- A difference of 1dB or less – insignificant
  - A difference of 2 to 4dB – marginal loss of amenity
  - A difference of 5 to 7dB – significant loss of amenity
  - A difference of 8dB or more – major loss of amenity
- 16.3.7 Environmental Health acknowledges that a difference of 3dB is discernable to the human ear. The noise consultant's view is that there is some loss of amenity during the day at some properties which is significant. The main loss of amenity will be at night when noise levels are lower. There will be a major loss of amenity at Turncole Farm, Broadward Farm, West Wycke Farm, Great West Wycke, Redward Cottages, New Bungalow, Poultry Farm and West Wycke Bungalow. There will be a significant loss of amenity at six other properties. This is all based on the BS4142 assessment.
- 16.3.8 However, turbine noise is measured by a different parameter from all other industrial noise and PPS22, and many wind farm appeal decisions, make it clear that the ETSU-R-97 guidelines should apply and not the BS4142. This view was taken with both the Bradwell and Middlewick appeal decision where the Inspectors made it clear that the ETSU-R-97 guidelines should apply as advised by PPS22.
- 16.3.9 From the Middlewick appeal the same noise consultant considered that the ETSU-R-97 lower day time limit should be 35dB. However, the noise consultant agreed with the appellant's consultant at the appeal that, in the event the inspector were to allow the appeal, it would be better to permit a lower limit of 38dB day and night rather than

35dB during the day and 43dB at night to avoid turbine noise being “turned up” at night. The Middlewick appeal decision therefore allows that a joint day and night time level of 38dB(A) should be used for wind speeds up to 8m/s with a level 5dB(A) above background levels for greater wind speeds. For financially involved properties this limit was set at 45dB(A) until wind speeds increase beyond 11m/s. In reaching this decision the Inspector from the Middlewick wind farm stated that a joint a day and night time limit would *‘prevent a sudden increase in acceptable noise limits during the night time and prevent excessive night time noise levels above background levels’*. Whilst not taking BS4142 into account directly in her decision, the Inspector acknowledged and had regard to the impact that changes in noise levels can have an amenity by accepting that a 8dB change in noise level would materially and adversely affect amenity. The Inspector went onto say that *‘at 38dB(A), I am satisfied that the amenities of the occupiers of the small number of dwellings that may be affected by any noise from the operation of the proposed turbines would not be unacceptably harmed and the aims of ETSU-R-97 would be met. Enforcement of such levels can be required by condition’*. Taking this into consideration, and given that the Turncole wind farm meets the ETSU-R-97 day time and night time criteria as the wind farm can be operational at 38dB(A), it would be difficult to refuse this application on noise grounds as a standalone wind farm.

#### **16.4 The ES Cumulative Assessment**

16.4.1 The ES reports that a cumulative impact assessment has been undertaken which considers the impact of this application and the approved Middlewick wind farm. The ES reports that predicted noise assessments were undertaken at 25 properties closest to both wind farms. For both wind farms the turbines would have a hub height of 80m, a rotor diameter of 90m and similar sound emissions. The nearest distances from nearby properties to turbines are stated as follows:

- For the Turncole wind farm the nearest distance from turbine to dwelling is as follows: Turncole Farm (750m), Broadward Farm (780m), West Wycke Farm and Bungalow (800m), New Bungalow (800m), Poultry Farm (800m), Great West Wick Farm (830m),
- For the Middlewick wind farm the nearest distance from turbine to dwelling is as follows: Middlewick Cottages (775m), Turncole Farm (855m), Brook Farm (855m), Court Farm (880m), Wraywick Farm (945m)

16.4.2 From the 25 properties considered there were 11 properties below the 35dB(A) ETSU-R-97 noise limit but 14 properties above the simplified noise limit. The simplified noise criteria is the noise limit to 35dB(A) up to wind speeds of 10m/s at 10m height. The properties affected would experience noise levels between 35 to 40dB(A) which is in line with the ETSU-R-97 limits apart from Turncole Farm which breaches the 40dB(A) limit but as a financially involved property would still meet the ETSU-R-97 limits which allows financially involved properties to be up to 45dB(A). The ES reports that the absolute lower quiet waking hours noise limit is increased to 40dB(A) for the cumulative assessment which is still within the ETSU-R-97 limits. The ES concludes that the predicted noise levels are within the noise limits at all of the properties considered.

## 16.5 Cumulative Impact

- 16.5.1 There are a number of difficult issues here. Although the likely noise levels from Middlewick can be calculated based on the turbine type put forward in that application it is not known whether this will be the final one used. Such details will need to be agreed through planning conditions imposed on that planning permission. In any case Middlewick is entitled to use up its “noise budget”, which is the noise level of 38dB(A) up to a wind speed of 8m/s as stated in the planning conditions. What’s more Turncole must not only comply with any limits assigned to that consent but, together with Middlewick, must comply with the Middlewick conditions. The Middlewick conditions were determined as being appropriate protection for the residents only a few months ago and it would be quite wrong if those limits were now to be raised.
- 16.5.2 The Council argued at the Middlewick Inquiry that a day time lower limit of 35dB(A) was appropriate but agreed to a lower limit of 38dB(A) at all times day and night to avoid the turbines running at a higher noise level at night which was considered to be more annoying to residents than having the same, but higher level operating continuously. Assessing this against the day time background noise level averaged over the six Turncole measurement sites the cumulative noise levels meet the ETSU-R-97 day time standard if a lower limit of 37dB(A) is used. However, if the cumulative noise level is assessed against the Middlewick conditions the application fails at Broadward Farm and at Middlewick Cottages and that means that the Middlewick condition is breached.
- 16.5.3 At this stage it is not known what the turbines will be at Middlewick and it is entitled to use up its “noise budget”. In fact, even if the Nordex turbines were used and left a margin inside the Middlewick condition they might reasonably want to keep that margin for the future – for example to allow for turbines getting more noisy as they got older. If the Middlewick wind farm were to use up its noise budget this, with the addition of Turncole, could take the noise level up to or even above the ETSU-R-97 noise limit with a lower fixed level of 40dB(A). This could happen at the most affected properties of Broadward Farm and Montsale Bungalow.
- 16.5.4 Another issue here is whether the cumulative noise levels from the two wind farms cause a significant loss of amenity or breach ETSU-R-97 guidelines. In the case of the loss of amenity the noise consultant has stated there would be a loss of amenity from Turncole alone if the BS4142 is applied so there would clearly be a greater loss of amenity from two wind farms. As to the ETSU-R-97 limits, which is the approach used instead of BS4142, the noise consultant has advised that if Middlewick were to use up all its “noise budget” then it is possible that the ETSU-R-97 day time limit would be exceeded even if the fixed limit were at the highest level of 40dB.
- 16.5.5 As a result the noise consultant cannot advise on proposing a cumulative noise condition because it is not envisaged how such a condition could be enforced. In the event of a breach, there would be no way of knowing whether it was the Middlewick wind farm or the Turncole wind farm that was at fault. It is considered that residents would expect the Middlewick condition would be the noise level from all turbines and so the Middlewick condition should not be breached cumulatively with Turncole. On this basis it is therefore considered that the cumulative impact is unacceptable. Furthermore, the details of the turbines to be used at Middlewick is unknown but they

are entitled to use up all the allotted noise budget in their condition (38dB(A)), which means that they could use different turbines that were more noisy than the ones stated in the ES, which were an example model of turbine that would be used. One of the planning conditions from the Middlewick appeal decision requires details to be agreed through the use of a planning condition. When the Turncole wind farm is added to the Middlewick turbines the excess over the Middlewick condition could potentially be as much as 2dB and this would have an even more unacceptable impact upon residents.

## **16.6 Construction and Decommissioning Phases**

- 16.6.1 The construction phase of the development will result in the most significant noise implications from the construction of the turbine foundations, erection of the turbines, excavation of trenches for cables, and from the associated hardstandings, access tracks, construction compound and substation. PPG24 advises on mitigation measures through the use of planning conditions to noisy development.
- 16.6.2 The ES refers to BS 5228 as setting the target level for noise to be 65 dB(A) and the ES shows that none of the predicted construction noise would exceed this target. Based on the ES predictions the noisiest days for nearby properties will be when site tracks are constructed as these are closer to nearby properties than the turbines. The Department of the Environment Advisory leaflet on Noise Control on Building Sites sets a fixed limit of 70 dB(A) in rural areas away from main roads so all the noise predictions would fall within this criteria. The ES states that working hours for construction would be from 7am to 7pm on Monday to Fridays and 7am to 1pm on Saturdays, however, it is considered that the hours should be from 8am to 6pm for weekdays and 8am to 1pm on Saturdays. Such measures would need to be agreed through a planning condition. The ES states that a lower noise target (55dB(A)) will be used on Saturdays to reduce the impact on nearby residents. To mitigate against noise the ES refers to the implementation of acoustic barriers, fitting of silencers to vehicles.
- 16.6.3 Environmental Health have recommended that a condition is imposed regarding construction work noise, which can form part of an overall construction method statement. Even so Environmental Health stated that a 55 db(A) is still in excess, in some cases, of 30 dB(A) above the background levels within proposed construction hours. Therefore noise mitigation measures such as bunds and barriers will also be needed. In addition to any planning condition other legislation covers statutory noise nuisance, which the Council's Environmental Health control.
- 16.6.4 Noise will also derive from the decommissioning of the wind farm with the removal of the turbines and removal of concrete bases
- 16.6.5 As stated in the Highway Matters section of this report the proposal would involve a significant amount of traffic movements which would lead to noise implications for properties near to the site and along the vehicle routes to the site. The ES refers to increases in noise at the six noise testing locations along the delivery route and the ES estimates the worst case scenario would be 105 vehicle movements per day during the most intensive period of development. This traffic will include dumper trucks, lorries and concrete mixers. The predicted noise level during this period would be 57 dB(A). Whilst dwellings would be affected along the delivery route it is the northern edge of Burnham and southern part of Althorne which comprise of the highest concentrations

of dwellings. However, any noise impact would only be for a temporary period and to protect amenities of residents in the vicinity of the access route the construction method statement and highway management conditions can impose mitigation measures to control hours of use and traffic calming measures.

- 16.6.6 The noise consultant's advice is that construction and decommissioning noise can be controlled by conditions limiting hours and possibly requiring a method statement to be agreed.

## **16.7 Infrasound and Low Frequency Noise**

16.7.1 Infrasound is defined as noise occurring at frequencies below which sound is normally audible as human ears are not sensitive to low frequency noise. Noise from wind turbines covers all frequency bands from low to high. As the distance from a wind farm increases the noise levels decrease as the sound energy is spread out. The PPS22 Companion guide states that the ETSU-R-97 report studied vibrations and low tonal sound and concluded that there is no evidence that low frequency noise is harmful to human health.

16.7.2 The ES recognises that low frequency noise is always present even in quiet background locations and is generated from natural sources such as weather conditions and from artificial sources such as household appliances and traffic. There have been numerous studies undertaken into low frequency noise. The most recent was published by the Department of Trade and Industry in 2006 (The Measurement of Low Frequency Noise at Three UK Wind Farms) and concluded that there was no evidence that low frequency noise or infrasound was causing human health effects. Another study by the German Wind Institute found that the level of infrasound emitted by the wind turbine was below 30 dB(A) which is the threshold of human perception.

16.7.3 The noise consultant has advised that there is not any specific low frequency noise problem that has not been assessed within the broadband analysis carried out in the ES.

## **16.8 Vibration**

16.8.1 Vibration is structure borne noise originating from a vibration as a low frequency noise through a wall or solid surface. The ES reports that a study titled 'Low Frequency Noise and Vibration Measurements at a Modern Wind Farm' stated that vibration levels at 100m from the nearest turbine itself were a factor of 10 lower than those recommended for human exposure. The report found that there was no clear relationship between vibration levels and wind speed, and that vibrations come from other sources. The ES considers that there would be no harmful vibration affects from the operation of the wind farm. The noise consultant has advised the that levels of ground borne vibration and infrasound from turbines are below the threshold of perception of the one in a thousand most sensitive person even at a distance of 100m from a turbine.

## **16.9 Blade Swish (Aerodynamic Modulation)**

- 16.9.1 Aerodynamic Modulation (also known as Amplitude Modulation) is a recognised phenomena often referred to as blade swish or thump. A report known as the Salford report was commissioned by the Government to study Aerodynamic Modulation and reported in 2007 that of 133 operational wind farm sites in the UK only 4 cases of Aerodynamic Modulation were reported. When this was found such an event only occurred between 7 to 15% of the time at the identified wind farms. PPS22 requires renewable energy developments to be located and designed in a way to minimise increases in ambient noise. PPS22 states that aerodynamic noise is generally unobtrusive and is similar to the noise of wind in the trees.
- 16.9.2 When considering this phenomena the Inspector's from the Bradwell and Middlewick appeals did not consider that Aerodynamic Modulation carried much weight in determining those appeals. On the question of Aerodynamic Modulation, the mechanism is not properly understood. It happens at perhaps 20% of turbine sites. There are pointers that suggest a higher than average risk. These include a particularly high wind shear site, short towers relative to rotor diameter, close proximity of turbines to each other and forestry. None of these indicators appears to be present here so no objections are raised.

## **16.10 Overall**

- 16.10.1 The proposed wind farm would result in a major loss of amenity at about ten properties at night and a significant loss at some others. There will also be some loss of amenity during the day. It is considered, following the noise consultant's advice, that this wind farm will result in an unacceptable level of noise and therefore be in breach of Policy PU6. When considering the cumulative impact of Turncole with the consented Middlewick wind farm, Turncole must not only comply with any limits assigned to it should it be consented but, together with Middlewick, must comply with the Middlewick conditions. If the installed Middlewick turbines are those in the Middlewick ES then the two developments cumulatively will meet the ETSU-R-97 standard for the Turncole development during the day if the lower level is set at 37dB(A). However, if the cumulative noise level is assessed against the Middlewick condition then that condition, which states a lower limit of 38dB(A) for wind speeds below 6ms, is breached. If the Middlewick wind farm were to use up all its noise budget this, with the addition of Turncole, could take the noise level up to or even above the highest ETSU-R-97 day time limit.

## **17. Shadow Flicker and Reflective Light**

- 17.1 'Shadow Flicker' is a phenomenon caused by sunlight passing through the arc of the turning blades of a turbine resulting in a flickering shadow where light passes through a narrow aperture such as a window in a building. These conditions would only occur when there is an alignment of the sun, turbine blades and receptor buildings. Shadow flicker could potentially impact upon properties east, north or west of the turbines throughout different periods of the day and depending upon the position of sun in the sky. The rotary action of each turbine results in an intermittent and regular shadow flicker impact. The shadow flicker can be experienced up to distances of 900m away from each turbine based upon the proven occurrence to be within ten rotor diameters of a turbine as stated in PPS22.

- 17.2 In terms of this application the ES predicts that only Turncole Farm would experience shadow flicker up to 20 days per year for a maximum time period of 16 minutes per day during the afternoon from mid to late December from turbine T4. It should be noted that Turncole Farm is a financial beneficiary of the wind farm project. Given that this is the only property affected by shadow flicker and for only a small period of time and only when weather conditions permit the proposal would not create any significant issues as a result of shadow flicker.
- 17.3 The PPS22 companion guide states that turbines can cause flashes of reflective light, which can be visible for some distance. To avoid any potential reflective light the proposed turbines would be finished in a matt surface finish; the convex surfaces of the turbines reflect light in a divergent manner; the variability of flow within the wind farm results in slightly different orientation directions and it is unlikely that an observer will experience simultaneous reflections; and finally certain weather conditions are required.

## **18. Highway Matters**

- 18.1 The application site is situated in a remote location where public highway roads serving the site and the surroundings only consist of one and a half width carriageways, which link to the wider area and connect to the 'B' roads in this part of the District. The existing access tracks are either unmade single carriage widths or public footpaths.

### **18.2 Policy Position**

- 18.2.1 The national policy framework for assessing planning applications is set out in PPG13 on transport. From the Local Plan there are a number of transport policies applicable to the proposal. The pre-ambule to the transport planning policies outlines the need for a strategy for traffic management through settlements to enforce speed reduction and identify routes for heavy goods vehicles through working with the County Council as the highway authority. The ES identifies that pre-application consultation has taken place to identify the best route to the site.
- 18.2.2 Policy T1 on Sustainable Transport and Location of New Development seeks to restrict development to fall within the defined development boundaries. This proposal therefore requires an exception to this policy as the proposal needs to be located in an area outside of a settlement. Policy T2 on Transport Infrastructure in New Developments is relevant as this seeks to deal with traffic management at sites and through the access arrangements to sites. Policy T2 also seeks off site improvements to the highway, facilities for pedestrians and cycling, appropriate road layouts, and links to existing footpath networks.
- 18.2.3 The proposal during the construction and operational stages of the development could generate the need for parking for construction workers and through interest from the general public when the turbines are operational. Policy T8 on Vehicle Parking Standards encourages off street parking provision and this needs to be taken into consideration.

- 18.2.4 Specifically to renewable energy provision Policy PU6 states that proposals for development of renewable energy facilities will be permitted provided they would not generate an unacceptable level of traffic.
- 18.2.5 Pre-application consultation has taken place between the applicant and Essex County Highways with regard to the delivery of all associated infrastructure and materials to the site and this is referred to below.
- 18.2.6 A delivery route has been identified from the A130 onto the A132 by-passing South Woodham Ferrers then linking to the B1012 (Lower Burnham Road) travelling east. Pre-application considerations were given to three different routes to the site but all would reach a point on the Lower Burnham Road (B1012) before the three different routes were considered. A plan submitted with the application details these dry run routes and a dry run exercise was undertaken before the application was submitted and was attended by Essex County Highways and the Police. From the dry run routes an abnormal load delivery route and a standard traffic route are detailed on the plans. Both routes would use the Lower Burnham Road to a point east of Althorne where the road meets 'Endway'. Two different routes would then be used for abnormal load delivery route and for standard traffic. These routes would then join up again at Marsh Road to the north of Burnham. Marsh Road would then be used as the remainder of the delivery route to the wind farm site.

### **18.3 Abnormal load delivery**

- 18.3.1 For the abnormal load delivery route the route would use the Lower Burnham Road to a point east of Althorne where the road meets 'Endway' and then continues onto 'Old Heath Road' in an easterly direction. The route would then turn onto the Southminster Road (B1021) in a southerly direction towards Burnham before turning onto Marsh Road where the route then reaches the site. Once delivered the abnormal load vehicles used will be retracted in size and would use the standard traffic route for returning.
- 18.3.2 The number of deliveries of these abnormal load vehicles would comprise of 44 journeys and at most 6 journeys in one day. The abnormal load delivery would comprise of two specialist vehicles used to deliver the turbine parts. One vehicle would transport the turbine blades and the other would transport the tower sections, hub and nacelle. The blade vehicle is the largest of these vehicles as the blades are the longest components at 45m in length. This vehicle is retractable so the vehicle can be shortened if required leaving the blade to overhang the vehicle. When not containing any abnormal loads these vehicles are retracted to 18m in length. A maximum of 3 abnormal vehicles would form one convoy and all these low load vehicles would have police escorts. There are no details regarding the height of these vehicles.
- 18.3.3 For the abnormal load route there are a number of difficulties proposed with the route. To facilitate the delivery vehicle a number of works are required to the highway and all works would fall within highway land apart from the works to Lower Burnham Road to the north of North Fambridge where a planning application (FUL/MAL/11/00806) has been made for works to the private land in addition to works to the highway. The two 'S' bends at Great Hayes Farm and at the junction with North Fambridge will create difficulties and these sections of road have some of the highest traffic levels so inconveniences would be caused to other road users from these works and from the additional traffic using the routes although the abnormal

load vehicles are likely to cause most disruption. It is considered that the worst section of road where difficulties would be experienced and where the character and appearance of the road would change is the section from The Endway along Old Heath Road to Southminster Road. This road is generally very narrow for such large vehicles. The road is one and half carriageway width and contains many areas where there are high levels of vegetation along both sides of the road and overhanging the road in a canopy arrangement. This high level of vegetation forms a distinctive character and appearance to this road, which is typical of a tranquil rural setting. This road also has some blind corners and there are houses positioned close to the road in some locations. The ES contains numerous sections of the road which require widening works to facilitate abnormal load vehicles but these works do not stipulate any vegetation removal and have been produced using software to show only the road changes. These drawings do not demonstrate whether the vegetation canopy which overhangs part of this road would be affected by the height of the vehicle and its load. It is considered that the extent of these works would result in a significant loss of vegetation including mature trees and hedgerows along this road and would unacceptably change the character and appearance of this rural road. In addition the residents along this route would experience noise and disruption and vibrations from the abnormal loads. The abnormal load route would continue to Marsh Road whereby the vehicles would pass a number of residential properties and a school. Again there would be further noise, disruption and vibrations from the abnormal loads passing. Potentially such vehicle movements could be at the same time period as when the Middlewick wind farm is being constructed, which would create further difficulties along parts of the route.

- 18.3.4 County Highways recommends that planning permission be refused as the modification of the existing highway to allow for the transportation of the abnormal loads associated with the development proposal has not been demonstrated to the satisfaction of the Highway Authority. It is noted from the County Highways response that discussions have taken place pre-application and during the life of this application to address these issues but such matters will not be resolved during the life of this application.
- 18.3.5 The ES reports that County Highways have advised the applicant of weight restrictions on the bridges along Marsh Road although it is noted stated in the application whether works would be required to any bridges along the route. When the abnormal loads have reached the application site at 'site entrance 1' vehicles would enter the site. The ES reports that to deliver the turbine parts for turbines T5, T6 and T7 it is proposed to exit at the north of the site at 'site entrance 2' travel eastwards along the road known as The Marshes and re enter the site at 'site entrance 3'. The reason for doing this is to reduce the number of culverts that would require upgrading and minimise the impact upon farming land.
- 18.3.6 Alternative options other than road delivery have been considered for abnormal load delivery. Rail transport was considered as part of the pre-application process. The ES reports that the main restriction for the delivery of abnormal loads using rail transport is width as the width limit is 2.5m and turbine towers and nacelles can measure 4.5m and more. Therefore it is not possible to delivery the abnormal loads by rail.

- 18.3.7 Consideration has also been given to the delivering turbine parts via the River Crouch which is the approach being used by the Middlewick wind farm developer. The ES for this application states that there are no port facilities nearby that would be suitable for the large vessels needed so additional infrastructure would be required. The ES states that it is possible using specific vehicles to deliver turbine parts via a marine access and the applicant has undertaken research on this issue. The ES concludes that due to issues regarding accessing privately owned land, the need for creating additional infrastructure and the lack of access to the shoreline, due to sea defences, marine access for delivery of abnormal loads is not considered the preferred option. However, given that the Middlewick wind farm turbine parts will be delivered via a temporary marine access it is considered that this part of the application requires further investigation. Whilst the comments of the ES are noted this does not demonstrate fully why a marine delivery route is not possible. If a marine delivery route is acceptable for one wind farm developer it is considered that a similar approach could be used for another wind farm development. Officers consider that a marine delivery route would be the preferred option for delivery of abnormal loads when compared to the road network route chosen by the applicant and especially as a result of the issues raised with regard to the abnormal delivery route proposed.
- 18.3.8 The time of day when the abnormal loads would be delivered has yet to be determined but the ES reports that County Highways would prefer a night time delivery to minimise disruption. However, this may not be acceptable from an amenity point of view as there are residential properties along the route. A day time delivery would also cause disruption to users of the existing highway. It is stated that road closures will also be needed.
- 18.3.9 Overall the abnormal load delivery route and its impacts are considered unacceptable for the reasons stated above.

#### **18.4 Standard Traffic Route**

- 18.4.1 The standard traffic route would follow the Lower Burnham Road east of Althorne all the way to the Burnham and the road traffic junction with Southminster Road, to the north of the town.
- 18.4.2 A significant number of vehicle movements for standard traffic delivering to the site would be experienced. The road and hardstandings phase of the construction would experience a large proportion of these vehicle journeys. For the site road construction phase there would be up to 2001 journeys for providing the stone. For the crane hardstandings there would be 690 vehicle movements. The maximum number of journeys per day for these construction phases would be 40 per day over a 5 month period. For the foundation construction period there would be 350 journeys for the turbine concrete delivery and a maximum number of journeys of 20 per day. Along parts of the route there would be a period of 108 HGV vehicle movements per day which equates to 9 an hour and this is the maximum worst case scenario. This is a significant number of vehicle movements and would impact upon the existing road network and amenities along the route. In total it is estimated that there would be 6403 vehicle movements for the construction phase of the development.

- 18.4.3 When analysed against existing traffic counts for the road network along the route it is predicted to result in an increase of 30% more traffic on parts of the existing road network. For the main road such as the Lower Burnham Road and Southminster Road this impact would be less in percentage terms but for roads like Marsh Road this could result in an increase of more than 30%. The ES reports the worst period of traffic impact would be for the 7 days when concrete is poured for turbine foundations. The predicted increases in traffic movements have been assessed in accordance with the Guidelines for the Environmental Assessment of Road Traffic (IEA, 1993) which for this proposal would not create a 'discernible environmental impact' as referred to in the guidelines.
- 18.4.4 Clearly the construction phase of the development would represent a significant increase in vehicle number and movements. This would have an impact upon the existing road network and the amenity of properties/land uses along the routes. The ES has considered the impact upon Marsh Road, which is a part residential street before the road leaves the settlement of Burnham. This assessment identifies that there would be a period of 108 HGV vehicle movements per day which would be 9 an hour. This level of vehicle movements would have a significant impact upon highway and upon residential properties and a school which is located along this route. In the County Highways consultation response no objections have been raised to the application with regard to the standard traffic route. Details of vehicle movements and times can be provided through a traffic management plan as a planning condition if planning permission were to be granted. In determining this application consideration also has to be given to the Middlewick wind farm application which was refused *inter alia* with regard to the vehicle movement impact and residential amenity impact upon Station Road in Southminster. However, from the planning appeal for the Middlewick wind farm the Inspector did not consider the impact of vehicle movements would result in harm to amenities and a suitable traffic management plan would control vehicle delivery times over the construction period, which would be over a 12 month period. The Inspector stated that '*residential amenity would not change to such an extent during the limited period of construction as to cause unacceptable harm to residential amenity*'. Given this view, and given that Station Road has properties much closer to the public highway in comparison to Marsh Road it is considered difficult to object to this part of the application on the basis of the impact upon Marsh Road from vehicle movements.
- 18.4.5 Alternative options other than road delivery have been considered for standard construction traffic such as rail delivery. However, for delivering concrete it is not possible to use rail as concrete has a 2 hour time limit on a journey to ensure the quality of the concrete. Therefore use of the road network is the only viable option for concrete delivery to the site. For delivery aggregates there would be similar issues for rail delivery. Rail was also considered for the delivery of materials particularly stone and concrete deliveries but both Burnham and Southminster lack temporary storage areas and delivering construction materials using the Burnham station would result in significant disruption to the local road network in this busy part of the town.
- 18.4.6 During the operational stage of the development the vehicle movements to the site would be very low and infrequent by workers carrying out routine maintenance to the turbines. There would be no need for any abnormal load deliveries during the operational phase of the development.

## **18.5 Essex County Highways View**

18.5.1 Essex County Highways originally responded to the consultation response raising no objection to this application. However, following a meeting with Highway and Planning Officers it became apparent that additional information and drawings supplied by the applicant direct to County Highways had informed their original consultation response. This Council has not been supplied with such information which falls outside of the scope of the planning application and therefore not in the public domain for consideration with this application. Planning Officers have informed County Highways that such information cannot be taken into consideration as this information has not been subject to the formal consultation process. As a result County Highways have reviewed their original consultation response and provided a revised consultation response based only on the application details. County Highways view is that the modification of the existing highway to allow for the transportation of the abnormal loads associated with the development proposal has not been demonstrated to the satisfaction of the Highway Authority and this is unacceptable.

## **18.6 Fire access and emergency access**

18.6.1 The Fire and Rescue service have been consulted and they consider the access is considered satisfactory. However, this type of development may contain areas where fire may occur, whether caused by an electrical fault or some other occurrence, a fire fighting supply within an acceptable distance of any such risk should be considered. As the nearest available fire fighting water supply is a fire hydrant sited in Marsh Road, to the south of the site, the Fire Service have identified that further discussions on any possible risk should be considered. Upon further consultation the Fire Service has since reported that they have taken all reasonable steps to ensure that an adequate fire fighting water supply is provided for the premises.

## **18.7 Cumulative impact**

18.7.1 Similarly to this application the Bradwell wind farm proposes to delivery all turbine parts and construction materials to that site via the existing road network. Planning permission was granted on appeal for this wind farm and there is a traffic management condition attached to that permission which will satisfactorily deal with any traffic management issues with that application. The traffic management condition has not been discharged and a recent application to discharge this condition was refused as a pending appeal decision is awaited for works to a road traffic junction at Land opposite Waterside Garage in Bradwell, which the Council refused planning permission for earlier this year. The outcome of that appeal will indicate as to whether the traffic management plan previously submitted will require amending before another application is made to discharge the condition. Nevertheless the delivery of turbine parts/equipment and materials for the construction of Bradwell wind farm will be using another delivery route and would therefore not affect the delivery route proposed with this application.

18.7.2 The Middlewick wind farm would have all abnormal loads delivered by a marine access and therefore this would not impact upon the highway network to either the Middlewick or Turncole site. The standard traffic delivery route for the Middlewick site would use part of the road network proposed by this application but the Middlewick delivery route differs as the Middlewick route would leave the Lower

Burnham Road (B1010) at Rectory Road and the join the Burnham Road (B1018) until Althorne where the route would then follow Southminster Road (B1018) to Southminster and pass through Southminster and follow the road known as the Marshes to the site. On this basis it is considered that there would not be any significant issues cumulatively in terms of traffic movements other than on the Lower Burnham Road (B1010), which based on the existing traffic capacity of that road can accommodate the additional traffic in a worse case scenario that both wind farms are constructed at the same time. County Highways have not raised any objections to the cumulative impact of the proposal. It should be noted that only standard traffic would be using that road for the Middlewick wind farm.

- 18.7.3 The cumulative impact of vehicles using Marsh Road for Turncole wind farm and the Marshes for Middlewick would introduce increased activity, noise and disturbance to the area changing the tranquillity of the area whilst construction is on going. Whilst this undesirable the construction periods if both wind farms were constructed at the same time this would only be temporary for a period of one year. If the construction period was staggered, such as Middlewick built in one year and Turncole the next year then this disruption period would be longer. Nevertheless this construction phase would be temporary and would not lead to any lasting activity in the area once the wind farms are operational.

## **18.8 Overall**

- 18.8.1 The proposed development would lead to abnormal load difficulties along the vehicle delivery route resulting in a significant loss of vegetation and changing the character and appearance of this narrow tranquil rural road. From the whole construction period the local road network would also be subject to an excessive increase in vehicle movements which would have a detrimental impact upon the residential amenities of properties along the construction routes. The modification of the existing highway to allow for the transportation of the abnormal loads associated with the development proposal has not been demonstrated to the satisfaction of the Highway Authority. There is also insufficient justification within the application to demonstrate why a marine delivery route for the abnormal loads cannot be accommodated as an alternative which is an approach to be used with the consented Middlewick wind farm development, and for the reasons stated above would be the preferred abnormal load delivery route.

## **19. Aviation**

- 19.1 An assessment of the potential impacts of the wind farm on aviation, both civil and military has been undertaken. The ES identifies that pre-application consultation has taken place with the Defence Estates (who represent the Ministry of Defence), the Civil Aviation Authority (CAA), London Southend Airport and National Air Traffic Control Services (NATS).
- 19.2 The national policy framework through PPS22 and the PPS22 Companion Guide identifies that wind turbines may have an adverse affect on air traffic movement and safety. The risk may be a risk of collision with low flying aircraft, interference with operational radar by limiting capacity to handle air traffic, and impacts upon aircraft landing systems. The PPS makes it clear that the onus is on the applicant to prove that the proposal would have no adverse effect on aviation interests.

- 19.3 At the local level Local Plan policy CON7 Development Affecting Airports states that permission for wind farms, amongst other things, within airport consultation areas will be granted if the proposed development would not have a detrimental effect on the safe operation of the relevant airport. The application site falls within the Southend Airport restriction zone and the proposal would exceed the 91.4m height as shown on the Southend Airport restriction zone map. The application site is significantly distant from the Stansted Airport restriction zone but the ES identifies that the site is within its 30km safeguarding radius. There also a number of airfields and landing strips in the District and surrounding area, which are used for private recreational flying.

#### **19.4 Civil Aviation**

- 19.4.1 It is recognised that the proposed development has the potential to impact upon aviation-related operations.
- 19.4.2 The ES reports that the turbines at a height of 126.5m do not constitute an ‘aerodrome obstruction’. The Civil Aviation Authority (CAA) have advised that there is an international civil aviation requirement for all structures of 300 feet (91.4 metres) or more to be charted on aeronautical charts; and that any structure of 150 metres or more must be lit in accordance with the Air Navigation Order and should be appropriately marked. Any charting requirement will need to be provided to the Defence Geographic Agency by the applicant to meet the first CAA requirement. An informative will be added to advise the applicant of this requirement.
- 19.4.3 The ES reports that London Southend Airport is currently in the process of upgrading their radar and it is anticipated that their new radar will have wind farm processing capabilities to allow for mitigation. The ES reports that the applicant will meet the costs related to mitigation measures for London Southend Airport, although this is a private matter between the two parties and not part of this application. London Southend Airport has responded to the consultation process objecting to the application as the proposal would have an impact upon Primary Radar. Correspondence has been sent to the airport requesting further information on their objection as to what the harm will be to primary radar/air safety. If there is a demonstrable reason outlining the harm this could form a reason for refusal. However at time of writing this report it is unclear as to the harm upon primary radar/air safety and whether such issues can be addressed through the use of a planning condition which was the case for the Middlewick wind farm. There are no objections raised to the application from a Civil Aviation Authority and National Air Traffic Service perspective. Furthermore the consultation response implies that the airport’s objection can be resolved, although, as mentioned, this is unclear as to whether this can be resolved during the life of this application.
- 19.4.4 With regard to airfields and landing strips in the District and surrounding area, which are used for private recreation flying, the Civil Aviation Authority requirements would mean that all aircraft would view the wind turbines as high structures on the civil aviation maps. This will be undertaken separately from any planning permission as the requirement falls within legislation outside of the Planning Acts.

19.4.5 The applicant has not referred to any pre-application consultations in the ES with the Essex Air Ambulance service. Nevertheless officers have consulted with the Essex Air Ambulance service as part of the application process but no response has been received. From the Middlewick wind farm no objections were raised to the impact upon this air ambulance service.

## **19.5 Military Aviation**

19.5.1 Defence Estates (representing the MoD) are the principle Government body for advice on military aviation. The principal safeguarding concern with respect to the development of wind turbines relates to their potential to create a physical obstruction to air traffic movements and cause interference to Air Traffic Control and Air Defence radar installations. The applicant's ES pre-application consultation did not identify any concerns upon military aviation.

19.5.2 From the application consultation Defence Estates have raised no objections but require information on the date construction starts and ends, the maximum height of construction equipment and the latitude and longitude of every turbine. This information will be plotted on flying charts to make sure military aircraft avoid this area. An informative will be added to any granting of planning permission so the applicant provides this information direct to Defence Estates.

## **19.6 National Air Traffic Control Services (NATS)**

19.6.1 NATS En Route supply air traffic service all civilian aircraft crossing UK airspace. From the application consultation NATS have stated that the proposed development has been examined from a technical safeguarding aspect and does not conflict with the NATS safeguarding criteria. As a result there are no objections raised to this application.

## **19.7 Cumulative impact**

19.7.1 The proposed turbines are a similar height to those approved at the Middlewick wind farm site to the north and the distant Bradwell wind farm site. The proposed turbines represent the tallest structures at these wind farms and given that planning permission has been granted for both these other wind farms without any objections raised by Inspectors, the proposal would not result in any aviation concerns from the cumulative impact. The aviation consultees are more concerned with the height of these structures impacting upon airspace rather than the cumulative impact. It is a requirement under separate legislation for the applicant to provide exact details for plotting the wind farms on flying charts to ensure all low flying aircraft avoid this area.

## **19.8 Overall**

19.8.1 Based on the consultation responses received the proposal would not pose any significant impacts upon aviation to warrant grounds to refuse the application. Informatives can be imposed to ensure safety requirements as requested by the consultation responses.

## **20. Biodiversity and Ecology**

20.1 The application site is located in a rural area where the presence of ecology has been identified in the ES. There are no statutory and non-statutory conservation sites within the site.

### **20.2 Policy Position**

20.2.1 PPS9 Biodiversity and Geological Conservation seeks to promote sustainable development by ensuring that biological and geological diversity are conserved, and by enhancing and restoring the diversity of England's wildlife and geology by improving the quality and extent of natural habitat. The PPS22 Companion guide on wind, which was published before PPS9, advises that there is little evidence that bird species and their habitats are affected by wind turbine developments, and advises that wind turbines should be positioned so they do not affect known migration paths of birds. The Companion guide also recognises that other species and habitats can be affected in areas where there are culverts and drainage ditches which are found within the application site. The East of England Plan through policy ENV3 Biodiversity and Earth Heritage seeks similar requirements to national planning policy statements.

20.2.2 Local Plan policy PU6 Renewable Energy states that renewable energy facilities will be permitted provided they do not have an adverse impact upon areas of ecological importance. The proposed landing area at the seawall with the River Crouch which falls within a SSSI, SPA and Ramsar site therefore Local Plan policies CC1, CC2 and CC3 on development affecting nature conservation sites apply.

20.2.3 As identified in the consultation response from Natural England, the Conservation (Natural Habitats etc) Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) form material planning considerations to this application.

### **20.3 Non-Avian Ecology**

20.3.1 The ES states that surveys of the ecology at and around the application site were undertaken to identify the presence of any species including protected species. The results of the findings and proposed mitigation measures are referred to below:

#### **20.3.2 Water Voles**

In the drainage culvert areas there was evidence indicating the presence of water vole populations from droppings. This evidence was distributed in standing water areas from the surveys undertaken. It is stated that estimations of numbers of water voles is unknown. The length of the water voles territories varies but the ES considers that it would be estimated that at each bridge crossing of the culverts no more than two female territories would be affected. The new drain crossings have the potential to impact upon water vole populations but the design of these crossings would be developed to main habitat connectivity for water voles through pipes built into the structure. Two water vole crossings would be installed per bridge to ensure habitat and activity areas for water voles are not significantly affected.

### 20.3.3 *Badgers*

From the badger surveys evidence of a badger sett was found in the site but this was distant from the proposed infrastructure. In their consultation response the North East Essex Badger Group (NEEBG) are aware that there are many other setts in the area of Turncole and near the Middlewick wind farm site and are concerned about the disturbance that the number of vehicle movements would have on this area from the construction phase of the development. NEEBG report that any displacement of badger setts from the closure of the badger sett near Holiwell Farm could result in new badger setts being formed within the site. NEEBG expect this factor to be taken into consideration when the re-evaluation of the area is made, which will be undertaken prior to construction commencing. This can be dealt with through the use of planning conditions requiring pre-development assessments and continuous monitoring throughout the phases of development to ensure adequate mitigation measures.

For both water voles and badgers the Environment Agency agree with the conclusions of the ecology studies stating that there should be minimal impact on any water related habitats and species and that the Environment Agency support the enhancement opportunities recommended.

For all water voles and badgers no plans have been provided in the ES which identify the locations where the above species were found.

### 20.3.4 *Bats*

It is stated that most UK bat species fly at a level below that swept by blades of wind turbines which produce 2MW of power and these are tall turbine structures 100m or more. Only the noctule specie of bat is known to fly at a height where it may interact with turbine blades. However, the ES reports that only limited numbers were recorded and therefore the risk of collision is defined as low. It is also report that there would be no loss to any bat roosts as there are no roots identified in close proximity to the site. Mitigation measures would be undertaken to provide bat boxes, which will be installed on trees in two areas of plantations.

Natural England has not objected to the application with regard to protected species subject to a suitably worded planning condition on water voles. Natural England has also welcomed the proposed biodiversity enhancements (stated below) but they are concerned that the extent of grassland strips may attract kestrels which may be affected by the turbines. As these enhancements would need to be agreed through the use of a planning condition the extent of a smaller grassland strip, if necessary, can be agreed prior to the conditions application being submitted should planning permission be granted.

## 20.4 **Ornithology**

20.4.1 The application site is in the vicinity of a Special Protection Area (SPA), Special Area for Conservation (SAC) and Ramsar site, which for this application are all outside of the site but are located in the vicinity Crouch and Roach Estuaries, Foulness, Colne Estuary, and Blackwater Estuary SPAs and Ramsar sites. These SPAs form components of the Mid-Essex Coast SPA, and are varyingly notified for their significant aggregations of breeding and wintering birds, including assemblages of waterfowl each exceeding 20,000.

- 20.4.2 It is recognised that wind farms can potentially affect the loss of breeding and feeding habitats, potential collision risk and indirect loss of habitats. The ES identifies that surveys were undertaken into the ornithology at and around the site. The main types of surveys consist of a breeding and wintering bird surveys. The breeding bird survey commenced during the breeding season, which is between April to August during 2006 and 2009. A number of species of birds were recorded within the survey and the most abundant species included the corn bunting, skylark and reed warbler. The over-wintering bird surveys were undertaken during the winter of 2005/06 and 2009/10. The breeding surveys show that the most common species in the area were the starling, golden plover, black headed gull and the lapwing.
- 20.4.3 The ES states the collision risk is low during the operational phase of the wind farm. The two key species at risk are the golden plover and lapwing birds but risks to both these species have been identified to be low and negligible. The ES claims that the residual effects upon conservation value have been stated as negligible. Natural England are satisfied that the survey methodology, effort levels, and collision risk modelling represent best practice. However, turning to the impacts themselves, and in particular highlight the concentrations of lapwing and golden plover, and their frequent flights at rotor height. Natural England consider that the collision risk modelling has calculated, for the 2005-06 surveys, rounded collision figures of (and presumed mortality) four lapwing and eight golden plover, using an avoidance rate of 95%<sup>3</sup>. Whilst Natural England accept that these figures are not significant they consider that it would improve clarity if a further table was included setting out the increase in baseline mortality against the mid-Essex coast SPA population baseline, providing a percentage figure. Nevertheless Natural England considers that the proposed development is not likely to have a significant effect on the mid-Essex coast SPA. Natural England recognises that there is a need for wildlife enhancements to benefit birds in the area and they consider that such enhancements would increase conservation value at the site.

## 20.5 Cumulative Impact

- 20.5.1 With regard to cumulative impact, Natural England have advised that the Habitats Regulations require that the test of whether the development will have a likely significant effect on the European sites is applied *in-combination* with other plans or projects. Natural England do not consider that this approach to cumulative effects is suitably precautionary and consider that an in-combination assessment should be undertaken to clearly demonstrate that the proposal will not result in likely significant effects in combination with other wind farms around the mid-Essex coast area. Natural England recognise the scale of movements likely to occur (and hence advise a baseline using mid-Essex coast SPA rather than a single SPA), in our view the distance between the development site and the nearest SPA (Dengie) does justify the precaution that the birds observed on the site may contribute towards the SPA population. Natural England suggests that this includes predicted mortality from other wind farm developments such as Middle Wick, Bradwell, and Earls Hall Farm (Clacton), using comparable collision risk modelling calculations.
- 20.5.2 Natural England advises Maldon District Council to defer determination of this planning application until the proposed development has been considered in combination with other wind farm projects in the area (as defined above), in order to determine whether the proposal will cause likely significant effects in combination

with other projects. The findings of this in-combination assessment will determine whether an Appropriate Assessment is required under the Habitats Regulations.

- 20.5.3 Having taken Natural England's comments into consideration, and given the other reasons for refusal with this application, it is considered that this application contains insufficient information on the cumulative impact of the proposed development and other wind farms in the area upon the nearby Special Protection Areas. Whilst Natural England suggests deferment officers consider that this issue should form a reason of refusal in addition to the overall recommendation of this application.

## **20.6 Appropriate Assessment**

- 20.6.1 Under Regulation 61(1) of the Conservation of Habitats and Species Regulations 2010 advises that local authority's must undertaken an Appropriate Assessment where sites are located within or in close vicinity of designated area which are internationally ecological designations around the coast that provide habitats for conservation. These include Special Protection Areas (SPA), Special Area for Conservation (SAC) and Ramsar sites, which are located within close proximity of this site. Therefore the local authority may need to undertake an Appropriate Assessment subject to advice of Natural England once the additional information is received. The aim of the Appropriate Assessment is to establish the implications of the project on these protected sites. However, based upon the above advice of Natural England the local authority are not in a position to ascertain whether an Appropriate Assessment is required or not as insufficient information has been provided for assessing the cumulative impact of the proposed development and other wind farms in the area upon the nearby Special Protection Areas

## **20.7 Other Ecological Impacts**

- 20.7.1 The site comprises of three types of habitats which includes arable field margins, ponds and hedgerows/trees. Habitat surveys have been undertaken and none of these habitats are of the types listed in EU Habitats Directive. The hedgerows were reported as species poor but can be improved from enhancement measures. The agricultural fields and cultivated land provided a range of plant species in addition to being used for the purposes of oil seed rape and cereals. There were a number of ponds located in the area but none are considered to be affected by the proposal subject to adequate mitigation measures, which were stated in the Hydrology section of this report.

## **20.8 Mitigation Measures**

- 20.8.1 An Ecological Mitigation and Enhancement Strategy (EMES) has been prepared for the site detailing mitigation options and timing of construction works. This strategy would also link into the Construction Method Statement to ensure all phases of the development have a limited impact upon ecology.
- 20.8.2 Mitigation measures proposed include the following:
- Planting of grassland to compensate for the loss of existing grassland habitats. This would cover 1.6 hectares
  - Bat boxes install on trees
  - Three pole mounted barn owl nesting boxes

- 300m of new species rich hedgerows
- A new native woodland covering an area of 0.49 hectares although new trees species will not exceed 10m in height

20.8.3 In addition to the proposed enhancements a post-construction monitoring programme will be implemented.

20.8.4 These above measures can be conditioned with the granting of planning permission and would reflect similar conditions imposed by the Inspector from the Middlewick wind farm appeal decision.

## **20.9 Overall**

20.9.1 Whilst the proposed development would not impact upon non-avian ecology the advice provided by Natural England is that there is insufficient information on the cumulative impact of the proposed development and other wind farms in the area upon the nearby Special Protection Areas. For this reason there is an objection to the application on ecological grounds.

## **21. Flooding and Hydrology**

### **21.1 Flooding**

21.1.1 The site lies within a high risk flood zone (flood zone 3) as identified on the Environment Agency flood maps. In accordance with PPS25 and the PPS25 Best Practice guide there is specific guidance for assessing wind farm proposals. The Best Practice guide states that local planning authorities should not use a sequential approach for the consideration of such proposals and therefore the Sequential Test shall not be applied. The Best Practice guide also states that whilst wind turbines in a high risk flood zone fall within 'essential infrastructure' on the Flood Risk Vulnerability Classification in PPS25 and would be subject to the Exception Test, the second element of the exception test, which considers development on previously developed land, should not be applied. The other two elements of the Exception Test shall be applied. Furthermore PPS22 states that the local planning authority should not give priority to the re-use of previously developed land for renewable technology developments.

21.1.2 With regard to the Exception Test, part a) requires the development to demonstrate that there would be wider sustainability benefits to the community that outweigh flood risk and that benefit the Council's Core Strategy Sustainability Appraisal. Firstly, the wider sustainability benefit to the community and the District constitute the provision of renewable energy allowing for electricity to be supplied to 7585 homes in the District. This equates to 31% of the total number of homes in the District. Such provision would help towards the UK Renewables Obligation of 15% of retailed electricity through renewable energy sources by 2015 and the Renewable Energy Strategy increased target of 30% of electricity by 2020. The second consideration of part a) of the Exception Test considers that if the Development Plan Document process (DPD) has reached the submission stage the benefits of the development should contribute to the Core Strategy's Sustainability Appraisal. However the Core Strategy's Sustainability Appraisal is only at consultation stage and has not reached submission stage to be considered as part of the Exception Test. Despite this the

Environment Agency and officers consider the proposal satisfies the requirements of part a) of the Exception Test.

- 21.1.3 Turning to part c) of the Exception Test, this requires the development to be safe without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall. The primary issue with this and any planning application regarding flooding is the threat to human life from a flood event. The operational stage would not involve any human presence at the wind farm site other than for maintenance requirements. The construction and decommissioning stage is therefore likely to result in a higher risk to human life. Accompanying the planning application the applicant has provided a detailed Flood Risk Assessment (FRA) which identifies the main sources of flooding at the site to be from tidal, fluvial and from rising/high groundwater. The proposal would only result in a small amount of change to the land from present day conditions through the formation of concrete bases for the turbines and associated infrastructure. This would increase impermeable surface which would reduce natural permeable drainage and is likely to increase surface run off to nearby to field drains and water courses.
- 21.1.4 Tidal flooding is likely to pose the greatest risk of a flood event at the site. The risk of a flood event taking place is a 1 in 200 year event (0.5% Annual Exceedance Probability). The risk and extent of tidal flooding is predicted to increase during the lifetime of the development through climate change predictions. The main source of tidal flooding is likely to result from storm surges where increased wave heights would potentially lead to potential overtopping of the existing sea defences. The existing sea defences are earth/clay embankments and are approximately 5m AOD with fluvial drainage through the defences provided by gravity sluices and a pumping station at Bridgewick Outfall. The site lies approximately 4km from the coast and 2km from the River Crouch and therefore inland from the sea defences. Given this is the case, and given the flat expanse of topography in the area, any flood event would result in water spreading over a large area. As a result this development is unlikely to pose any significant flood risk as this would cover a large area resulting in the likelihood of only shallow flood depths
- 21.1.5 Any risk of fluvial flooding is considered much lower compared to tidal flooding. Nevertheless the extensive land drainage channels and watercourses in the area pose a risk. These drainage channels are managed and outflow through sea defences through sluice gates with protected flap valves can manage flow. A pumping station at Bridgewick outfall will allow for the discharge of flows from fluvial sources during high/extreme tides. It is therefore considered that any localised flooding would result in shallow pooling due to the flat topography in the area and this would not lead to any significant risk. Similarly any surface or groundwater flooding is likely to be minimal and would not constitute any significant flood risk.
- 21.1.6 The FRA identifies various flood mitigation measures for the construction phase and operational phase of the development. For the construction mitigation the concrete foundations would not affect surface run off, all new access tracks will be constructed of permeable material, and all sensitive equipment would be positioned about 600mm and flood proofing measures would be applied to the structures below this level. The FRA states that a flood evacuation plan will be prepared for the construction workforce to adhere too and this will be provided through the use of a planning

condition. For both the construction and operational phase the applicant will sign up to the Environment Agency's Floodline.

21.1.7 On the basis of the above, which incorporates the Environment Agency's consultation response, the proposal would not present any demonstrable flood risk to raise objection.

21.1.8 As an informative the Environment Agency identifies that prior written consent is required for any affect on the flow of ordinary watercourses, and crossings of the rivers or any roads which run alongside, and within 9 metres of, any designated main river.

## **21.2 Hydrology and Hydrogeology**

21.2.1 The site is characterised by low-lying land at a general height of 2m AOD. There is a network of engineered drains which discharge water into the North Sea from the east coast. The ES has assessed the impact of the proposal upon local groundwater and surface water environments together with mitigation measures. The assessment considered the impact upon surface water catchments, flood risk, surface water quality, surface water discharges, licensed and private water abstraction, aquifer characteristics and groundwater source protection zones, and sensitive water related features.

21.2.2 The impact assessment was considered over the three stages of the development: the construction, operational and decommissioning stages. The construction and decommissioning stages would have the most impact.

21.2.3 The impact recognises there is a small risk of polluting run off from the site during the construction stage, particularly on soils. For the three stages of the development various mitigation measures are proposed. These include surface water monitoring downstream, site tracks of permeable surfacing materials, and storage of any fuels/chemicals in containers. A construction method statement which will be imposed as a planning condition, will detail mitigation measures to prevent any pollution of hydrology and such details will be subject of the consideration of both the Environment Agency and Environmental Health.

21.2.4 Environmental Health considers the assessment appears very comprehensive with particular reference to the associated risks and in accordance with IEMA (Institute for Environmental Management and Assessment) guidelines. Nevertheless conditions are required for mitigation measures to prevent blockage and diversion of flow, prevention of turbidity and contamination and also to include monitoring and evaluation during and after these phases.

21.2.5 The Environment Agency have no objections subject to no loading or storage areas involving chemicals to be connected to the surface water drainage system. For all above ground facilities there is a need for all drums and small containers used for oil and other chemicals shall be stored in bunded areas that do not drain to any watercourse, surface water sewer or soakaway.

21.2.6 It should be noted that both the Environment Agency and Environmental Health have powers under different legislations to protect hydrology.

### **21.3 Cumulative Impact**

21.3.1 From the Middlewick wind farm no objections were raised on flood risk and hydrology. Cumulatively there are no objections as both wind farms would be constructed to withstand flooding and flood mitigation methods would be applied. The cumulative impact upon hydrology would not be significant and mitigation would be applied to avoid any risk of pollution to soils.

### **21.4 Overall**

21.4.1 There are no objections to the application from a flood risk, hydrology and hydrogeology perspective.

## **22. Heritage and Archaeology**

22.1 PPS5 enforces the Government's overarching aim 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. Policy HE1 of PPS5 identifies that opportunities to adapt heritage assets include *inter alia* allowing greater use of renewable energy and goes onto advise 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 significance of heritage assets.

22.2 PPS22 states that sites with national recognised designations (listed buildings, conservation areas, Scheduled Ancient Monuments) should only be granted where it can be demonstrated that the objectives of the designation will not be compromised by the development, and any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits.

22.3 Dealing specifically with wind energy proposals English Heritage have issued a publication titled 'Wind Energy and the Historic Environment'. This publication highlights the impact of wind energy projects upon the historic environment drawing attention to the impact upon the setting and character of areas/buildings, and recognised that climate change is likely to be detrimental to the historic environment. English Heritage provided a consultation response stating that they do not wish to offer any comments on this occasion and their recommendation is that the application should be determined in accordance with national and local policy guidance, and on the basis of your specialist conservation advice.

22.4 Part of Local Plan policy PU6 states that proposals for the development of renewable energy facilities will be permitted provided they would not *inter alia* have an adverse impact upon areas of architectural, historical and conservation importance. Indirectly related to the proposal, as the site does not fall within a Conservation Area and any listed buildings and schedule ancient monuments are located outside of the site, are policies BE13 (Development in Conservation Areas), BE16 (Extensions alterations to and additional buildings in the curtilage of Listed Buildings), BE17 (Preservation of

Sites of Nationally Important Archaeological Remains and their Settings), BE18 (Control of Development at a Site of Local Archaeological Value) and CC10 (Historic Landscape Features). The emerging LDF Core Strategy policy CS20 (Protection and Enhancement of Built Heritage) seeks to preserve and enhance historic assets, and ensure that proposals must not cause harm to sites of known, sensitive or potential archaeological value.

- 22.5 Consideration needs to be given to the site's location and the nearest identified heritage assets, which include listed buildings, conservation areas, Scheduled Ancient Monuments and archaeology. The ES reports that a surveyed area of 5km radius and extending out to a 10km radius from the site has identified all the heritage assets in the area. The manors, halls and farms on the Dengie are historic buildings most associated with the prevailing agricultural land use on the reclaimed marshes. The marshes were largely reclaimed from tidal marsh land intersected by numerous creeks and shell banks. The natural landscape therefore, is intrinsically linked to the historic built environment.

## 22.1 Listed Buildings

- 22.1.1 Within the ES survey area there are a number of listed buildings. The nearest listed buildings to nearest turbine distances within a 3km radius are stated as follows: Old Montsale (1.2km), Newman's Farmhouse (1.5km), Dammerwick Farmhouse (1.5km) and Court Farmhouse (2.5km). The listed building of Old Montsale and Court Farmhouse are both located to the east of the wind farm site with Newman's Farmhouse and Dammerwick Farmhouse located to the west of the wind farm site. All of these buildings are grade II listed. The settings of these listed buildings have not changed significantly since their foundation when the marsh land was reclaimed in the 17<sup>th</sup> century. PPS5 defines 'setting' as follows: *the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.* The setting of a listed building is not confined to its curtilage. The wider historic landscape in this particular application is intrinsically linked to the identified built heritage.
- 22.1.2 The Conservation Officer considers that this proposal and the two previous proposals (Hockley and Middlewick) impact negatively on the settings of listed buildings in their immediate and wider historic landscape setting. These settings have not changed significantly since their foundation. Whilst the proposal would have an impact upon the settings of these listed buildings consideration should be made on whether the impact would lead to material harm. The aforementioned listed buildings are significantly distant from the nearest turbines and in between these turbines and listed buildings there are landscape features which break up any open clear views, such as vegetation and buildings, apart from Courthouse Farm and Old Montsale which has clear views across the fields in between the turbines and these buildings. Old Montsale is the closest listed building to this site. Nevertheless it is considered that given the distance to the nearest listed buildings, which ranges between 1.2km and 2.5km, the impact upon the setting of these listed buildings is not considered to demonstrate material harm to warrant grounds for refusal.

22.1.3 Furthermore, it should be noted that the Middlewick wind farm was not refused on grounds of the impact upon listed buildings. With that application the nearest distances from listed buildings to turbines was over a much shorter distance of 0.87km and 1.7km.

## **22.2 Conservation Areas**

22.2.1 The site is not in a Conservation Area. The nearest conservation areas are located in Southminster and Burnham on Crouch, which are both 3.5km away from the site. Given the lack of views into and out of each Conservation Area to the site it is considered that the proposal would not have any significant impact upon these Conservation Areas.

## **22.3 Scheduled Ancient Monuments (SAMs)**

22.3.1 There are eight Scheduled Ancient Monuments (SAMs) within the 10km survey area. The nearest SAM is an earthworks at Pandole Wood at 3km in a north west direction from the site, and a World War II minefield control tower and pillbox located 3km to the south east of the site adjacent the coast as part of the entrance to the River Crouch. Two other SAMs within a 5km radius include crop marks at Oldmoor and a slight univallate hillfort south of End Way Farm Asheldham. Both these sites are located to the north west of the site.

22.3.2 The Conservation Officer has drawn reference to the natural landscape, which inspired the duck decoy ponds (SAMs) of 18<sup>th</sup>/19<sup>th</sup> century origin to trap wildfowl on a large scale that supported the economy and supplied the London Markets with food and feathers (for eiderdowns). The nearest duck decoy pond has been identified at Marsh House Farm 6km to the north of the site and east of the village of Tillingham.

22.3.3 It has been stated in the ES that the earthworks at Pandole Wood and the crop marks at Oldmoor are not sensitive to visual impacts and any impact would be low. For the World War II minefield control tower and pillbox, the pill box is built in the seawall but the tower is considered sensitive to the visual impact changes but the view from the tower is intervened by buildings and tree coverage to mitigate the impact. For the hillfort in Asheldham this is buried into the landscape and was originally built to overlook the Crouch estuary and is sensitive to visual impacts but the direction towards the wind farm site is screened to some extent. Overall it is considered that the proposal would not impact upon the setting of these SAMs given the distances involved and as such would not warrant grounds for refusal.

## **22.4 Archaeology**

22.4.1 The ES reports that an archaeological survey was undertaken identifying the site as low lying and within the area was a salt marsh throughout late prehistoric and early historic periods before being drained for agricultural use 200 years ago. Records of the study area include salterns where salt was produced by evaporating water. These salterns date to the Iron Age/Roman-British period. Other findings relate to medieval sites included moated sites and medieval industrial activity as the land would have been exploited for oyster farming, fish weirs and salt production. Historic mapping shows that there are a number of properties which no longer exist in the study area. There are also recordings of Second World War defences.

22.4.2 The Conservation Officer and the Historic Environment Officer at Essex County Council have evaluated the ES. The archaeological desk-top and trial-trenching has identified the location of a number of surviving archaeological deposits, including a Red Hill (saltern) complex and the historic farmstead at Old Turncole, and that there is the potential for further discoveries. The area of the trenched Red Hill and the two Red Hills to the north is to be stripped and fully excavated, an area approx 250m long by the width of the road wide. This work is to take place after planning permission is granted but in advance of any construction work taking place on site. Therefore there is a need for a planning condition to be imposed on any planning permission requiring the implementation of a programme of archaeological work from an accredited archaeological contractor in accordance with a written scheme of investigation which will need to be agreed.

## **22.5 Cumulative Impact**

22.5.1 The cumulative impact of this application and the Middlewick wind farm has been undertaken as part of the ES study. The cumulative impact upon the grade II listed buildings of Court Farmhouse and Old Montsale have been assessed to have a significant impact as a result of the two wind farms. The cumulative magnitude of change is greater than that assessed for just the Turncole wind farm when taking into consideration the Middlewick wind farm. However, both the Court Farmhouse listed buildings would be more affected by the Middlewick wind farm which is much closer than this proposal. For the Turncole wind farm the Old Montsale property would be more than 1km from the nearest turbine. The cumulative impact of both wind farms and rotary operation would inevitably impact upon the historic environment. However, the issue to consider is whether this cumulative impact would result in material harm. It has been found that the Bradwell wind farm would have an impact upon the historic environment but the wider benefits of renewable energy would outweigh any harmful impact. Cumulatively the impact upon the historic environment is not considered significant and PPS5 recognises the need for renewable energy sources to tackle climate change, which means that the benefits of the wind farm should be recognised on balance with the heritage implications.

## **22.6 Overall**

22.6.1 Based on the information above the proposed wind farm is not considered to raise significant objections to the heritage and archaeology aspects of the site and the wider area, taking into consideration the cumulative impact of other consented wind farms.

## **23. Electromagnetic Interference**

23.1 The PPS22 Companion Guide recognises that wind turbines can affect electromagnetic transmissions and communication systems. The Local Plan recognises utility provision through the 'Public Utilities' section but does not offer any advice for consideration of this application.

23.2 The impact of the development upon existing utility infrastructure and communication systems has been assessed and is detailed in the ES. The assessment has considered the implications upon television, radio and microwave communications. Pre-application consultation was undertaken by the applicant with a number of consultees in respect of these systems.

### **23.3 Television**

23.3.1 The main issues arising from the ES identifies that terrestrial television reception would be affected by turbine blades which may depreciate the television signal to the properties in the immediate vicinity. The problems likely to be experienced are loss of picture detail, loss of colour, a buzz on sound and ghosting. From the pre-application consultations a prediction modelling test was undertaken which assessed television coverage in the area and possible interference to reception from transmitters serving the area, which include the transmitters at Sudbury, Dover, Bluebell Hill and Crystal Palace. The assessment was carried out over a 10km area from the application site. The ES reports that there would be limited interference to the signal from each of the transmitters but there would be some properties affected by interference. It is stated that the digital switchover should reduce the level of interference. Already the Sudbury analogue transmitter has been switched off and is only transmitting the digital signal but the rest of those transmitters stated above are still broadcasting both signals until 2012. The applicant has stated that they would undertake a mitigation strategy to address any potential impacts, which would be at the applicant's own expense. A planning condition can be imposed to ensure an investigation and mitigation scheme is submitted for approval and implemented. The construction and first operation of the wind farm, if approved, is likely to be after the digital switchover.

23.3.2 It should be noted that the cable and satellite television services would not be affected.

23.3.3 An additional consultation has been sent to Ofcom to obtain their views on this application and any response will be reported to committee. It should be noted that from the Middlewick wind farm Ofcom raised no objection to that application.

### **23.4 Radio and Microwave Communications**

23.4.1 The ES reports that their pre-application consultation with the BBC is not expected to have any impact upon national or local radio reception.

23.4.2 It has been identified in the ES that the proposal would not have any significant effect on microwave telecommunication, radio telemetry or utility infrastructure. There are no consultation objections raised to the impact upon radio and microwave communications. It should be noted that the Middlewick wind farm application had no objections raised on this consideration.

### **23.5 Cumulative Impact**

23.5.1 For television interference the combination of both the Middlewick and Turncole wind farm may affect television inference. From the Middlewick wind farm this was not considered an issue and a planning condition to investigate and mitigate against any harm to properties in the area was considered the most appropriate way of addressing any issues. A similar planning condition can be imposed upon this application to protect the amenities of residential properties in the area in the event that any television inference is caused. Any mitigation measures would need to be undertaken by the applicant at their own expense, again this was the accepted approach taken with the Middlewick and Bradwell wind farm decisions.

## **23.6 Overall**

- 23.6.1 It is considered that the proposal would not result any significant impact upon the existing radio and microwave communications in the area. A similar view was taken in the Middlewick and Bradwell appeal decisions. As a result any implications upon terrestrial television reception can be mitigated through the use of a planning condition if necessary.

## **24. Socio-Economic Benefits**

- 24.1 PPS22 advises that the wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight when determining planning applications. The ES outlines these benefits although some of the information does not form material planning considerations such as the community fund.

## **24.2 Employment**

- 24.2.1 Due to the lack of on shore wind farms being constructed in the UK the only wind turbine manufacturer in the country, which was based on the Isle of Wight and has closed, the majority of turbines are currently manufacturer by companies in Denmark and Holland. With the UK Renewables Obligation leading to increases in renewable energy provision there is likely to be future employment opportunities in the wind energy industry. The European Wind Energy Association (EWEA) calculates that the wind industry employs 154,000 in Europe and this is predicted to double by 2020. In the UK the future development of wind farms, both on and off shore, is predicted to create up to 160,000 jobs according to the UK Renewable Energy Strategy. For this proposal the applicant has identified that jobs would be created within the Maldon District for the 12 month construction phase of the development, and local firms and construction material sources would be used wherever possible. For the operational phase of the wind farm it is stated that local people will be employed wherever possible. It is also stated that wind farms now represent a form of rural diversification benefiting the host farm. At this stage of the development process the actual numbers of jobs created is unclear.

## **24.3 Recreation**

- 24.3.1 From a recreational point of view the ES states that there are no existing public footpaths pass through the site and people using the area such as bird watchers and people sailing on the river Crouch are unlikely to be affected. It is recognised that this wind farm is more than 2km inland from the Crouch estuary and whilst viewable the impact upon people sailing is not considered to be significantly harmful to their amenities. For bird watchers the existing nearby Special Protection Areas would remain as existing although the advice provided by Natural England is that there is insufficient information on the cumulative impact of the proposed development and other wind farms upon ornithology at the nearby Special Protection Areas.

## **24.4 Tourism**

- 24.4.1 The ES identifies that wind farms are located in areas where there are high levels of tourism and that people are often interested in visiting them, which can bring money

into the local economy. However, it is recognised that areas such as Cornwall, the Lake District and Scotland have always been well visited before the development of wind farms in these areas. The ES identifies that one of the wind turbines at a site in Norfolk has a viewing platform at the nacelle to allow people to view the operational systems of a wind turbine and allow for elevated views of the area. Whilst this proposal would not have the benefit of a viewing platform, like the Norfolk example, the proposed wind farm could become an attraction for visitors to the area increasing tourism potential for the Maldon District.

## **24.5 Education**

24.5.1 The wind farm would create an educational resource and the applicants would allow visits by schools to the site, subject to the landowners consent. The applicant would also be willing to conduct talks at schools for educational benefits.

## **24.6 Public Safety**

24.6.1 The PPS22 companion guide recognises public safety as a material planning consideration with applications for wind turbines/wind farms. The PPS22 Companion Guide states that properly designed and maintained wind turbines are a safe technology and that there have been very few accidents involving injury to humans caused by failure to observe manufacturers' and operators' instructions for the operation of the machines. Many blades are composite structures with no bolts or other separate components. Blade failure is therefore most unlikely. Even for blades with separate control surfaces on or comprising the tips of the blade, separation is most unlikely.

24.6.2 The ES identifies that site safety procedures would be followed and that the site compound would secure any hazardous machinery used during the construction phase of the development, which is the most hazardous period. All safety procedures would have to accord with health and safety legislation by law. During the operational phase of the development the technology used would identify if a turbine was to develop a fault and would shut down operation of the turbine and a message to the engineer so the problem can be fixed. All turbines and the met mast are fitted with lightning conductors. The proposal therefore is not considered to prevent public safety implications.

## **24.7 Icing**

24.7.1 PPS22 Companion Guide defines 'icing' as the build up of ice on turbine blades. The PPS22 Companion Guide and the ES identifies that icing is unlikely to present problems on the majority of sites in England as the particular weather conditions required account for less than one day per year. Technology allows for vibration detectors to be fitted to the turbine blades to detect any imbalances. Such measures can prevent the blades from operating and the ES identifies that it is unlikely that any icing would result. The ES states that a turbine control system and the anemometer fixed to the top of the turbine will monitor any changes or ice build up. This system which uses vibration detectors will prevent the turbine from working in the event of icing. A condition requiring the details of the turbines can also specify the requirement for information to be provided regarding the systems used to detect icing to ensure such measures are implemented.

## **24.8 Local Community Benefits**

24.8.1 The ES identifies that the applicant will provide an annual fund to the local community from the wind farm. The value of this fund is envisaged to be approximately £25,000 per annum based upon the nominal total wind farm capacity. To manage this funding the applicant envisages a committee made up of members from the local community who can decide where to spend the funds in the local area. The ES recognises such funding is not directly related to the development and therefore this cannot form a material planning consideration. A similar offer was made during the life of the application for the Middlewick wind farm proposal. Legal services have advised that such funding should not form a material planning consideration.

## **25. Grid Connection**

25.1 It should be noted that the grid connection is not consented under the Town and Country Planning Act 1990 and therefore does not form part of the application for consideration. However, for information purposes the ES details the grid connection.

25.2 To achieve a grid connection cabling will be laid between the proposed substation and the nearest electricity connection point known as the Distribution Network Operator (DNO). The grid connection works will be undertaken by EDF energy as the electricity undertaker. This will only take place once planning permission has been granted. The undertaking of works by EDF energy, as the electricity undertaker, is works carried out as permitted development under Schedule 2 Part 17 Class G of the Town and Country Planning (General Permitted Development) Order 1995.

25.3 As part of the overall EIA for the project the ES details that the preferred grid connection location will be to a substation on the south east side of Burnham. The power lines will be routed to the substation via underground cabling. The exact route to connect the wind farm to the sub station will be determined by the DNO. This distance is approximately 3.5km as measured on a map. The cables used will single cables taking electricity at 33kV and the cables will be laid in trenches. The grid connection route will take into consideration ecology, cultural heritage, hydrology and socio-economic effects (including recreation, residents and road users) to minimize any impact.

25.4 For the decommissioning stage all redundant underground cables would be dug up and disposed of in a practical way.

## **26. Conclusion**

26.1 There is a clear need for renewable energy which weighs heavily in favour of the development and this is supported by current Government policy at the national, regional and local policy level. Whilst in draft format the National Planning Policy Framework, which will change the current planning system, makes it clear that when determining planning applications, local planning authorities should apply the presumption in favour of sustainable development and not require applicants for energy development to demonstrate the overall need for renewable or low-carbon energy. For this application the need is not disputed. The National Planning Policy Framework also states that policies should apply unless the adverse impacts of

allowing the development would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework. Accordingly the need for renewable energy development must be balanced against the impact of the wind farm upon the landscape, nearby properties, aviation, highway implications, ecology, flooding/hydrology, heritage assets, electromagnetic interference and the socio-economic considerations of this proposal.

- 26.2 It is considered that the proposed wind farm development as a result of the scale of the turbines and their visual intrusion in combination with the Middlewick wind farm development would have a detrimental impact upon this unique countryside and coastal landscape, which is recognised for its natural beauty and tranquillity as a Special Landscape Area. The proposal would also result in significant and demonstrable cumulative effects on the outlook of dwellings in the area and would result in noise implications. Such issues would make the two properties at Turncole Farm and Broadward Farm unacceptable places to live harmfully affecting the living conditions of residents through a loss of outlook and amenity.
- 26.3 With regard to the construction routes, the proposed development would lead to noise and disruption from abnormal loads and standard construction traffic using the local road networks to and from the site, particularly for the abnormal loads passing along Old Heath Road and the residential section of Marsh Road. To facilitate the abnormal loads along Old Heath Road significant levels of tree and hedgerow removal would be needed and insufficient information has been provided to demonstrate the full extent of tree and hedgerow removal, which would have a detrimental impact upon the character and appearance of this narrow tranquil rural road. The local road network would be subject to an excessive increase in vehicle movements which would have a detrimental impact upon the residential amenities of properties along the construction route. The modification of the existing highway to allow for the transportation of the abnormal loads associated with the development proposal has not been demonstrated to the satisfaction of the Highway Authority. Furthermore, insufficient justification has been provided to demonstrate why a marine delivery route for the abnormal loads cannot be accommodated as an alternative, which is an approach to be used with the consented Middlewick wind farm development, and is considered as the preferred abnormal load delivery route.
- 26.4 For the ecological considerations the submitted Environmental Statement has failed to fully consider the cumulative effects of other wind farm developments around the mid-Essex Special Protection Areas. The findings of a detailed cumulative assessment will determine whether the Local Planning Authority has to undertake an Appropriate Assessment as required under the Conservation of Habitats and Species Regulations 2010 but in the absence of this information this is unknown. As a result the proposal could have a significant and harmful impact upon the nearby Special Protection Area, Site of Special Scientific Interest (SSSI), Ramsar site and Special Area of Conservation (SAC) to the south and east of the site.
- 26.5 Turning to the matters of aviation, flooding/hydrology, heritage assets and electromagnetic interference the proposal does not raise any objections which cannot be mitigated through the use of planning conditions. The socio-economic benefits of the proposal are noted and have been taken into consideration.

26.6 On the basis of the above and as outlined in the reasons of refusal below the planning application is considered unacceptable.

### **Recommendation to the Planning and Licensing Committee**

#### **REFUSE for the following reasons**

#### **REASONS FOR REFUSAL**

- 1 The proposed wind farm development as a result of the scale of the turbines and their visual intrusion in combination with the consented Middlewick wind farm development would have a detrimental impact upon this unique countryside and coastal landscape, which is recognised for its natural beauty and tranquillity as a Special Landscape Area. The proposal is therefore contrary to policies CC6, CC7, BE1 and PU6 of the adopted Maldon District Replacement Local Plan.
- 2 The proposed development in combination with the consented Middlewick wind farm development would result in significant and demonstrable cumulative effects on the outlook of Turncole Farm and Broadward Farm that would make them unacceptable places in which to live. This cumulative impact would be detrimental to the living conditions of residents resulting in a significantly harmful loss of outlook from these properties. The proposal is therefore contrary to policies BE1 and PU6 of the adopted Maldon District Replacement Local Plan.
- 3 The proposed cumulative impact of the Turncole wind farm in combination with the consented Middlewick wind farm development would result in noise implications upon nearby properties resulting in a significant loss of amenity to the detriment of the occupiers of these residential properties. As such the proposal would be contrary to policies CON5 and PU6 of the adopted Maldon District Replacement Local Plan
- 4 The proposed development would lead to noise and disruption from abnormal loads and standard construction traffic using the local road networks to and from the site, particularly for the abnormal loads passing along Old Heath Road and the residential section of Marsh Road. To facilitate the abnormal loads along Old Heath Road significant levels of tree and hedgerow removal would be needed and insufficient information has been provided to demonstrate the full extent of tree and hedgerow removal, which would have a detrimental impact upon the character and appearance of this narrow tranquil rural road. The local road network would be subject to an excessive increase in vehicle movements which would have a detrimental impact upon the residential amenities of properties along the construction route. The modification of the existing highway to allow for the transportation of the abnormal loads associated with the development proposal has not been demonstrated to the satisfaction of the Highway Authority. Furthermore insufficient justification has been provided to demonstrate why a marine delivery route for the abnormal loads cannot be accommodated as an alternative which is an approach to be used with the consented Middlewick wind farm development, and would be the preferred abnormal load delivery route. As a result of these issues the proposal is contrary to policies CC10, BE1, T2 and PU6 of the adopted Maldon District Replacement Local Plan.
- 5 The submitted Environmental Statement has failed to fully consider the cumulative effects of other wind farm developments around the mid-Essex Special Protection Areas. The findings of a detailed cumulative assessment will determine whether the Local Planning Authority has to undertake an Appropriate Assessment as required under the Conservation of Habitats and Species Regulations 2010 In the absence of this information the proposal could have a significant and harmful impact upon the

nearby Special Protection Area, Site of Special Scientific Interest (SSSI), Ramsar site and Special Area of Conservation (SAC) to the south and east of the site. As such the proposal is contrary to policies CC1, CC2, CC3 and CC5 of the adopted Maldon District Replacement Local Plan.

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