Your Energy

UPDATED ENVIRONMENTAL IMPACT ASSESSMENT SCOPING REPORT

WEST WIGHT PROJECT

Isle of Wight

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1. Introduction

1.1 Your Energy Ltd (YEL) intends to submit a planning application to the Isle of Wight Council (IoWC) to develop a wind farm, on the west of the Island approximately 2.5km south east of Yarmouth and directly south of Wellow (see figure 1). The proposal is to be known as the 'West Wight Project' (WWP, or the 'Project').

1.2 Given the proximity of WWP on the Island to the blade manufacturing facility of Vestas Blades Ltd. (Vestas), Vestas have expressed an interest in using one of the wind turbines for research and development activities. Six wind turbines will be installed, providing a generating capacity of between 9.9 and 12 megawatts (MW), depending on ultimate turbine selection. This supply of renewable electricity is equivalent to the power demands of between 6,500 and 7,000 homes, and will displace between 25,000 and 30,000 tonnes of carbon dioxide that would be emitted to the atmosphere per year from conventional fossil fuel electricity generation [1].

1.3 The proposal falls within Schedule 2 (3i) of the Town and Country (Environmental Impact Assessment) (England and Wales) Regulations 1999 (hereafter referred to as the 'Regulations'), which specify the types of developments for which environmental impact assessment (EIA) should be considered in order to support a planning application.

1.4 In March 2004 a scoping exercise was undertaken in accordance with the Regulations and a formal Scoping Opinion was issued by IoWC. An EIA has been undertaken based on this Scoping Opinion and is nearing its final stages.

1.5 Given the time that has elapsed since the original Scoping Opinion was issued, it was considered prudent to update the key statutory consultees with respect to the Project to determine whether any material changes had arisen in the interim period.

1.6 This report therefore provides a re-scope of the project and outlines the key issues that are being addressed in the EIA. In accordance with Regulation 5 of the EIA Regulations, a revised formal scoping opinion is being sought from IoWC. This process includes consultation with various bodies including statutory consultees, non-statutory consultees and other stakeholders: see appendix 4 for a suggested list of consultees. Responses will help define what extra information, if any, needs to be included in the final environmental statement (ES). Comments from the various consultees will be given due consideration and the scope of the EIA may be amended as appropriate.

[1] Figures derived from formulas available at www.bwea.com and based on the current UK generation mix

2. Background to proposals

Your Energy

2.1 YEL is an independent UK renewable energy company. It was established in 2001 and is owned by Mistral Invest Limited, the investment arm of an international shipping company. YEL is actively developing a wind energy portfolio across the UK, which will assist in addressing the UK's renewable energy targets that ultimately contribute to the country's energy self-sufficiency. YEL has professional experience across all the key disciplines including planning, environmental services, wind turbine technology, contract law and project financing. Through careful attention to design, planning, development and consultation with the local community, YEL has the proven ability to plan, build and operate wind farms in the UK.

Vestas Blades Limited

2.2 In the UK Vestas Blades Ltd is one of the leading wind turbine manufacturers with over 20 years experience and has installed over 12,000 wind turbines in 40 countries. Vestas Blades, formerly NEG Micon Rotors, is one of the Isle of Wight's biggest private sector employers, employing over 400 people at its UK technology centre for the research, development and manufacture of wind turbine blades at the St Cross Business Park in Newport.

Need for development

2.3 The UK is faced not only with a pressing need to tackle climate change, but also to find a sustainable way in which to meet a growing demand for electricity. As a signatory to the Kyoto Protocol, the UK is committed to reducing greenhouse gas emissions by 12.5% below 1990 levels by 2008-2012. In aid of achieving this, the UK Government has placed further goals of reducing carbon dioxide emissions by 20% below base levels by 2010 and 60% by 2050.

2.4 As a large percentage of the UK's carbon dioxide emissions are derived through the production of energy from conventional burning of fossil fuels, a key part of the strategy is to increase the supply of electricity from renewable sources. The UK has set a commitment to ensure that 10% supply of electricity in the UK by 2010 shall be from renewable sources.

2.5 Development of renewable energy schemes presents an economic opportunity. Denmark, the world leader in wind energy, now employs approximately 20,000 people in its wind energy industry and meets almost 20% of its domestic electricity demand from wind turbines. The Isle of Wight currently employs a significant number within the renewable energy sector at the Vestas Blades facility close to Newport. The development of the Project will facilitate industrial research, development and testing programmes to further strengthen the businesses' technical knowledge and market position as a leading turbine component manufacturing facility.

Your Energy

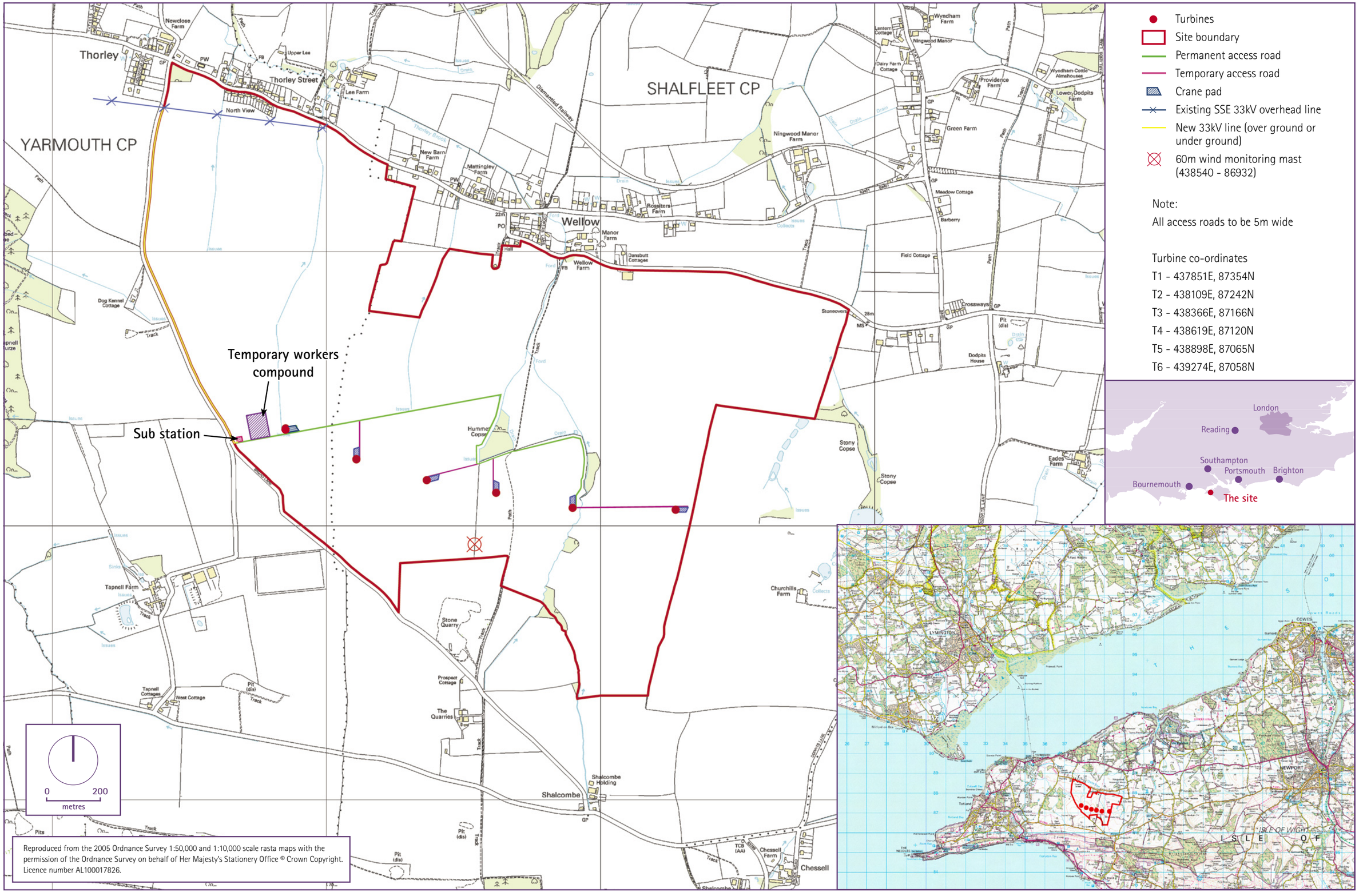


Figure number 1. Site and context

3. The application site and surrounding area

The Isle of Wight

3.1 The environment and countryside of the Isle of Wight is a key resource and much of it is protected under a range of national and international nature conservation and landscape designations and local level policies. Agricultural practices, geology and the distribution of settlements have formed a distinctive and varied landscape, which is valued and appreciated by islanders and visitors alike.

3.2 Agriculture is the predominant traditional rural activity in the Island, but with increasing levels of car ownership and diversification in the range of activities available, the countryside is becoming an increasingly utilised recreational resource. The importance of the Island environment is emphasised in the Unitary Development Plan (1996 – 2011) which summarises the resource as:

- agriculture and horticulture occupy 80% of the Island
- 50% of the Island is nationally designated as an Area of Outstanding Natural Beauty (AONB)
- forest and woodland cover 8.5% of the Island
- 28 miles of the 60 mile coastline is designated as Heritage Coast
- there are 43 Sites of Special Scientific Interest (SSSI)
- there are six Local Nature Reserves (LNRs) and one National Nature Reserve (NNR)
- there are more than 300 Sites of Importance for Nature Conservation (SINC)
- areas within and around the Island are recognised as being of international nature conservation importance, including Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites
- the County Sites and Monuments Record (SMR) identifies over 2,100 sites of known archaeological importance
- there are currently over 22 conservation areas on the Island
- there are over 2,000 listed structures, mostly Grade I
- there are six Historic Parks and Gardens of national importance and more than 30 sites of county importance.

3.3 The wealth and diversity of the environmental resource on a relatively small land area is clear and it is evident that any development needs to consider the potential implications for the Island environment.

3.4 Although all of the environmental resources are important to the Island, in terms of the proposal, the landscape, nature conservation designations and cultural heritage are of particular importance.

3.5 The AONB encompasses a broad variety of landscapes found within the Island, ranging from grand chalk cliffs to lush green pastoral areas. Much of

the Island's land surface is covered by the AONB and other protective designations, which are accompanied by strong planning controls. These designations, many located in areas offering a good wind resource, provide constraints to possible locations of such wind farm proposals as the WWTP. Figure 2 presents a map showing the area covered by the AONB designation.

3.6 Visual impacts will not be limited to receptors on the Island. Many areas of the south coastal mainland will also have views to the turbines including the New Forest National Park. The coastal area between Lymington and Fawley is also designated as an AONB. This designated area may therefore be sensitive to potential changes in views.

3.7 The Island's coastline exhibits a varied nature and character, and, some of the most important and scenic stretches have been designated as Heritage Coast. The protection and conservation of these designated areas is considered to be of prime importance.

3.8 Nature conservation designations can be described on three scales - international, national and local. On the international scale, some of the Island's SSSIs are included as part of the Solent and Southampton Water Special Protection Area for their breeding gulls, terns and wintering waterfowl. These areas are coincidental with the Ramsar sites, which are designated as wetlands of international importance for waterfowl habitats. In addition, three areas of the Island and its coast are designated as Special Areas of Conservation (SAC) under the Habitats Directive.

3.9 On a national scale there are 43 SSSIs on the Island, notified by English Nature. Besides being an important consideration in planning, many activities that are not subject to planning control are controlled in SSSIs through a notification procedure by English Nature under the Wildlife and Countryside Act.

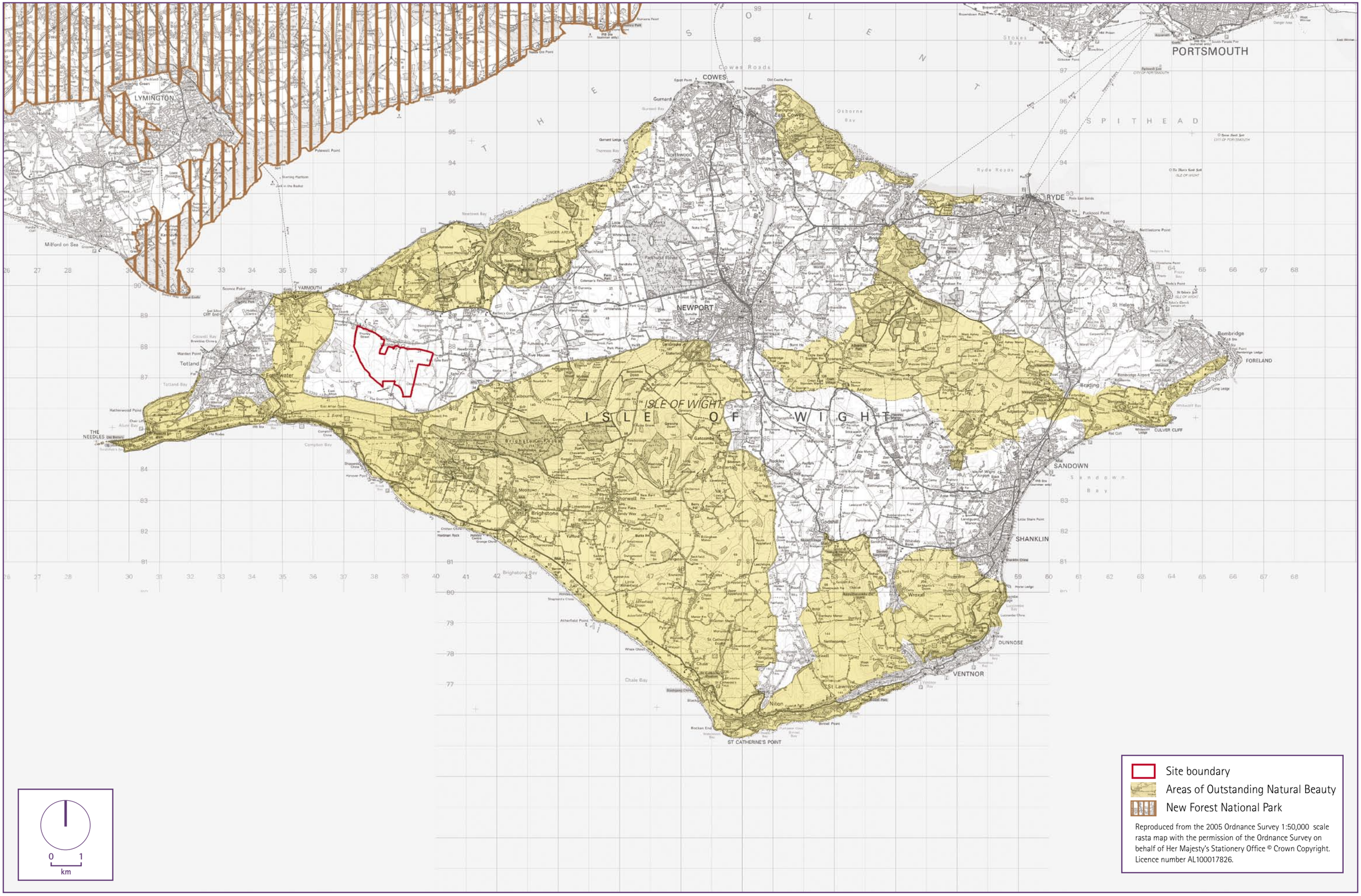
3.10 At the local level there are six local nature reserves and over 300 SINCs. SINCs are non-statutory sites identified by IoWC and cover a wide range of habitat types from woodlands to coastal and estuarine locations. Many of these sites, in addition to their intrinsic local value, are seen as wildlife corridors, linking some of the higher designations.

3.11 With regard to cultural heritage, the Island possesses a rich resource, which is of importance for historic, scientific and educational reasons. The preservation and protection of such resources, which include archaeological sites, historic landscapes, listed buildings / structures, monuments, and conservation areas, is considered to be important.

3.12 The Island's environmental quality is key to its tourist success. As stated in the Unitary Development Plan:

> *"Much of the Island's appeal lies in the coastline and countryside, and its general environment can make a lasting impression on visitors."*

3.13 The plan also states that green tourism is a growth area of the industry and is making an important contribution to the economy of rural areas.



Reproduced from the 2005 Ordnance Survey 1:50,000 scale rasta map with the permission of the Ordnance Survey on behalf of Her Majesty's Stationery Office © Crown Copyright. Licence number AL100017826.

Figure number 2. Areas of outstanding natural beauty

3.14 Approximately 20% of the Island's population are employed either directly or indirectly in tourism. Therefore, maintaining the quality of the environment on which tourism depends and providing further opportunities for tourist activity is of key importance.

The proposed development site

3.15 The proposed location and provisional turbine layout were the results of a rigorous site selection process in which data were collected from six alternatives. The site was required to satisfy a mix of engineering, environmental and planning constraints, in order to be the preferred location for the proposal. Information on all sites was collected from desktop analysis and on-site investigative work.

3.16 The proposed site is situated to the west of Newport and south-west of Shalfleet, it has good access from the B3401 / B3399 and is crossed by five public rights of way. The site is currently in agricultural use, with a few farm buildings within close proximity.

3.17 There are three small areas of woodland within the site boundary, together with a short stretch of the Thorley Brook and another stream or field ditch. Both water bodies appear to be flowing from south to north, ultimately draining to the River Yar.

3.18 The Isle of Wight unitary development plan (UDP) identifies a locally designated SINC south of the proposed wind turbine location. This is due to Hummer Copse, a small section of woodland that exists on site. No other national or international nature conservation designations occur within the site, although Prospect Quarry SSSI is situated close to the southern boundary. The SSSI is designated both for its geological and biological qualities.

Planning policy context

National policy

3.19 The Energy White Paper of February 2003 is the current key Government statement on renewable energy. It encapsulates existing initiatives including Kyoto and EC Directive 2001/77 objectives, and sets out future policy. Renewable energy targets in the White Paper now represent UK Government policy and require the following:

- 10% supply of UK electricity from renewables by 2010, subject to the cost to consumers being acceptable
- an aspiration to achieve 20% supply of UK electricity from renewables by 2020.

3.20 On-shore wind is identified as having a role in the creation of the 2020 energy system, intimately related to the other characteristics of that system: greater

diversity of energy generation, a grid capable of handling intermittent sources of generation, and local distributed networks.

The White Paper explains that if the UK is to achieve a 60% reduction in carbon emissions by 2050 (as recommended by the Royal Commission on Environmental Pollution), renewables by this time should contribute at least 30% to 40% of our electricity generation and possibly more. To facilitate this level of renewable energy production it is necessary to develop a framework that encourages the development of a wide range of renewable options and that establishes significant changes to the UK's institutions and systems. These and other statements are now given formal backing through PPS22, Renewable Energy.

Planning Policy Statement 22: Renewable Energy (2004)

3.21 PPS22 sets out a series of key principles that regional planning bodies and local planning authorities should adhere to. It explains that renewable energy developments should be accommodated throughout England in locations where the technology is viable and environmental, economic and social impacts can be satisfactorily addressed.

3.22 The wider environmental and economic benefits arising from a renewable energy project are material considerations, which PPS22 states should carry considerable weight in the determination of planning applications.

Regional policy

3.23 RPG9 was published in 2001, providing a regional framework for the preparation of local development plans and setting a spatial framework for other strategies and programmes for the South East of England. It covers the period up to 2016.

3.24 In November 2004 a revised chapter 10 (Energy Efficiency and Renewable Energy) was adopted and published by Government Office for the South East. It contains minimum regional targets for electricity generation from renewable sources within the region at Policy INF6, which are set out in Table 1 below. It also identifies on-shore wind as being one of the renewable energy technologies with the greatest potential for renewable electricity generation to meet these targets.

Year/timescale	Installed capacity	% Electricity generation capacity
2010	620	5.5
2016	895	8.0
2026	1750	16

Table 1: RPG9 minimum regional targets for renewable electricity generation

3.25 Policy INF7 identifies indicative sub-regional renewable energy targets for land-based renewable energy.

Sub-region	2010 Renewable energy target (MW)	2016 Renewable energy target (MW)
Hampshire & Isle of Wight	115	122
Thames Valley & Surrey	140	209
East Sussex & West Sussex	57	68
Kent	111	154

Table 2: RPG9 indicative sub-regional targets for renewable electricity generation

3.26 Local authorities are expected to collaborate and engage with communities, the renewable energy industry and other stakeholders on a sub-regional basis to assist in the achievement of the targets through:

- undertaking more detailed assessments of local potential
- encourage small-scale community based schemes
- encouraging development of local supply chains, especially for biomass
- raising awareness, ownership and understanding of renewable energy.

Sub-region	Renewable energy type	Progress on achieving targets (Installed capacity MWe)
Hampshire & Isle of Wight	Co-firing	0
	Wave and tidal	0
	Offshore wind	0
	Hydro-electric	0
	Solar	0.24
	Bio and sewage gas	0.34
	Onshore wind	0.32
	Biomass	0
	Total operational	**0.90**
	Total Planned	**17.89**
Thames Valley & Surrey	Co-firing	25.17
	Wave and tidal	- (not possible)
	Offshore wind	- (not possible)
	Hydro-electric	0.07
	Solar	0.96
	Bio and sewage gas	3.19
	Onshore wind	2.05
	Biomass	40.00
	Total operational	**71.44**
	Total Planned	**23.77**
East Sussex & West Sussex	Co-firing	0
	Wave and tidal	0
	Offshore wind	0
	Hydro-electric	0
	Solar	0.03
	Bio and sewage gas	1.09
	Onshore wind	0.01
	Biomass	0
	Total operational	**1.15**
	Total Planned	**0.03**

Table 3 continued

Sub-region	Renewable energy type	Progress on achieving targets (Installed capacity MWe)
Kent	Co-firing	0
	Wave and tidal	0
	Offshore wind	0
	Hydro-electric	-
	Solar	0.05
	Bio and sewage gas	1.35
	Onshore wind	1.01
	Biomass	0
	Total operational	**2.41**
	Total Planned	**78.09**

Table 3: Renewable energy statistics per energy type, per sub-region as of November 2005. Data source, www.see-stats.org March 2006.

3.27 Table 3 provides data from November 2005 on the rate of progress in achieving the sub-regional targets. Of specific interest is the data relating to Hampshire and the Isle of Wight. It shows that current progress on the 115MW to be generated in the sub-region, 0.9MWe of electricity is currently sourced from renewables, whilst 17.89MWe is currently planned for.

3.28 The RPG identifies that the Isle of Wight, together with Hampshire, Kent, the Thames Valley and Surrey, have the greatest potential for onshore wind development. It goes on to advocate more detailed local consultation and assessment of potential to refine targets and define more specific local targets as has been undertaken on the Isle of Wight.

3.29 RPG9 states that the region's potential for renewable energy is likely to be realised by a mixture of developments of different types and scales, including up to three wind energy clusters and four single large turbines per county area over the next 20 years plus at least one larger scale wind farm.

3.30 The emerging Regional Spatial Strategy (RSS) for the South East, also known as the South East Plan, is currently under preparation. Once approved this will replace RPG9. Part One of the RSS document was submitted to the Secretary of State in 2005 and provides policy guidance on renewable energy developments, including location, design and other development criteria. It also proposes regional renewable energy targets in line with those previously set out in RPG9.

Local policy

3.31 Policy U18 of the Isle of Wight Unitary Development Plan, 2001 states that proposals for the production of energy from renewable sources will be approved provided that a range of criteria are met. These include that the development is at a scale sympathetic to the intimate character and landform of the Island, that sensitive areas are avoided, detrimental effects from noise, electromagnetic, visual or similar interference are minimised and that there is no detrimental effect on water requirements or quality.

3.32 The UDP acknowledges that the greatest potential for the generation of renewable energy on the Island is from wind although this is constrained by environmental factors.

3.33 The Isle of Wight produced its own Renewable Energy Strategy in 2002, which recommends that renewable energy technologies should contribute at least 10% of electricity generation on the Island. Wind energy is identified as the major potential contributor. In respect of on-shore wind, at least 5.1% of the total electricity generated from renewables should be achieved from this technology with the context of agreed planning criteria, having full regard to all environmental and landscape designations and on condition of community ownership and / or local economic benefit.

4. Development proposals

4.1 The proposal is for the installation of six wind turbines and associated site infrastructure. The turbines will have a range of hub heights, from approximately 65 metres above ground level (providing a maximum height to blade tip of approximately 106m), to approximately 75m hub height, which would provide a maximum height to blade tip of approximately 116m above ground level.

4.2 The turbines will be of a three-bladed horizontal axis design with an upwind rotor, and a tubular steel tower. Each turbine tower will be fixed to a concrete foundation, which would be adjacent to an area large enough to support a construction crane stand.

4.3 The different components of the proposed development are listed below:

- wind turbine transformer (one per wind turbine), these are likely to be enclosed inside the base section of each turbine tower thereby minimising the footprint of the development site
- access tracks approximately 5m in width, used for construction and operational access
- temporary laydown and construction compound areas
- possible borrow pits for construction materials
- self-supporting lattice permanent meteorological mast (at hub height)
- underground power and communication cables
- electrical substation (approximately the size of a portacabin containing switchgear and metering equipment)
- underground electrical and communication cabling between turbines and the substation building following alongside or under the routes of the site access tracks

4.4 Construction is anticipated to take approximately six to nine months and is likely to consist of the following temporary components:

- one temporary construction compound comprising temporary site offices, toilet, car parking and material storage facilities, compound will not exceed 1,200m^2.
- site access tracks, approximately 5m in width, for construction and operational access. These temporary site access tracks will be removed after construction and re-laid as and when site maintenance operations require their use
- formation of borrow pits (if required)
- construction of tracks within and onto the site
- construction of turbine foundations and cable trenches
- construction of control building/substation and grid connection line
- erection of turbines
- commissioning of the site
- site restoration and handover.

4.5 A permanent connection to the existing local electricity distribution network to the north of the site will comprise approximately 1.5km of underground 33kV

electrical cabling. This electrical connection is subject to a separate planning application.

4.6 It is anticipated that the site will remain in agricultural use throughout the construction and operation of the Project, with only the relatively small footprints of the proposal's components being removed from its current arable use.

4.7 Materials and equipment transported to the site will most likely travel from Newport along the A3045, onto Station Road, Main Road and Broad Lane, with the access to site from Broad Lane. A transport management plan will be developed for the construction phase of the development to ensure that all vehicles entering and leaving the site are routed to and from the site in accordance with designated routes mindful of local sensitive receptors.

4.8 The construction phase will be followed by an operational life of approximately 25 years. At the end of this period the Project will either be decommissioned and the site reinstated (in agreement with the land owner) or a new application (accompanied by a new ES) may be submitted to retain or modify the existing development. Such an application would meet the planning requirements at the time of submission. The decommissioning period for the Project is estimated to be six months.

4.9 The provisional site layout of the Project presented in figure 1 may be further refined as the environmental impact assessment, consultation and technical design process progresses.

5. Environmental impact assessment (EIA)

Background

5.1 The Regulations require an EIA to be carried out in order to support a specified range of major development proposals. EIA is defined in the Department of the Environment, Transport and the Regions' Circular 02/99 as:

> *'a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects. This helps to ensure that the importance of the predicted effects, and the scope for reducing them, are properly understood by the public and the relevant competent authority before it makes a decision.'*

5.2 The information gathered by a developer and put forward in conjunction with a planning application is referred to as an Environmental Statement (ES). Information that must be included within the ES is defined in Schedule 4, Part II of the Regulations (reproduced in Appendix 1). In addition, Schedule 4, Part I sets out further information that the ES may include by way of explanation or amplification.

5.3 The Regulations define the type and size of developments where EIA is required. Projects are classified as either Schedule 1 or Schedule 2 projects:

- Schedule 1 development - development of a type listed in Schedule 1 always requires EIA
- Schedule 2 development - development listed in Schedule 2 requires an EIA if it is likely to have significant effects on the environment, by virtue of factors such as its size, nature or location. Exclusive and indicative thresholds / criteria for the purpose of classifying development as Schedule 2 development are set out in the Regulations and Circular respectively.

Determining the need for EIA

5.4 The proposed Project falls under Schedule 2 of the Regulations, as an EIA may be required for installations for the harnessing of wind power for energy production (wind farms) where the development involves the installation of more than two turbines, or the hub height of any turbine or height of any other structure exceeds 15 metres. In this case, the proposal is likely to require an EIA as these thresholds are exceeded. Whether an EIA is required ultimately depends on the likelihood of significant environmental effects arising as a result of the proposal. Further guidance, provided in Annex A of Circular 02/99 states:

> *'Wind farms*
> *A15. The likelihood of significant effects will generally depend upon the scale of the development, and its visual impact, as well as potential noise impacts. EIA is more likely to be required for commercial developments of five or more turbines, or more than 5MW of new generating capacity.*

5.5 Given the size of the proposals, in accordance with the Regulations and EIA guidance, an environmental statement (ES) will accompany the planning application for the proposal.

6. Scoping an environmental impact assessment

Introduction

6.1 Scoping is the first stage of an EIA and is the key to a good quality ES. The main function of the exercise is to determine:

- the nature / characteristics of the development
- the alternatives under consideration
- the breadth of the EIA
- the broad range and complexity of key issues
- the extent to which each environmental topic area needs to be investigated.

6.2 Through determining the above, the EIA is focused and issues are subject to assessment at an appropriate level. If the scope of an EIA is defined too narrowly some critical area of uncertainty or an adverse impact may emerge late in the process. If scoping is too loosely defined, then much time, effort and money can be spent on unnecessary detail.

6.3 The scoping process should therefore identify the important environmental factors, which are most likely to be affected by the scheme, so that all potential effects are taken into account and that only those that are potentially significant are examined in more detail

Scoping methodology

6.4 To define the scope of the EIA, the proposal and the site were examined in detail to identify the key issues and sensitivities for consideration. This was the initial stage of the scoping exercise and involved a site visit and a 'scoping' meeting with key members of the project team. A checklist of potential environmental issues was used (Appendix 2) to aid the process. This checklist is based on guidance included in the ‘Preparation of environmental statements for planning projects that require environmental assessment - a good practice guide’ (Department of Environment, 1995) and it covers all aspects of the environment referred to in the EIA Regulations.

6.5 All potential issues that could arise from the proposals were noted during the meeting. Once the issues and sensitivities of the proposal and the site were identified, their level of potential significance was determined.

6.6 In preparing the significance criteria reference has been made to at least one of the following:

- guidance form a relevant professional institute or similar body (LI, IEMA, etc)
- consultation with a relevant statutory consultee
- accepted best practice from environmental statements, planning decisions, Inquiry decisions, etc.

6.7 The significance of the issues was assessed by comparing the magnitude of the likely changes (classified as large, medium, small or negligible), to the sensitivity of the receptors (classified as high, medium, low or negligible). The

overall significance classifications are primary, secondary and none. The table used to determine the significance is shown in Appendix 3.

6.8 By examining the significance of every issue and sensitivity, the overall ranking of each environmental topic (e.g. air quality, community and social effects, and traffic and transport, etc.) was determined. Each environmental topic was ranked as a primary or secondary issue. This ranking helps to determine the type and level of detail of the specialist studies required for the EIA.

6.9 The EIA will focus on the primary issues and to a lesser extent on the secondary issues. Descriptions of each of the issues raised in the second round of scoping are presented in the analysis of results section of this report. This section is accompanied by summary table for each environmental area of study and shows the potential issues and their likely significance.

Consultation exercise

6.10 This updated scoping report has been produced in order to present the findings of the scoping exercise to the local planning authority and interested consultees, and to prompt discussion and agreement over the nature and significance of the likely environmental implications of the proposals and the methodologies to be employed.

6.11 In accordance with the EIA Regulations, IoWC will undertake consultations on this scoping report and then provide YEL with a scoping opinion. Consultation will be with organisations set out in the Regulations. A period of five weeks is allowed for them to provide their responses.

6.12 Responses from the consultees from the first round of consultation following the original scoping report, the public exhibitions that subsequently followed and consultations following this document will be included and addressed in the ES where appropriate. This will provide an audit trail and in doing so, ensure that the issues considered in the ES are comprehensive and stakeholder comments are given the appropriate degree of emphasis. A list of suggested consultees is included in Appendix 4.

General structure of the environmental statement

6.13 The ES will consist of 4 volumes:

- Volume 1: Non-technical Summary.
- Volume 2: Main Text
- Volume 3: Figures
- Volume 4: Planning Appraisal

6.14 The non-technical summary (NTS), provides a summary of the ES in non-specialist language. This is aimed at a wide audience and will be available as a separately bound document to ensure a widespread circulation.

7. Results of Scoping

7.1 The environmental issues that have been identified as likely to require investigation and evaluation are set out in the following section, by environmental topic, alongside the relevant significance tables.

Issues of primary importance

7.2 The following have been determined to be issues of primary significance that will be examined in the EIA.

Birds

7.3 Ornithological studies will be a key component of the survey work. Initial survey findings have highlighted the use of the general area by golden plover and some raptor species. Discussions with English Nature, the IoWC and the Royal Society for the Protection of Birds (RSPB) have led to the development of a survey programme aimed at establishing levels of golden plover activity, both on site and in the wider area. The site is located close to the Solent and Southampton Water Special Protection Area (SPA) and Ramsar site.

7.4 Until recently there was no guidance available from English Nature on the level of ornithological survey effort required for on-shore wind farms in England. This is currently in draft form and relates specifically to the Humber Estuary and related SPA. The current survey programme has been developed in consultation with IoW Council, English Nature and the RSPB. The vantage point surveys are based on the methodologies given in based on those recommended in annex I of Scottish Natural Heritage (SNH) guidance, *'Survey methods to assess the impacts of proposed onshore wind farms on bird communities' (November 2005).* Particular attention is being given to groups judged to be sensitive to wind farm developments, such as raptors and golden plover. Survey work targeted golden plover will be carried out throughout the day including dusk and dawn periods. A common bird census has already been undertaken on the site during 2003. A winter bird survey was conducted through the winter of 2003/04 and this survey is in the process of being repeated. All surveys have taken particular note of birds appearing on any of the following lists:

- Annexe I of the Birds Directive (79/409/EEC)
- Schedule 1 of the Wildlife and Countryside Act (1981, as amended)
- Species of Conservation Concern (SoCC) 2002-2007 (red list only) – Gregory *et al*.

7.5 Ornithological survey work commenced on this site during April 2003 and is ongoing. All survey methods and findings will be discussed with English Nature, RSPB and the IoWC. A summary of the survey work undertaken up to the end of January 2006 is shown in table 4.

Survey	Status
Common bird census (2003)	Complete
Wintering bird survey (2003/04)	Complete
Repeat wintering bird survey (2005/06)	Ongoing
Wintering vantage point watches	Ongoing
Golden plover searches in wider area	Ongoing

Table 4. A summary of planned and completed survey work

7.6 Vantage point observations have been based on the methodology outlined in SNH *Survey methods to assess the impacts of proposed onshore wind farms on bird communities* (November 2005). (This methodology is taken from Band *et al* (In press) *Developing field and analytical methods to assess avian collision risk at wind farms*.). At present only winter survey work is considered necessary in relation to vantage point watches.

7.7 The vantage point surveys will ensure the proposed site area is watched for a minimum of 36-hours between January and March 2006. During this period observations will be spread throughout the day. The target species for the vantage point watches are shown in the list below. Vantage points surveys will initially be undertaken over the period of months.

Principal target species	**Secondary target species**
Golden plover	All geese species (except Canada geese)
Harriers (all species)	All duck species (except mallard)
Merlin	All wader species
Peregrine	
Barn owl	
Short-eared owl	

7.8 In addition to the vantage point surveys, other surveys have been undertaken to assess breeding and wintering populations of birds across the site.

7.9 Winter bird surveys will be undertaken using the standard set of methods as set out in Gilbert et al. 1998. Surveys will be undertaken between November and March.

7.10 Collision modelling will be used to assess the risks to vulnerable birds at the site. Vantage point data will be collected in unitary height categories (e.g. 10 or 20m units) to allow for flexibility during the assessment process and changes to turbine specifications. Draft SNH guidance, 'Developing field and analytical methods to assess avian collision risks at wind farms' provides the most recent standards.

7.11 It is not considered appropriate to include details of all the survey findings in this document, all surveys have been / will be made available to English Nature, RSPB and the IoW Council.

7.12 The breeding bird community within the survey area is largely represented by birds that are common and widespread on the Isle of Wight. Species recorded during the breeding season surveys include common buzzard, lapwing, yellowhammer, skylark, linnet, yellowhammer and reed bunting. Of particular

interest on this site was the relatively high density of breeding skylark and the presence of grey partridge.

7.13 The wintering bird survey recorded a total of 51 species on the site. Species of particular interest included a flock of 104 golden plover, single records of merlin and peregrine. The areas also supported good numbers of passerines such as yellowhammer and skylark. This work is in the process of being repeated.

7.14 The potential impacts of the proposals on birds can be considered to fall into four main categories:

a. Disturbance – during construction, operation and de-commissioning of the Project. Potential impacts could include reduced breeding success, loss of feeding areas, or loss of roosting sites, both inside and outside the development boundary. The severity of the disturbance will depend on the species involved and the nature and duration of the disturbance event.

b. Displacement – the construction of the turbines and subsequent operation may prevent birds from using the site area for feeding, breeding or roosting. The effects of displacement will vary on the number and type of birds involved and will be assessed over the operational lifespan of the proposals.

c. Loss of habitat – the construction of turbine bases, access roads, borrow pits and other associated infrastructure will all lead to the loss of habitats which may be used by feeding, breeding or roosting birds.

d. Direct mortality – some species of bird are particularly vulnerable to collision with wind turbines. The susceptibility to collision is influenced by many variables including turbine type and location, bird species involved and weather conditions. Predicted impacts on bird populations throughout the lifespan of the proposals will be addressed.

7.15 The assessment will include a description of the bird communities identified within the survey area (both breeding and wintering). These communities will be evaluated and all key species of conservation concern will be identified. This will include the highlighting of those species of importance not only at European or national level, but also those whose populations are significant at a regional level.

7.16 The impacts of displacement, disturbance, loss of habitat and direct mortality will be examined for all species identified as being of conservation interest. A broader assessment of the potential impacts on the larger bird community will also be included. The impacts of any suggested mitigation or habitat improvements will also be fully evaluated.

7.17 If required, the assessment will also include an evaluation of the possible impacts of the development on those bird species for which the Solent and Southampton Water SPA and Ramsar have been designated.

References

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Whitfield P, Bullman R & Band, B. (2005) *Survey methods for Use in Assessing the Impacts of Onshore Wind farms on Bird Communities*. SNH Advisory Services.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance / sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	✓
BIRDS	Habitat	Direct loss of habitat	Implemented masterplan	-	On-site bird populations	Low	Small	Secondary	✓
		Disturbance resulting in abandonment of habitat	Implemented masterplan	-	Bird populations	Low	Small	Secondary	✓
	Flight	Potential disruption of flight lines	Implemented masterplan	-	Off-site bird populations	High	Small	Primary	✓
		Potential collisions with turbines or wires	Implemented masterplan	-	Off-site bird populations	High	Small	Primary	✓

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(3) Categories = Primary, Secondary, Uncertain, None.

Community and social effects

7.18 Vestas Blades currently employs approximately 400 people on the Island and in recent years has had commercial relationships with around 70 businesses on the Isle of Wight, estimated as involving a further 150 people and worth around £8.6 million. This makes Vestas Blades a significant employer on the Island and the one of the largest in the Island's private sector.

7.19 The economic effects associated with having an operational Project close to where the turbine blades are manufactured would be beneficial, as the local site where potential customers of Vestas Blades could be given a demonstration of the technology available from the manufacturer. The proposal's direct and indirect effects on the Island's economy will be addressed in the ES. These will include key issues such as:

- the direct effect on local construction businesses and their suppliers who will erect the turbines
- the effect that may arise from the influx of construction workers to the site
- the effects caused by increased spending in the local economy - for example, temporary accommodation, food outlets, restaurants and local shops.

7.20 The presence of wind turbines in cherished environments is a sensitive issue and evaluating the public perception of wind farms is important in order to identify anticipated effects on tourism, local prices of property and housing and the general perceived effect on lifestyle and quality of life. These elements will be addressed in the ES using research conducted on similar schemes in representative locations that are comparable to the Isle of Wight.

7.21 Renewable energy is gaining increasing prominence in the UK, and it is now an important part of the educational curriculum. The proposals will provide a working example of this technology and therefore will provide an educational resource for the Island's community and its visitors. The effects on education that the proposal brings to the Island will be addressed in the ES.

7.22 An assessment of potential health and safety issues associated with the proposal will also be undertaken, considering the potential for effect on areas such as Southampton Airport and Ministry of Defence tactical training areas, flight paths and radar sites. The ES will also address highway safety and the potential for vehicle accidents occurring due to drivers being distracted by moving turbine blades.

Resource	Component	Potential Issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance / sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
COMMUNITY AND SOCIAL EFFECTS	Employment	Provision of employment	Operation	-	Maintenance personnel	Low	Small	Secondary	×
			Construction	-	Construction workers	Medium	Medium	Primary	✓
	Economics	Effect on local businesses in proximity to proposal	Construction	-	Local businesses, shops, restaurants, temporary accommodation	Medium	Medium	Primary	✓
		Effect on Island economy through renewable energy business relationships	Presence of development	-	Future investment in the Island's private sector and other small businesses	Medium	Medium	Primary	✓
		Effect on tourism	Presence of development	-	Visitor numbers and Island revenue	Medium	Medium	Primary	✓
	Lifestyle local amenities	Public nuisance caused through the effects of shadow flicker	Presence of development	-	Local residences	Medium	Small	Secondary	✓

	Lifestyle local amenities	House and property prices	Development proposals	-	Local house owners and those within sight of the proposed development	Medium	Medium	Primary	✓
	Education	Improved understanding of renewable energy issues	Presence of development	-	Island population and its visitors	Low	Medium	Secondary	✓
	Public health and safety	Highway safety	Operation turbine blade movement	-	Road network users	High	Small	Secondary	✓
		Obstruction or diversion of aircraft flight paths	Development proposals	-	MOD, civil aviation	High	Small	Secondary	✓

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Cultural heritage

7.24 The proposed development site lies in an area of known cultural heritage interest on the west of the Island. A search of the Isle of Wight Sites and Monuments Record revealed a number of past archaeological finds and features in the immediate area ranging from prehistoric flint artefacts to the site of a World War Two gun emplacement. Of particular significance are the large concentrations of prehistoric burial mounds present on the ridgeways north and south of the site.

7.25 There have been limited archaeological surveys in the area with the exception of investigations as part of the insertion of a new pipeline along the northern edge of the site (Seaclean 2001), which does highlight the possibility of further, similar archaeological material being uncovered within the boundary of this site.

7.26 The land on the site has not been developed in several hundred years, and therefore has the potential to reveal hitherto unknown archaeological sites, features or findspots. A number of significant stray finds have been discovered in this part of the Island in the past year; these highlight the necessity of thorough site investigations before construction in this particular area. The proposed location of wind turbines is on land that has been subject to intensive farming practices over several hundred years. The full extent of this practice will be addressed in the ES.

7.27 The progressive archaeological work undertaken for the EIA has included a desktop survey, a geophysical examination of the site, and intrusive archaeological excavations on the proposed locations of the wind turbines, crane pads and temporary construction compound. The findings of each of these stages of the assessment have been discussed with the IoWC.

7.28 Figures 3 and 4 show the site with respect to historical buildings, ancient monuments, and conservation areas. There are hundreds of non-designated archaeological sites on the Island, with many in close proximity to the site. Given the size and physical presence of the proposals, those features of significance will be assessed with respect to the changes invoked by the presence of the proposals.

7.29 The setting of scheduled and unscheduled archaeological sites within the Zone of Visual Influence will also be defined. Any impacts on the settings of archaeological sites may influence the micro-siting of turbines within the application boundary. The landscape and visual assessment will also highlight any issues associated with listed buildings and conservation areas that may be affected.

7.30 The preliminary assessment of cultural heritage in the immediate vicinity of the proposed site has highlighted a landscape with many archaeological and historical resources, some of which are nationally protected sites (SAMs or listed buildings). A full list of designated sites, listed buildings and other receptors likely to be affected, either directly or indirectly, will be addressed in the ES.

7.31 The assessment will evaluate the entire cultural heritage resource in terms of its significance and the likely effects the proposal will have upon each

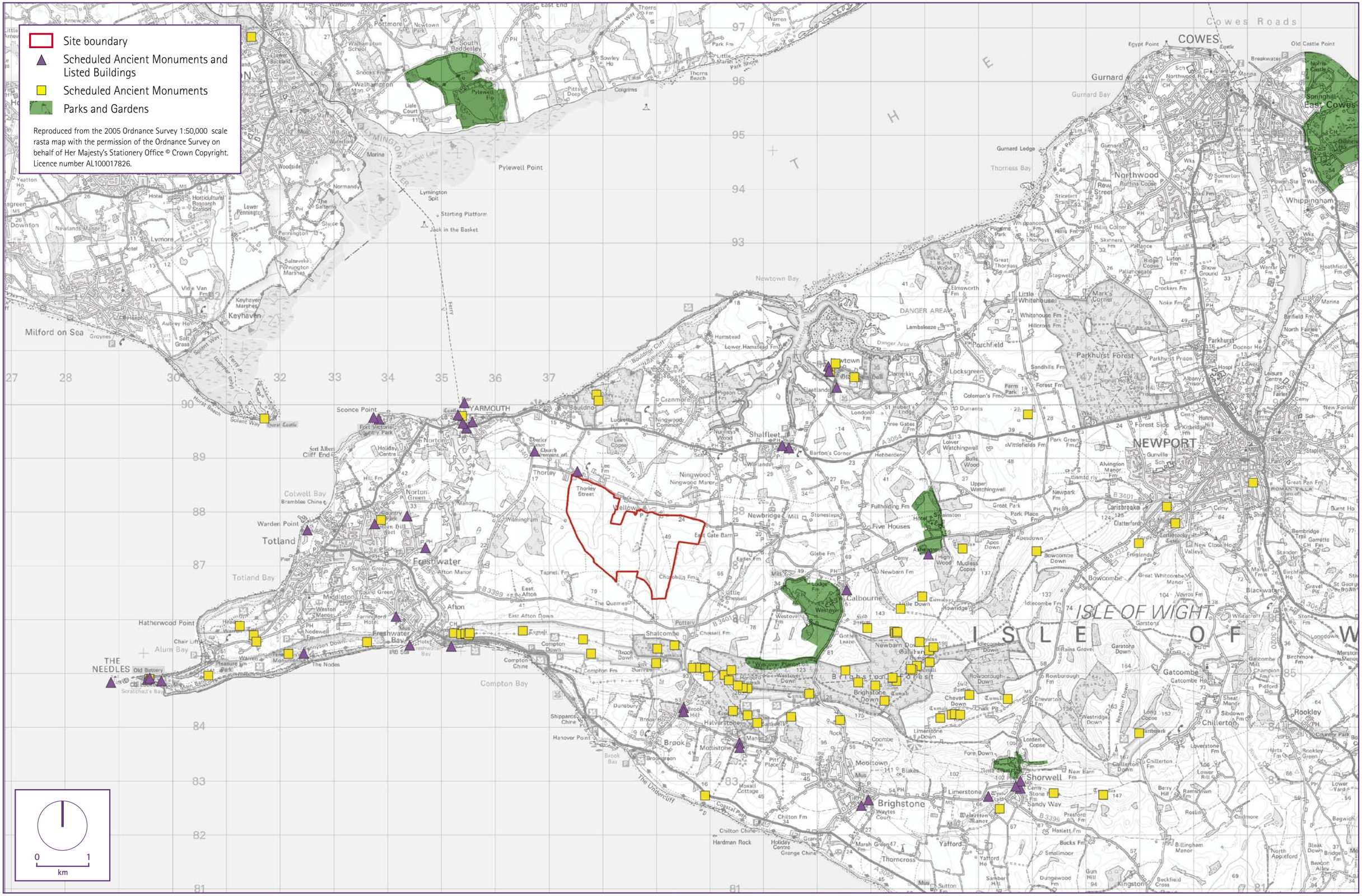

Figure number 3. Historic areas

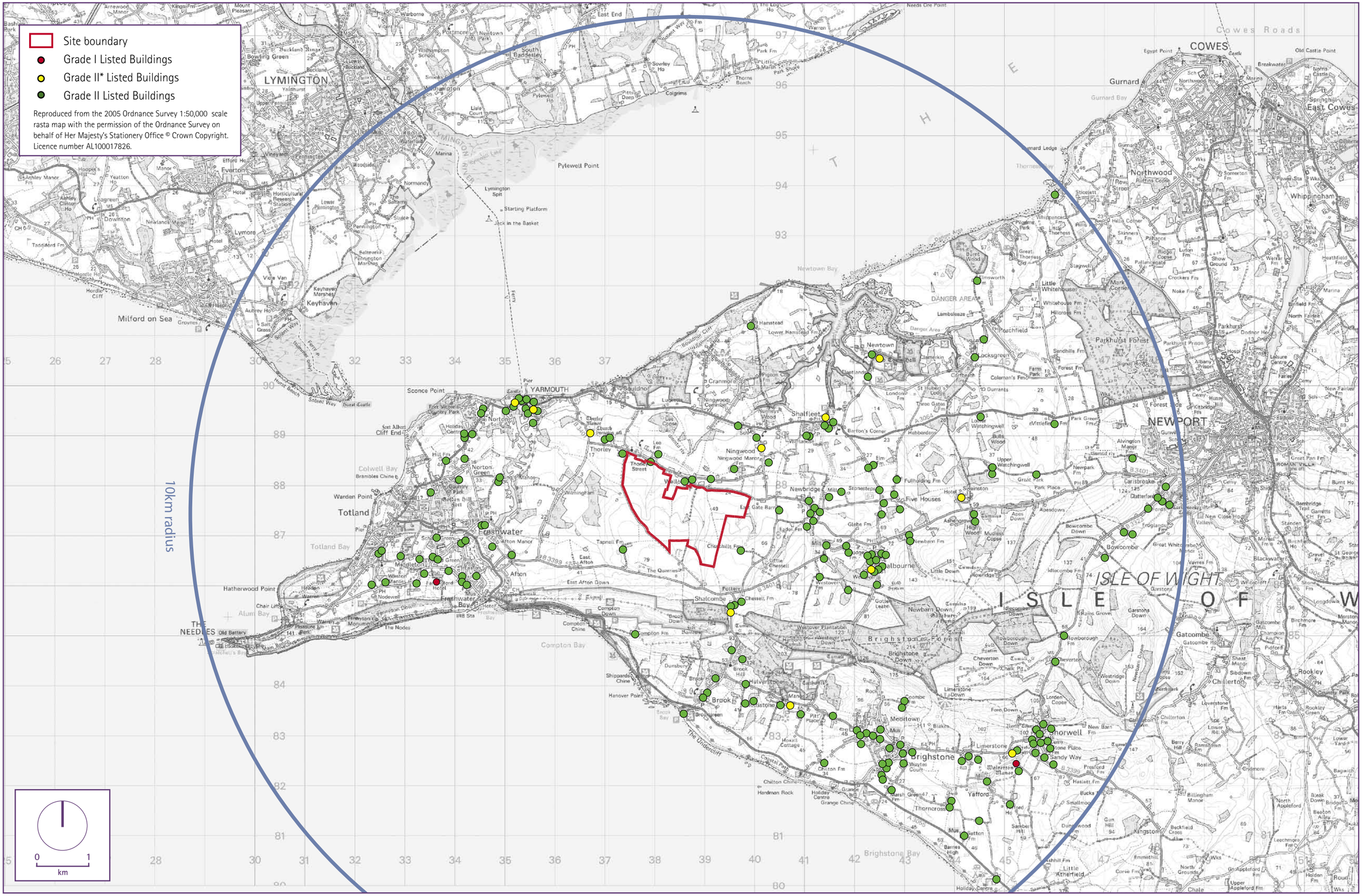

Figure number 4. Listed buildings

element, whether it be an archaeological site or listed building or other components of the wider historical landscape. Appropriate mitigation measures will be recommended to minimise unavoidable adverse affects.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance/ sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
CULTURAL HERITAGE	Historical setting	Disruption of historical setting of the area	Presence of development / construction activities	-	Cultural / historical setting local residents and visitors to the Island	Medium	Medium	Secondary	✓
	Archaeology	Destruction of unidentified archaeological finds	Construction	-	Archaeological finds	Low - high	Small –large	Uncertain	✓
	Scheduled Monuments / buildings	Effects on views of historic monuments/buildings	Presence of development / construction activities	-	Scheduled / ancient monuments / historic buildings	High	Medium	Primary	✓

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(3) Categories = Primary, Secondary, Uncertain, None.

Noise and vibration

7.32 Noise issues can arise during the construction, operational and decommissioning phases of the proposals.

7.33 Access road provision, site preparation and the construction and commissioning of the turbines will give rise to temporarily raised noise levels in the local area. Construction activities may include use of excavation and earth moving equipment, delivery vehicles and compaction plant noise.

7.34 The turbines are mounted on substantial concrete bases, which may need to be anchored using piles. Should pre-cast piles be used, requiring the use of impact piling techniques, there is the potential for noise impacts at receptors in the vicinity of the site. Other piling methodologies, such as non-percussive piling techniques, which are far quieter, will be considered if piling is indeed necessary. The use of cranes to erect the turbines is not considered likely to cause any further significant noise impact.

7.35 Much of the equipment and materials required will have to be transported along local roads on HGVs, giving rise to a potential temporary noise impact at receptors along the route.

7.36 There are two potential sources of operational noise from a wind turbine; aerodynamic noise from blade movement through the air, and mechanical noise from the gearbox and generator in the nacelle. Through careful design and development, modern wind turbines have become significantly quieter than early machines. Aerodynamic noise is minimised by careful attention to blade design, and the noise from the gearbox and generator by gear design and the use of sound insulation materials. It is possible to hear a swishing sound at the base of the turbine as the blades rotate and, to a lesser extent, the mechanical noise of the gearbox. Both of these noises diminish quickly with distance, and by careful siting any potential for noise nuisance can generally be eliminated. Maintenance vehicles will generate occasional minor noise during the life of the Project, however this will be infrequent and temporary in nature and therefore considered insignificant.

7.37 The monitoring and assessment of noise levels will be performed/calculated in accordance with the ETSU report – ETSU-R-97: '*The Assessment and Rating of Noise from Wind farms*'[2].

7.38 Assessments will comprise comprehensive baseline noise surveys at identified sensitive receptors, coupled with simultaneous wind speed measurements at locations on the proposed site. A bespoke noise modelling computer program will then be used to predict noise levels from the wind turbines at the receptors and demonstrate compliance with the criteria set out in the ETSU document. Careful consideration will be given to any cumulative effects that may arise due to the proximity of other consented developments.

7.39 Decommissioning will involve using plant and equipment to demolish and remove the turbines from the site, causing temporarily elevated noise levels locally at the site and along the access routes.

[2] The Assessment and Rating of Noise from Wind Farms, ETSU-R-97, September 1996

7.40 Noise and vibration may affect local properties depending on their site characteristics, other noise sources in the vicinity and distance from closest turbine. Any impact on birds and other wildlife populations and the significance of this will be included in the ES and cross-referenced with the findings of the ecological surveys.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance / Sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
NOISE AND VIBRATION	Noise	Increase in noise from construction and earth moving activities	Construction and decommissioning phase activities	-	Local human community and fauna	Medium	Medium	Primary	✓
		Increase in noise due to blades, generator and gearbox	Operational phase	-	Local human population within 500m	Medium	Small	Secondary	✓
		Increase in noise from traffic and transport movements	Construction	-	Local human population/wider road network / fauna	Medium	Medium	Primary	✓
			Operation	-	Local human population/wider road network / fauna	Medium	Negligible	Secondary	×
	Vibration	Increase in vibration from construction activity /traffic	Construction work including earth moving, piling and HGV movement	-	Local human population and fauna	Medium	Medium	Primary	✓

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Landscape character

7.41 The proposed site lies to the north of Brook Down, which is a narrow, east west trending shallow ridge line with a maximum elevation of 164m AOD (above ordnance datum). The site lies within the intensive agricultural landscape and is mainly in arable agricultural use and has several small streams issuing from the site and flowing northwards in shallow valleys. Site elevations range from approximately 50-80m AOD.

7.42 Given the dimensions of the wind turbines it is clear that issues associated with landscape will be important. This importance is further amplified by the number of landscape designations that exist on the Island and within the site's vicinity. While the site is not within a designated landscape, over 50% of the Island is designated and forms the Isle of Wight AONB. It is proposed that the study area used in this assessment will include a 30km radius from the centre of the site. This will include the entire land surface of the Island and a wide area of the southern coastal mainland. Figure 2 shows the IoW AONB, and the extent of the New Forest National Park.

7.43 The addition of large scale towers, nacelles and rotating blades to the Island's landscape will alter the character of the landscape and its intrinsic quality over a wide part of the Island and on sections of the mainland. The significance of any changes will be thoroughly assessed.

7.44 In order to assess the full impact of the landscape effects attributed to this proposal, the historic and cultural setting will also be addressed and cross-referenced with the cultural heritage chapter of the ES. Figures 3 and 4 of this report show the number of historic areas and listed buildings within the vicinity of the site. The effect of the proposal on these sites will be addressed within the ES.

7.45 The landscape assessment will address the landscape character of the site, the landscape context of the development and the potential changes to the perception of the landscape and landscape resources. The landscape character areas are shown on figure 5.

Visual effects

7.46 Site preparation and construction activities associated with the proposed development, while temporary in nature, are likely to be visible from the ridge line to the south of the site, which is within the AONB. They are therefore likely to be visible by local residents, users of the local rights of way and visitors to the AONB.

7.47 Following the completion of construction work, the majority of the site (including the construction compound area) will be restored to agricultural use, which will reduce any long-term adverse visual effects.

7.48 During operation, the wind turbines would be visible from close, medium and distant views, both from property and public vantage points. It is unlikely that the wind turbines would be visible from south of the ridge (Compton Down), although this will be further investigated and examined within the ES. The visual impact of the operation of the development is considered significant. Of particular importance is the issue of visibility from the AONB and New Forest National Park, and the effects on the tourist industry of the Island. This latter point will be further discussed in the community and social effects chapter of the ES.

7.49 Viewpoints have been selected with the agreement of statutory consultees, including the local planning authority and English Heritage. The precise location (OS grid reference), date, time of day and weather conditions will be described for each location. Viewpoints are chosen to:

- achieve the effective assessment of both key viewpoints and representative viewpoints from various directions and distances
- identify the range of potentially sensitive receptors (including those of different receptor groups and static and moving viewpoints) and potentially significant views, locations or landscapes.

7.50 The visual effects assessment will undertake a detailed study of the visual setting and address the potential visual receptors that may be affected by the proposals. The assessment will be undertaken implementing a variety of techniques, including a Zone of Visual Influence and wire-frame/photo-montage studies. The assessment will be conducted in accordance with the latest methodologies from the Landscape Institute and professional guidance such as *Guidelines for Landscape and Visual Impact Assessment*.

7.51 In addition, the potential for reflected light and shadow flicker will also be investigated. The need for mitigation measures and opportunities for new landscape enhancement measures derived from these studies will be appraised as appropriate.

7.52 Cumulative impacts will be addressed in the ES, which will take into account any future consented developments, and especially wind farm developments.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance / sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
LANDSCAPE AND VISUAL	Landscape quality	Detraction in landscape quality	Presence of development in the landscape	-	Current landscape quality	High	High	Primary	✓
	Landscape character	Change in character of local land in wider area	Presence of development in the landscape	-	Current Landscape character	High	High	Primary	✓
	View of structures	Changes in views from surrounding area, road and river / sea users, and from population centres both on and off the Island	Presence of development	-	Recreational users /local population	High	High	Primary	✓
		Changes to views from protected landscapes	Presence of development	-	Recreational users of footpaths and bridleways within AONBs on and off the Island	High	High	Primary	✓
		Cumulative effects	Anticipated wind farms and other developments on the Island	-	Threshold capacity of surrounding landscape	Medium	Medium	Primary	✓

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(3) Categories = Primary, Secondary, Uncertain, None.

Your Energy

Site boundary

Location of turbines

Boundary between Christchurch and New Forest Landscape Character Assessments

Notes:

1. Isle of Wight landscape type boundaries derived from *The Isle of Wight Landscape (CC 1994)*
2. Mainland landscape unit boundaries derived from *New Forest District Landscape Character Assessment (ERM 2000) and Christchurch Borough Wide Character Assessment (MS 2003)*

12 13 27 14 23 26 20 24 25 15 19 18 16 17 UE TC CL3

20km radius

10km radius

Landscape Character (mainland)

Christchurch Borough (Dorset)

CL3	Christchurch Bay
UE	Urban edges and enclaves
TC	Settlements

New Forest District

12	Hythe and Ashurst Forest farmlands
13	Waterside parishes
14	Fawley Refinery complex
15	North west Solent Estate
16	Lymington and Pennington coastal plains
17	Barton and Milford coastal plain
18	Sway pasture and small holdings
19	Bransgore woods and pastures
20	Southern heath and forest
23	New Forest central woodlands
24	Lymington River
25	Beaulieu Heath
26	Beaulieu River
27	Eastern forest heaths

Landscape Character (Isle of Wight)

- Chalk downs
- Traditional enclosed pasture land
- Intensive agricultural land
- Southern coastal farmland
- Sandstone hills and gravel ridges
- Northern woodlands
- Landscape improvement area
- Harbours and creeks
- The undercliff
- Osborne Coast
- Northern coastal cliffs
- Settlememt

0 2 km

Figure number 5. Landscape character areas

Issues of secondary importance

7.53 The following have been determined to be issues of secondary significance that will be examined in less detail in the ES.

Air and climate

7.54 The Isle of Wight currently has no designated air quality management areas (AQMA), indicating that there are no significant air quality issues on the Island in terms of local air quality management and the national air quality strategy (NAQS).

7.55 The characteristics of the proposed site and the absence of any specific point sources of potential air pollution indicate that the main source of direct air pollution will be from construction vehicles, and from site maintenance vehicles during the operational stage of the Project.

7.56 Careful consideration of the traffic and transport assessment will be undertaken to determine if the emissions generated by traffic related to the proposals are likely to have any significant effect on sensitive receptors. Guidance on the Methodology for Multi Modal Studies (GOMMMS) will be used as a preliminary screening threshold before any detailed studies are undertaken. The GOMMMS guidance identifies a 10% increase in traffic as a threshold for changes to occur in local air quality.

7.57 The air quality assessment will also examine the likelihood of fugitive dust arisings during the construction phase of the development and effect on sensitive receptors. The proposals outline potentially significant excavation and earthmoving activities for the foundations of the turbine platforms and crane pads.

7.58 The extent of dust arisings that occur at the site is dependent on many factors; vegetation coverage, volume of traffic over exposed soil and meteorological conditions. The effect of potential airborne dust arisings on identified sensitive receptors will be addressed in the ES and mitigation measures presented and included in the code of construction practices.

7.59 Indirect air and climate effects from this type of development include global climatic issues. Specifically these include the likely carbon savings associated with the proposed development through the displacement of carbon emissions produced by energy generated from the combustion of fossil fuel sources.

7.60 Wider issues that also require consideration include the need to supply power from other sources (including fossil fuel sources) on still days and off-site carbon costs, for example those associated with the erection of transmission lines and laying of new tracks.

7.61 The proposed development can potentially save carbon emissions and contribute to the UK's renewable energy target. However, the amount of land taken by the proposed development (e.g. the area of tracks, turbine bases) will reduce the amount of carbon that can be fixed in the live vegetation, though this is unlikely to be significant in this case.

7.62 The ‘payback’ of the Project is the length of time required for the development to generate the equivalent amount of energy used in its manufacturing and installation. This will be calculated and the results presented in the ES. While some simplifications and assumptions are necessary in these calculations, the resulting estimates will be useful in indicating the potential carbon efficiency of the scheme.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance/ sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
AIR AND CLIMATE	Local air quality	Decrease in local air quality due to traffic emissions, primarily NO_2, PM_{10}	Construction	Air	Local population flora and fauna	High	Small	Secondary	✓
			Operation	Air	Local population and flora / fauna	High	Negligible	None	×
		Cumulative traffic emissions with other developments	Operation / construction traffic	Air	Local population and flora / fauna	High	Small	Uncertain	✓
	Global air quality / climate	Reduction in CO_2 production	Operation of proposal	Air	Troposphere / directly humans flora/fauna	High	Medium	Primary	✓
	Particles and dust	Deposition/inhalation of wind blown dust	Construction	Air	Local population flora and fauna	High	Medium	Primary	✓
			Operation	Air	Local population, flora and fauna	High	Small	Secondary	✓

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Land, contamination and waste

7.63 Historical maps of the site examined in the desktop study reveal that there has not been any development on the site in several hundred years. The current agricultural use indicates that existing contamination of the soil is unlikely, other than potential herbicide/pesticide residues, or minor fuel spills arising from farm-related operational vehicles and machinery.

7.64 The soils on site and within the surrounding area are generally heavy clay soils derived from the underlying clays and limestone geology. They belong to the Aberford Soil Association, which has characteristics of being shallow, well drained, calcareous and loamy.

7.65 Beneath this soil classification lies the solid geology. It is characterised as belonging to the Bembridge Limestone series and the Osborne Beds of the Oligocene Period. These beds are up to 207m thick on the Island.

7.66 The nature of the soils means that they may be easily compacted. This is of particular importance given the heavier vehicles that would be used on the site during the construction phase. Unmitigated, this compaction may give rise to elevated rates of run-off and hence increase the potential for erosion. The degree to which this may occur will be examined in the ES and appropriate mitigation measures proposed to avoid any adverse effect on the land and soil structure.

7.67 The use of motor vehicles on site, and their associated fuel and lubricants, provides an inherent risk for contamination to occur. However, the likelihood for this is considered low given the detail of the codes of construction practice that would be adhered to during this phase. These will be described in the ES.

7.68 The periodic inspections of the wind turbines and maintenance of ancillary equipment during the operational phase are considered to have a small likelihood for soil contamination. The most likely event is a spill of lubricant, fuel or other maintenance fluid during a visit. Safeguards will be set in place as part of the site management plan to ensure that such events have no residual effects on the environment.

7.69 Site preparation and construction activities are likely to generate some excavated spoil and there may be some minor waste arisings attributed to workers spending time on site.

7.70 Due to the size and freestanding nature of wind turbines, excavations will be necessary for the provision of hardstanding foundations and crane pads. Where spoil is generated, this will be redistributed or re-used on site wherever practicable to minimise transport and disposal requirements. If any excavated material or waste is found to be contaminated due to past uses of the site, this will be disposed of at a suitably licensed waste management facility as close to the site as possible.

7.71 Given the nature of the proposals, only negligible amounts of solid residues will be generated during the operation phase. This will be generally in the form of common disposables and empty containers, which will be removed from site by maintenance personnel.

7.72 If contamination is suspected or identified during the EIA, additional research and intrusive ground investigation works may prove to be necessary this will determine its nature and extent, with proposals drawn up for any necessary control, remediation or disposal. The local authority Environmental Health Officer (EHO) and Environment Agency will be consulted on the detailed approach to sampling, testing, assessment methodology and disposal / remediation before commencement, if this case arises.

7.73 The quantities of spoil and solid residues produced during construction of the proposals will be estimated and potential options for reuse, recycling or beneficial disposal discussed in the ES.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance/ sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
LAND AND CONTAMINATION	Geology / geomorphology	Changes to structural stability, erosion and compaction.	Piling, drilling and laying of foundations, earth moving operations, introduction of hardstanding areas	-	Soils, geology, geomorphology, hydrology	Medium	Small	Secondary	✓
	Ground contamination	Storage of chemicals, lubricants, maintenance material, leaks of potential contaminants	Construction/ Operation	-	Soils, hydrology and groundwater	High	Small	Secondary	✓
		Remediation activities and mobilisation of any existing contaminants	Construction	-	Soils, hydrology and groundwater	High	Small	Secondary	✓
				-	On / off-site workers users of rights of way, flora and fauna	Medium	Small	Secondary	✓

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(2) Categories = Large, Medium, Small, Negligible.
(3) Categories = Primary, Secondary, Uncertain, None.

Land use

7.74 Land use effects addresses the potential of the proposed development to restrict, prevent or enhance land uses in the vicinity of the proposals. The site is mainly in arable use. Several rights of way cross the site, including local footpaths, bridleways and the Hamstead Trail long distance footpath.

7.75 During site preparation and construction activities, a small area covered by cereal crops will be removed. However, following the completion of construction and restoration work, agricultural use would resume across the remainder of the site.

7.76 The construction phase includes the site ground preparations for the access tracks and turbine tower footprints. It also includes the connection and trench digging to accommodate underground electricity cables. The construction phase is predicted to take approximately six to nine months. The final connection may cause some disruption to the on-site agricultural activity though, the disturbance is likely to be short and temporary.

7.77 During operation of the Project there may be a few restrictions in terms of land use in close proximity to the turbines and ancillary equipment such as an exclusion area beneath the turbine blades for certain agricultural machinery which is in excess of a specified heights. The area affected will be minimal.

7.78 Wind turbines, as is the case with similar tall structures, may cause electromagnetic interference (EMI), potentially leading to adverse effects on communications signals from television, radio and radar sources. The potential effects of electromagnetic interference will be evaluated in the ES.

7.79 Given the importance of the rights of way which cross the site, the effect on informal recreation and any disruption / diversion of these footpaths will be assessed in the ES.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance/ sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
LAND USE	Recreational / open space / Right of Way	Disruption to local and long distance footpaths	Construction phase and period of possible restricted access	-	Recreational users of rights of way	Medium	Medium	Primary	✓
	Agricultural area	Reduction in arable area, reduced yield and agricultural returns	Proposed development	-	Farm land owner	High	Small	Secondary	✓
	Harvesting activities	Restriction of equipment use beneath turbines	Proposed development	-	Farm land owners	High	Small	Secondary	✓
	Communication	Electromagnetic Interference caused by freestanding wind turbines with telecommunications and signalling across the Isle of Wight	Proposed development	-	Local population, communication companies, emergency services - users of signals such as RADAR, mobile phones, Television microwaves etc.	High	Medium	Primary	✓

1) Categories = High, Medium, Low, Negligible, (takes into account geographical level of importance).
2) Categories = Large, Medium, Small, Negligible.
3) Categories = Primary, Secondary, Uncertain, None

Natural heritage

7.80 The area of the proposed Project is predominantly arable land with small copses, hedgerows and watercourses. There are a number of statutory nature conservation designations in the immediate surrounds of the site, as shown in figure 6 and detailed in table 5. In addition to these are a small number of local nature reserves and national nature reserves within 5-6km of the site.

Designation	Name	Distance from site (m)
SSSI	Prospect Quarry	100
	Compton Down	700
	Yar Estuary	1000
	Bouldor & Hamstead	1400
	Newtown Harbour	1500
	Cranmore	1700
	Compton Chine to Steephill Cove	2000
	Mottistone Down	2000
	Freshwater Marshes	3000
	Calbourne Down	3400
	North Park Copse	3500
	Headon Warren & West High Down	4200
	Colwell Bay	4300
	Rowridge Valley	5500
	Locks Farm Meadow	5700
Special Protection Area	Solent & Southampton Water	1100
Ramsar	Solent & Southampton Water	1100

Table 5. Designated areas within 6km of the proposed site.

7.81 While a preliminary site visit suggested that there were no features of significant nature conservation interest on the site itself, a number of protected species surveys will be conducted using standard survey methodologies. A Phase 1 habitat survey has already been undertaken. A summary of the survey work undertaken and proposed for 2006 is shown below in table 6.

Survey	Status
Badger	Survey in 2006
Red squirrel	Survey in 2006
Dormouse	Survey in 2006
Bats	Habitat assessment in 2006
Great crested newt	Survey in 2006
Phase 1 Habitat	Complete

Table 6. Survey work proposed for 2006.

Flora

7.82 A Phase 1 habitat survey has been undertaken covering an area occupied by the turbines, access roads and any other works, plus Prospect Quarry SSSI. The initial survey work did not identify any habitat or species of interest outside the SSSI, however the reasoning for the identification of a SINC designation on site will be further examined as part of the ES.

Fauna (excluding birds)

7.83 The presence of protected mammals will be assessed by the use of targeted survey work to check their presence and estimate population size. Protected species such as red squirrel, dormouse, badger and bat species will be the subject of specific surveys. Changes to the scope and survey methodology may be made following liaison with consultees and the acquisition of additional local knowledge.

7.84 Survey information on the route of the connector to the national grid will also be included in the ES where known.

7.85 The potential impacts of the Project on flora and fauna can be considered to fall into four main categories:

a. Disturbance – during construction, operation and de-commissioning of the proposals. Potential impacts could include reduced breeding success or loss of feeding areas both inside and outside the development boundary. The severity of the disturbance will depend on the species involved and the nature and duration of the disturbance event.

b. Displacement – the construction of the turbines and subsequent operation may prevent animal species from using the site area for feeding or breeding. The effects of displacement will vary on the number and type of species involved and will be assessed over the operational lifespan of the Project.

c. Loss of habitat – the construction of turbine bases, access roads, borrow pits and other associated infrastructure will all lead to the loss of areas of vegetation and of habitats which may be used by feeding or breeding mammals, reptiles and amphibians.

d. Direct mortality – the operational turbines could have a direct impact on bat species in the area by posing a collision risk.

7.86 The results of the ecological assessments will indicate issues regarding habitat loss that will inform the layout of the turbines and ancillary structures. Mitigation measures will also be considered, along with opportunities for habitat enhancement in the area that could possibly offset any adverse impacts of the proposal.

7.87 The proposed development may result in the removal of some trees and woodland to facilitate access or grid connection, and a tree and woodland report will be prepared if necessary to assess potential impacts.

Bouldnor & Hamstead Cliffs
Newtown Harbour
Cranmore
Locks Farm Meadow
Yar Estuary
North Park Copse
Colwell Bay
Freshwater Marshes
Prospect Quarry
Lacey's Farm Quarry
Rowridge Valley
Calbourne Down
Compton Down
Headon Warren & West High Down
Mottistone Down
Compton Chine to Steephill Cove

0 500 metres

Site boundary
Ramsar: Solent and Southampton Water
Special Protection Area: Solent and Southampton Water
Site of Special Scientific Interest

Figure number 6. Natural designations

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance/ sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
NATURAL HERITAGE	Habitat type	Effects on areas directly affected by onsite infrastructure	Construction – piling activities and presence of development	Removal / change to habitat	Arable land	Low	Small	Secondary	✓
	Animal communities	Effects on existing and through disturbance to habitat and loss of breeding and foraging areas	Construction activities	-	Badgers, dormice, red squirrels	High	Small	Secondary	✓
		Loss of roost site, collision risk Severance of foraging route	Provision of infrastructure and operation of turbines	-	Bats	High	Small	Secondary	✓
	Wildlife Conservation	Potential impact on local designated areas	Construction / operation	-	Onsite SINC and surrounding SSSIs	Medium	Medium	Primary	✓

(1) Categories = High, Medium, Low, Negligible, (takes into account geographical level of importance).
(2) Categories = Large, Medium, Small, Negligible.
(3) Categories = Primary, Secondary, Uncertain, None.

Traffic and transport

7.88 The site is located between the B3399 to the south and the B3401 to the north. The B3401 links to the A3054, which is the main transport route between Yarmouth and Newport. The B3399 connects the town of Newport to the western village of Totland. The site will be accessed directly from a single lane track, Broad Lane, which runs the length of the south-western boundary between Shalcombe and Thorley.

7.89 The construction phase will include an increase in vehicles accessing the site along the A3054, B3401 and B3399. These will be in the form of general worker transport and specific abnormal size HGV equipment transporters that will be necessary for transporting the wind turbine components for on-site assembly. The HGV movements are not envisaged to be substantial in number and will only be for a short period. However, specific programming of delivery / transport times will be agreed with the local authority to ensure peak traffic times are avoided.

7.90 The size of the loads required for constructing the wind turbines is likely to result in some highway works being required to accommodate large loads: this may be necessary on Broad Lane, which currently is a minor single track road with passing points. Agreement with the highways authority will be required prior to any changes to this road or others deemed necessary. Other alterations to the local road network may include the temporary removal of traffic calming measures and road signs.

7.91 The operational phase will require some maintenance personnel to visit the site over the lifetime of the proposals. These traffic movements will be small in number per year and related to site maintenance, repair, and refurbishment activities. This may include, subject to an agreement between Vestas and YEL the replacement of turbine components to facilitate Vestas Blades' research, development and testing programmes to further strengthen the business' technical knowledge and market position as a leading turbine component manufacturing facility.

7.92 The Project may also generate some educational / tourist interest and the potential effects of this in terms of traffic and transport would be considered during the EIA process.

7.93 Existing road conditions and traffic volumes on the highway network around the site and along the routes used during construction and operation of the site will be assessed to establish the baseline data, for later comparison with predictions of traffic, which will be generated by the proposals. Flow data will be obtained at sensitive locations on the local traffic network. These data will comprise both turning count and automatic link count information in order to provide both hourly and daily flows.

7.94 Existing personal injury accident data will be obtained where available and the highway authority will be consulted for an opinion on the likely traffic implications. Issues such as junction capacity and the significance of increased traffic flows on the local road network will be investigated and the impact of any possible infrastructure improvements evaluated. Traffic volumes will be considered with the likelihood of other secured developments being operational and hence adding to the cumulative traffic volume using the local road network.

7.95 Potential increases in traffic flows will have air quality and noise implications. The traffic data will be used to predict the traffic-based components of potential noise and air quality effects, which will be examined under the respective environmental topic areas.

7.96 Mitigation measures will be proposed, where applicable, to minimise any adverse effects predicted. During the design of the site, options to minimise disturbance will be given detailed consideration, including possible junction and access improvements.

7.97 The transport section of the ES will also examine issues such as delay, severance, intimidation, safety and accident risk for drivers, pedestrians and cyclists. This will be particularly relevant where transport routes pass through small villages or past schools.

7.98 Final routing of construction and operational transport will be assessed in the context of potential Section 106 agreements and having regard to weight restrictions that apply to HGV movements within the Island's transport network.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance / sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
TRAFFIC AND TRANSPORT	Road and junction capacity	Increase in traffic volumes and the remaining capacity of local road network	Construction	-	Local population / road users	Medium	Medium	Primary	✓
			Operation	-		Medium	Small	Secondary	✓
	Accidents	Potential increase in accident rate	Operation / construction	-	Users of local road network	Medium	Unknown	Primary	✓
		Delay, severance, intimidation, safety	Operation / construction	-	Cyclists/ pedestrians, users of local road network	High	Medium	Primary	✓
	Infrastructure	Junction and local road improvements to accommodate oversized HGV deliveries of turbine components	Construction	-	Users of local road network	Medium	Medium	Primary	✓

(1) Categories = High, Medium, Low, Negligible, (takes into account geographical level of importance).
(2) Categories = Large, Medium, Small, Negligible.
(3) Categories = Primary, Secondary, Uncertain, None.

Water environment

7.99 A number of small watercourses that issue from within the site boundary and Thorley Brook completely traverse the site. All watercourses flow in a northerly direction towards one of four tributaries which feed the Thorely Brook Catchment.

7.100 The site is classified as a minor aquifer with high leaching potential. The site is located within 1km of a source protection zone for the Shalcombe public water supply.

7.101 Prospect Quarry SSSI, which is designated for various characteristics, contains a small, high calcareous pond, and is situated at an elevated point to the south of the site boundary. The pond's location on higher ground affords it protection from potential impacts.

7.102 Given the absence of water abstractions and sewage requirements in the proposals, the focus of the hydrology assessment will be on:

- site preparation and earth moving activities
- use of fuels, lubricants and other required chemicals on-site during construction and operation of the Project
- the effect of site access roads, infrastructure and tower foundations that may occur on surface water bodies and groundwater hydrology.

7.103 Site preparation activities such as earth moving are a hazard to on-site streams due to the potential for soil erosion and subsequent silting effects. Equally, the fuels, lubricants and other chemicals on site are also a hazard to soil and water quality simply by their use on site. However, with the proper on-site management and adherence to water quality guidance and Regulations the likelihood of accidents occurring will be small and therefore not a cause for concern.

7.104 Appropriate surveys will determine whether hydrological conditions and processes will be disrupted including effects on any important aquatic ecology. The presence of the infrastructure works, tracks, crane pads and turbine hardstanding foundations will be assessed to determine their effect on the site hydrology. Recharge volumes, run-off rates, watercourse diversion, or the interception of groundwater and changes in flow capacity will be analysed as part of the assessment.

7.105 Measures to prevent erosion, sedimentation or discoloration of watercourses may be required along with monitoring proposals and contingency plans. In addition, any measures necessary to avoid the erosion of hillside associated with the discharge from road culverting will be set out in the ES. The scheme will be designed to avoid crossing watercourses by preference. However, there is a need for the temporary access road to cross Thorley Brook to reach the eastern-most turbine location. The ES will include a detailed examination of the best way to traverse this watercourse.

7.106 The ES will include sufficient information to allow for a full assessment of the risks from the engineering proposals to any affected water bodies. Such information may include:

- details of all structures affecting watercourses and lengths of water courses involved
- photography of the area, including views upstream and downstream from affected sites, for each bank of the watercourse
- physical habitat
- morphological and ecological data.

7.107 No flood risk assessment is considered necessary given the site conditions and none has been requested by the Environment Agency.

7.108 Advice and agreement with the Environment Agency will be sought throughout the assessment process.

Resource	Component	Potential issue	Source or cause of change	Pathway for change	Receptor	Preliminary prediction of significance of issue			Addressed in ES?
						Importance/ sensitivity of receptor (1)	Magnitude or scale of effect (2)	Significance (3)	
WATER ENVIRONMENT	Surface water hydrology	Changes to land drainage / runoff regime, flow characteristics of Thorley Brook	Presence of hardstanding tower foundations and crane pads crossing of Thorley Brook by temporary access track	'	Thorley Brook and the River Yar	Medium	Small	Secondary	✓
	Groundwater hydrology	Reduced groundwater recharge and changes to groundwater infiltration rates	Underground piling and foundation hardstanding	Infiltration	Groundwater abstractors	High	Small	Secondary	✓
	Surface water quality	Risk of pollution through leaks or spills	Construction / decommissioning phases	Runoff	Surface watercourses	Medium	Small	Secondary	✓
	Groundwater quality	Risk of pollution through leaks or spills	Construction / decommissioning phases	Infiltration	Groundwater and abstractors for water supply	High	Small	Secondary	✓

(1) Categories = High, Medium, Low, Negligible, (takes into account geographical level of importance).
(2) Categories = Large, Medium, Small, Negligible.
(3) Categories = Primary, Secondary, Uncertain, None.

Insignificant issues

7.109 Issues evaluated and considered not to be significant in relation to the proposed development will not be addressed in the ES. These are shown in the final column of the scoping tables for individual topic areas presented within this section of the document.

Alternatives

7.110 The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 provide detailed guidance on the need for and content of Environmental Impact Assessments. With regards to alternatives, Schedule 4 (Part II) of the Regulations states that environmental statements should include:

"An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects."

7.111 An alternative sites assessment has been undertaken by Your Energy, which commenced in 1999/2000. The initial sieving process of sites on the Island using technical, commercial, planning and environmental constraints found 11 sites that had potential for development. These include:

North of Niton / west of Whitwell	South of Wellow
West of Wroxall	Bleak Down
South of Freshwater / east of Totland	Military Road
North of Freshwater	Bowcombe Down
Land north-east of Afton	Brightstone Forest
Land south-west of Bembridge	

7.112 The 11 short-listed sites were then subject to further detailed site and desktop analysis in order to determine the most feasible location. The results of the process showed that the site south of Wellow is the most suitable. The methodology, results and reasons for rejecting the alternatives will be presented in the ES.

Cumulative effects

7.113 The EIA will also consider the cumulative effects of the proposed Project and other proposed developments on the Island. The cumulative effects of issues such as landscape and visual impacts are considered to be of particular importance.

8. Conclusion

8.1 This scoping exercise has identified issues of primary and secondary importance. These are summarised in table 7. This is in line with best practice guidance and greater emphasis will be placed on the primary issues during the EIA process.

Primary significance	Secondary significance
Birds	Air and climate
Community and social effects	Land, waste and contamination
Cultural heritage	Land use
Noise and vibration	Natural heritage
Landscape and visual effects	Traffic and transport
	Water environment

Table 7: Ranking of scoped issues

8.2 Although these issues are described here under separate headings, the EIA will, of course, pay close attention to the inter-relationship of the various factors, in order to assemble a holistic picture of the likely impacts and responsive measures. It should also be noted that EIA is an iterative process, enabling matters not recognised at a preliminary stage to be addressed subsequently.

8.3 The consideration and ranking of issues in this scoping report is preliminary. The planning authority and consultees are invited to comment on the intended scope of the EIA, and to highlight any matters that might inadvertently have been omitted.

Appendix 1: Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999

Schedule 4

Information for inclusion in Environmental Statements

Part I

1. Description of the development, including in particular -

   (a) a description of the physical characteristics of the whole development and the land use requirements during the construction and operational phases;

   (b) a description of the main characteristics of the production processes, for instance, nature and quality of materials used; and

   (c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.

2. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects.

3. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

4. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:

   (a) the existence of the development;

   (b) the use of natural resources;

   (c) the emission of pollutants, the creation of nuisances and the elimination of waste,

   (d) and the description by the applicant of the forecasting methods used to assess the effects on the environment.

5. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

6. A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.

7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

Part II

1. A description of the development comprising information on the site, design and size of the development.

2. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.

3. The data required identifying and assessing the main effects, which the development is likely to have on the environment.

4. An outline of the main alternatives studies by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects.

5. A non-technical summary of the information provided under paragraphs 1 to 4 of this Part.

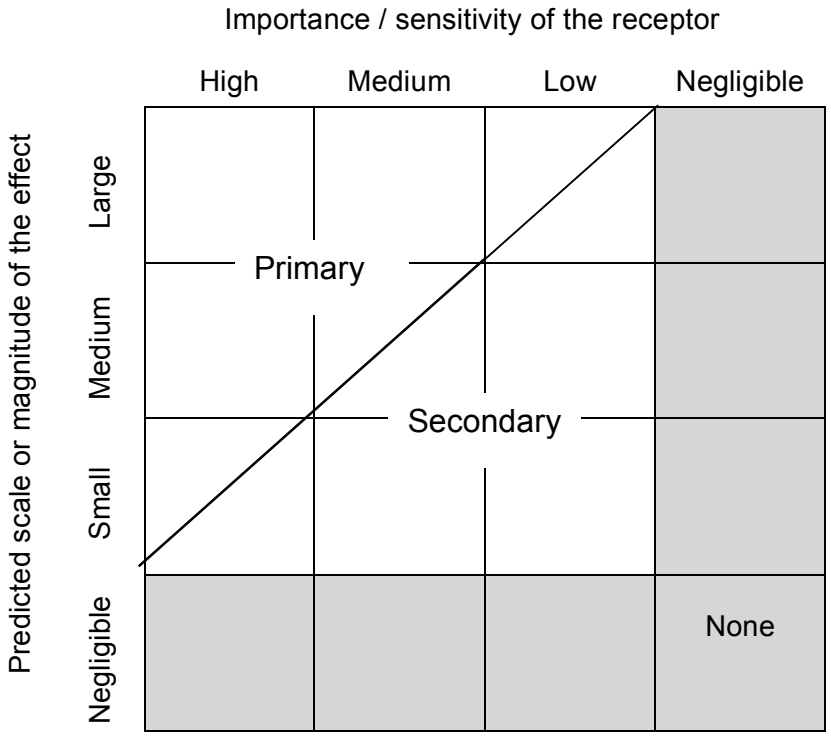
Appendix 2: Checklist of environmental issues for scoping exercise

Appendix 2: Environmental issue checklist Project: West Wight Project

Resource	Component	Constn	Oprtn	Decmn
AIR AND CLIMATE	Odour			
	Local air quality (criteria pollutants)	✓	✓	
	Local climate effects			
	Air temperature			
	Particulates / dust	✓	✓	✓
	Global air quality / climate		✓	
BIRDS	Flight		✓	
	Habitat	✓	✓	✓
COMMUNITY AND SOCIAL EFFECTS	Population profile and density			
	Demography	✓		
	Housing			
	Employment	✓	✓	✓
	Lifestyle, standard of living	✓	✓	
	Education, health & other local		✓	
	Public health & safety		✓	
	Economics		✓	
	Availability of utility services			
	Local environmental amenity	✓	✓	
	Electromagnetism / radiation		✓	
CULTURAL HERITAGE	Architecture / buildings / structures		✓	
	Archaeology / monuments	✓	✓	
	Historic parks and gardens		✓	
	Other historic interest			
LAND, CONTAMINATION AND WASTE	Geology / geomorphology	✓	✓	
	Earth conservation - geology	✓	✓	✓
	Earth conservation - geomorphology			
	Mineral resources			
	Ground contamination	✓	✓	✓
	Soils/agricultural land quality	✓		
	Erosion / deposition / stability	✓	✓	✓
	Waste management	✓	✓	
	Waste characterisation			
LANDSCAPE AND VISUAL	Landform / topography			
	Land cover			
	Landscape character		✓	
	Landscape quality	✓	✓	✓
	Protected landscapes		✓	
	Wilderness			
	Views		✓	
LAND USE	Agriculture / horticulture	✓	✓	✓
	Forestry			
	Recreation / open space / rights of	✓	✓	✓
	Mineral extraction			
	Commerce/retail	✓	✓	
	Industry			
	Residential			
	Health / social / education			
	Waste disposal			
	Other (specify)			
	Communication		✓	
NATURAL HERITAGE	Habitat types	✓	✓	
	Plant communities			
	Animal communities	✓	✓	
	Individual species			
	Ecosystem integrity			
	Wildlife conservation	✓	✓	
	Resource management			
	Natural processes			
NOISE AND VIBRATION	Noise	✓	✓	✓
	Vibration	✓		
WATER ENVIRONMENT	The hydrological cycle			
	Surface water quality	✓	✓	
	Surface water hydrology	✓	✓	
	Surface water temperature			
	Groundwater quality	✓	✓	
	Groundwater hydrology/ recharge		✓	
	Groundwater temperature			
	Flooding			
TRAFFIC AND TRANSPORT	Road and junction capacity	✓		
	Infrastructure	✓		
	Accident record	✓		
	Pedestrians and cyclists	✓		
	Public transport			

Appendix 3:

Scoping Guidance used to Determine Significance of Issues



Appendix 4:

List of proposed consultees to the West Wight Scoping Report

Statutory consultees to be approached by the Isle of Wight Council

- English Nature
- Environment Agency
- Council for National Parks and / or the Countryside Agency
- English Heritage
- New Forest District Council
- New Forest National Park Authority

Non-statutory consultees to be approached by the Isle of Wight Council

- Council for the Protection of Rural England (CPRE)
- Department for Environment Food and Rural Affairs
- Hampshire and Isle of Wight Wildlife Trust
- Isle of Wight Council, internal consultations including: Environmental Health, Economic Development, Ecology, Highways Authority, Rights of Way, County Archaeologist, Tourism Officer, Green Tourism, AONB, Historic Buildings and Conservation, Health and Sustainable Development)
- Island 2000
- Parish Councils, Yarmouth Town Council

Other stakeholders likely to be approached by Your Energy

- Bembridge Airport
- Bournemouth International Airport
- Civil Aviation Authority
- Crown Castle UK Ltd / British Broadcasting Corporation
- Farming and Rural Conservation Agency (FRCA)
- Friends of the Earth
- Greenpeace
- Groups / forums established as part of the development of the Community Renewable Energy Strategy for the Isle of Wight
- Independent Television Commission c/o National Transcommunications Ltd
- Isle of Wight and mainland harbour authorities
- Isle of Wight Partnership
- Local community groups (e.g. THWART)
- Local member of Parliament, Andrew Turner
- Ministry of Defence (Defence Estates)
- National Air Traffic Services (NATS)
- National Trust
- Ramblers Association
- Royal Society for the Protection of Birds (RSPB)
- Sandown Airport
- Southampton Airport
- Southern Electric
- Southern Tourist Board
- Southern Water
- Telecommunications companies
- Wight Green Centre