PROPOSED NAVITUS BAY WIND PARK

PRELIMINARY ENVIRONMENTAL INFORMATION 3

CHAPTER 22
OFFSHORE RECREATION

SEPTEMBER 2013

NAVITUSBAY

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22. OFFSHORE RECREATION

22.1. Introduction

22.1. This chapter assesses the potential impacts on recreation activities arising from the construction, operation and maintenance (O&M) and decommissioning phases of the offshore elements of the Navitus Bay Wind Park ('the Project'). For the purpose of this assessment, the Offshore Development Area comprises the following project elements: the Turbine Area and an Offshore Export Cable Corridor. For details of the Project description used within this assessment, refer to Chapter 2, 'Navitus Bay Wind Park Project'.

22.2. This assessment considers potential impacts in relation to: recreational angling; bathing; recreational diving; sailing and yachting (including power boating); surfing (including windsurfing and kitesurfing); paragliding; nature study (focussing on bird watching and dolphin watching); horse riding; recreational cycling; and recreational walking.

22.3. Refer to Chapter 33 for details of the recreation assessment undertaken in relation to the onshore elements of the Project.

22.2. Legislation, Policy and Guidance

22.4. This section outlines the legislation, policy and guidance that is relevant to this assessment. Professional judgement has been applied on their relevance and importance to the assessment.

22.2.1. International

22.5. There is no international legislation or guidance relevant to this assessment.

22.2.2. National policy statements

22.6. The relevant national policies pertinent to this assessments are as follows:

National Policy Statements

22.7. National Policy Statements (NPSs) establish the primary basis on which the Secretary of State is required to determine applications for development consent. In preparing this assessment the following NPSs were reviewed:

- Overarching National Policy Statement for Energy (EN-1) (DECC, 2011a);
- NPS for Renewable Energy (EN-3) (DECC, 2011b).

22.8. Table 22.1 presents the specific parts of these NPSs that are relevant to this assessment. It also identifies where in this assessment the matter has been addressed.

Table 22.1 Compliance with National Policy Statements

Summary of NPS provision	Where addressed
NPS EN-1	
Paragraph 5.5.7 states that the applicant: *"should include an assessment of the effects on the coast. In particular, applicants should assess: the effects of the proposed project on maintaining coastal recreation sites and features…"*	Refer to the Impact Assessment section for the assessment.
Paragraph 5.10.2 reiterates Government policy to ensure there is adequate provision of high quality open space (including green infrastructure) and sports and recreation facilities to meet the needs of local communities.	Refer to the Impact Assessment for details.
Paragraph 5.10.6 states: *"Applicants will need to consult the local community on their proposals to build on open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements."*	None of the offshore components would result in the loss of recreational land, including bathing waters. Therefore this paragraph and related paragraphs are not considered relevant to this assessment.

Paragraph 5.10.16 requires the Planning Inspectorate to: "*consider[e] the impact on maintaining coastal recreation sites and features…should expect applicants to have taken advantage of opportunities to maintain and enhance access to the coast."*	Refer to the Impact Assessment section for details.
Paragraph 5.10.24 states: "*The IPC [now the Planning Inspectorate] should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way."*	Refer to the Impact Assessment section for details.
NPS EN-3	
Paragraph 2.6.151 notes that for both the applicant and the Planning Inspectorate: "*The use of the sea by recreational craft is also an important consideration*."	Refer to the Impact Assessment section for details. Reference should also be made to the Shipping and Navigation assessment (Chapter 16 for further details).
Paragraph 2.6.153 states: "*Applicants should establish stakeholder engagement with interested parties in the navigation sector early in the development phase of the proposed offshore wind farm and this should continue throughout the life of the development including during the construction, operation; and decommissioning phases. Such engagement should be taken to ensure that solutions are sought that allow offshore wind farms and navigation uses of the sea to successfully co-exist.*	
Paragraph 2.6.154 states: "*Assessment should be underpinned by consultation with the MMO, Maritime and Coastguard Agency (MCA), the relevant General Lighthouse Authority, the relevant industry bodies (both national and local) and any representatives of recreational users of the sea, such as the Royal Yachting Association (RYA), who may be affected."*	
Paragraph 2.6.160 requires applicants to consider: "*The potential effect on recreational craft, such as yachts*."	
Paragraph 2.6.162 directs that: "*The IPC should be satisfied that the site selection has been made with a view to avoiding or minimising disruption or economic loss to…recreational users of the sea."*	
Paragraph 2.6.166 states: "*The IPC should be satisfied that the scheme has been designed to minimise the effects on recreational craft and that appropriate mitigation measures, such as buffer areas, are built into applications to allow for recreational use outside of commercial shipping routes."*	
Paragraph 2.6.174 states: "*Mitigation measures will include site configuration, lighting and marking of projects to take account of any requirements of the General Lighthouse Authority and also the provision of an acceptable Active Safety Management System."*	

The UK Marine Policy Statement

22.9. The UK Marine Policy Statement (MPS) (DEFRA, 2011) notes opportunities for optimising the potential of environmental resources through ecotourism and recreational use; notes potential impacts on recreational angling and lists relevant recreational activities, for example:

"The sea can provide a variety of tourism and recreational opportunities. These will vary from area to area but will include pleasure boating, sailing, recreational diving (including diving on wrecks), sea angling, kayaking and surfing, as well as exploration of underwater and coastal heritage assets. The coast also provides inspiration for a range of artistic and cultural activities and food-based tourism. There is also growing interest in eco-tourism and wildlife experiences…

"In weighing up these considerations it will be important to ensure that local authorities, local tourism stakeholders, tourism destination management organisations, water based sports organisations and other marine and coastal users are engaged and consulted before decisions are taken." (MPS Section 3.11.6)

22.10. Regard has been given to the MPS when identifying the scope of the study, approach to consultation and survey work.

22.2.3. Regional

22.11. There is no regional policy or guidance relevant to this assessment.

22.2.4. Local

22.12. The following local development strategies, insofar as they relate to recreation, are relevant to the study area:

Purbeck Adopted Local Plan 2012

22.13. It is acknowledged that recreational pressures such as public access, campsites and boating must be carefully managed to ensure the long-term protection necessary for the relatively undisturbed southern shores of Poole Harbour (paragraph 2.12). It is stated that rising sea level and managed realignment will increase flood risk and have implications for recreation and other uses around Poole Harbour. In addition, it is noted that the beaches at Studland are being eroded as a result of storms and changing sea levels (paragraph 2.18).

22.14. Policy PH: Poole Harbour, states that the Council will work with neighbouring local authorities, statutory bodies and landowners to manage shoreline access to Poole Harbour and implement the Poole Harbour Aquatic Management Plan to manage water based activities.

22.15. Policy GI: Green Infrastructure, Recreation and Sports Facilities, requires new development to make provision for recreation, sport and/or open space facilities and green infrastructure; and that all open space, sport and recreation areas will be protected.

Poole Adopted Core Strategy 2009

22.16. Poole Harbour is identified as being of ecological, recreational and commercial importance. The Borough is noted for high quality beaches, as well as the Old Town and Quay forming the historic core.

22.17. The Strategy states that the constrained development opportunities restrict the scope to provide large new public open spaces.

22.18. Strategic Objective 5 states that the prospects of young people in Poole need to be improved through better life chances.

22.19. Policy PCS 3 Poole Port, states that the use of the harbour for recreation should not be harmed.

22.20. Key recreation priorities are improvement and enhancement of existing open spaces; improvement of major built recreation facilities such as sports halls and swimming pools; securing on-site provision of smaller play areas and spaces; minimising recreational pressure on Heathland areas; and ensuring public access to the harbour, via footpaths, slipways and boatyards without compromising the Poole Harbour Special Protection Area. Policy PCS 26 includes the provision of safe, convenient pedestrian and cyclist routes and high-quality public open spaces and other recreation facilities.

Bournemouth Adopted Local Plan 2012

22.21. It is stated that Bournemouth has seven miles of beaches historic gardens, as well as events throughout the year and a lively evening economy (paragraph 1.1.4).

22.22. Objective 4 seeks to increase opportunities to walk and cycle. This is supported by Policy CS6 which seeks to improve accessibility and permeability on foot and by bicycle by providing for a well-connected, safe and attractive network of streets and roads, open spaces and other routes; and promoting a range of interconnected green infrastructure and the management of existing spaces to promote health, well-being and biodiversity.

22.23. A critical aspect of encouraging walking and cycling is to make these modes of travel safer, more desirable and attractive for a range of types of journey (paragraph 4.2.23). Policy CS18 Increasing Opportunities for Walking and Cycling, obliges new development to help achieve the Core Strategy's strategic objective of facilitating and increasing levels of walking and cycling.

22.24. Policy CS30 Promoting Green Infrastructure, states that the Council, with developers and other partners, will provide for a well-connected and distributed multifunctional green infrastructure network, identifying the Borough as an urban greening zone and the coastal strip as a coastal enhancement zone. This policy will seek to improve sustainable access through improved walking and cycling routes to key destinations, the coast and open spaces as well as increase access to open space, formal and informal recreation and sport opportunities.

22.25. Bournemouth has 780 hectares (ha) of public open space, with 304 ha set aside for specific active recreational purposes, and the remaining 476 ha classified either as countryside, woodland, clifftops, gardens, parkland or local amenity areas (paragraph 4.5.7). Policy CS31 Recreation, Play and Sports, works to protect the Borough's open space, sports and play grounds.

22.26. The Stour Valley Project is identified as having potential for a significant recreation and habitat resource (paragraph 4.5.16). Fragmented sections of the valley are already publicly accessible, with the Stour Valley Way linking open spaces adjacent to the river. However, more extensive and coherent cycling and walking access through the valley and increased provision for environmentally friendly activities will enhance opportunities for outdoor recreation. The development of the Stour Valley as a sub-regionally significant recreation and habitat resource is set out in Policy CS36 Stour Valley Project.

Christchurch and East Dorset Core Strategy Submission Draft 2013

22.27. The vision set out in the Core Strategy includes the role that recreation and commercial activity will have in sustaining the Dorset Heathlands, the Cranborne Chase and West Wiltshire Downs Area Of Outstanding Natural Beauty, Christchurch Harbour and the coast, beaches and rivers.

22.28. Objective 6 seeks the development of new Green Infrastructure including footpaths, bridleways and cycleways; and to encourage people to enjoy recreation without the need to travel by car.

22.29. Christchurch town centre and Highcliffe district centre are identified as the main shopping centres for Christchurch Borough, providing a focus for leisure, entertainment, recreation and employment opportunities (paragraph 5.1).

22.30. It is acknowledged that the provision of large open spaces and green infrastructure also serves to divert recreational pressure away from the sensitive Dorset Heaths (paragraph 14.20). Policy HE4 sets out provisions for the protection of open space.

New Forest District Adopted Core Strategy 2009 (excluding the National Park)

22.31. The Core Strategy covers the part of the District excluding the National Park. The Strategy notes that many local residents use areas within the National Park for recreation (paragraph 3.1.10), that Lymington is a very popular sailing centre and visitor destination and that most of the coast in the southern strip of the District is accessible to the public (paragraph 3.6.3).

22.32. Objective 9 Leisure and Recreation seeks to provide a range of opportunities for leisure and recreation, promote participation in active recreation, to facilitate the enjoyment of the coast and to manage recreational pressures within areas subject to environmental designations.

22.33. The area caters for a wide range of outdoor recreational pursuits, including organised sports, walking, cycling, riding, sailing, fishing, golf (paragraph 6.7.2). The New Forest National Park and other Natura 2000 sites are valuable assets to the district for recreational and education purposes. The New Forest is used extensively for informal recreation, mainly walking and dog walking (paragraph 6.7.3).

22.34. Policy CS7 Open spaces, sport and recreation, sets out provisions for protecting open space and the standards for new development to provide recreation space.

New Forest National Park Adopted Core Strategy and Development Management Policies DPD 2012

22.35. The New Forest is identified as a major recreational resource, with 42 km of coastline, 325 km of Public Rights of Way (PRoW) and over 30,000 ha of accessible land (more than 50 % of the area of the National Park). The major attractions (including Lepe Country Park, Calshot Activities Centre,

the National Motor Museum, Paulton's Park, and the villages of Lyndhurst, Brockenhurst, Beaulieu and Burley) attract people throughout the year (paragraph 2.7). Quiet recreation is noted as one of the special qualities of the National Park (paragraph 3.4). The National Park receives an estimated 13.5 million visitor days each year (paragraph 9.5).

22.36. The strategic objectives include supporting development which encourages sustainable tourism and recreation and the creation of opportunities for enjoying the Park's special qualities.

22.37. Policy CP3 supports proposals which create, maintain and enhance a network of green infrastructure to relieve recreational pressures on internationally important nature conservation sites. Policy DP3 sets out provisions for protecting open space.

22.38. The Core Strategy notes the traditional role of horse keeping in the New Forest (paragraph 8.39). Policy DP21 sets out the provisions for recreational horse keeping and Policy DP23 sets out the provisions for the development of maneges.

Isle of Wight Adopted Core Strategy 2012

22.39. Core Strategy Objective 5 seeks to promote and enhance community leisure and recreational facilities.

22.40. A number of the allocated sites include policies for the provision of green space and walking/cycling routes.

22.41. Policy DM7 Social and Community Infrastructure sets out provisions for protecting open space.

22.42. Policy DM13 Green Infrastructure notes the Council has identified green infrastructure sites which are important for open space, sport and recreation, and sets out provisions for protecting, enhancing and increasing the coverage of these sites.

22.43. Policy DM15 Coastal Management, includes the need to ensure that development does not hinder the creation and maintenance of a continuous signed and managed route around the coast.

22.44. DM17 Sustainable Travel, includes the need to provide new cycle routes as part of the national and/or local cycle network.

22.45. The Baseline Environment and the Impact Assessment sections in this chapter take account of the priorities in these development strategies.

22.2.5. Guidance

22.46. There are no statutory guidelines for the assessment of recreation impacts. However, the Scottish Natural Heritage guidance (SNH, 2009) identifies an approach to the assessment of recreation impacts and effects, which has broadly been followed for the purposes of this assessment. It states that the following matters should be considered:

- Loss/closure/extinguishment/diversion of links, routes, or walks;
- Reduction in amenity;
- Enhancement of amenity and access;
- Potential obstructions to access routes;
- Changes to setting and context.

22.3. Assessment Methodology

22.3.1. Study Area

22.47. The study area has been developed from an understanding of how potential impacts on recreation receptors may arise. This has been informed by the Scoping Opinion and consultation undertaken to date, as well professional judgement on the type of changes to recreation activities that may result from the offshore components of the Project. The nature of the offshore aspects of the Project means that there is potential to affect sea-based and coastal land-based recreation across a wide area, including:

- Visual impacts, particularly upon coastal areas where the Project would be visible (the zone of theoretical visibility (ZTV) runs from Weymouth in the west to Ventnor and Fareham in the east) (refer to Chapter 13, Seascape, Landscape and Visual);
- Potential changes to the wind and wave regimes due to the presence of the turbines, and increased suspended sediment affecting water quality within the Offshore Development Area and nearby beaches (refer to Chapter 5, Physical Processes);

- Impacts on wildlife, particularly potential displacement, affecting nature study (including marine mammals and birds), as well as recreational angling and diving (refer to Chapters 10, Fish and Shellfish Ecology; 11, Marine Mammals and Megafauna; and 12, Ornithology);
- Subsea noise affecting divers in offshore waters;
- Displacement of yachting, recreational angling and diving (refer to Chapter 16, Shipping and Navigation).

22.48. Taking these factors into account, the core study area for the offshore recreation impact assessment is Poole Bay and the coastline and immediate hinterland (up to 5 km inland to capture recreational activity that may receive visual or other effects from the Project) running from Weymouth in the west to Ventnor and Fareham in the east, as shown in Figure 22.1. The extent of this has been informed by the Zone of Theoretical Visibility (ZTV) as discussed in Chapter 13, Landscape and Visual.

22.3.2. Consultation

22.49. Consultation to define the scope of this assessment has taken place through an Environmental Impact Assessment (EIA) scoping exercise, specific correspondence and meetings with local authorities and a survey of recreation groups. A summary of the consultation undertaken to date is detailed in Table 22.2.

22.50. This section should be read in conjunction with Baseline Environment section which details the findings from interviews undertaken with recreation groups active within the study area.

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5630000

5600000

Calshott
Lymington
Hengistbury Head
Poole
Yarmouth
Ryde
Bembridge
Sandbanks
Studland/ Shell Bay
Weymouth
Kimmeridge Bay
Swanage

New Forest
Southampton
Portsmouth
Bournemouth

0 5 10 km 0 3.5 7 NM

Legend

- Turbine Area
- Offshore Export Cable Corridor
- Study Area

Scale @A3 1:350,000	**Coordinate System:** WGS 1984 UTM Zone 30N
Date: 09/08/2013	**Datum:** WGS 1984
Ref. No.: PMSSRM/130704231	**Data Source** OS SeaZone
Fig. No.: Figure 22.1	
Author: NDU	
Rv.No.: 01	**Checked:** RM **Approved:** SMF

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Study Area

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Table 22.2 Consultation

Organisation and date	Summary of response	Where addressed
The Infrastructure Planning Commission, 2011 Scoping Opinion (IPC is now part of the Planning Inspectorate)	It is requested that potential environmental issues are identified and an assessment is undertaken of potential impacts on recreational users (summary section).	Refer to the Impact Assessment section for details.
	It is noted that potential changes to the hydrological regime may impact upon both commercial and recreational water users. In particular, turbine wakes may impact upon the ability of small boats to navigate safely. Therefore, the information obtained from the hydrodynamic modelling should be used to inform the 'Shipping and Navigation', 'Commercial and Recreational Fisheries' and 'Tourism, Recreation and Amenity' assessments.	The Impact Assessment section undertaken in support of recreation receptors has been informed by the assessments undertaken in relation to: Physical Processes (Chapter 5); Shipping and Navigation (Chapter 16) and Commercial Fisheries (Chapter 17).
	It is welcomed that the results of the assessment will be used to inform other assessments, including the ecological assessments in the 'Offshore Biological Environment' assessment. It is stated that consideration should also be given to the potential impacts that increased sediment may have on offshore archaeology and cultural heritage, and on fisheries and recreational activities in the area (paragraph 3.38).	The Impact Assessment section undertaken in support of recreation receptors has been informed by the assessments undertaken in relation to Physical Processes (Chapter 5).
	It is noted that effects on offshore or onshore ornithology may have implications on tourism; and therefore the interrelationships should be assessed and appropriate cross reference made (paragraph 3.59).	An assessment has been made of the potential impact of the Project on bird watching as a recreational receptor (refer to the Impact Assessment section for details). The Environmental Statement that will form part of the application for development consent, when submitted in early 2014, will include an assessment of all potential interrelationships.
	It is stated that the proposed development could present a potential visual impact to recreational users, including sailing boats, cruise line and ferry passengers, as well as to commercial vessels; noting the assessment should take these into account (paragraph 3.64).	The Impact Assessment section undertaken in support of recreation receptors has been informed by the assessments undertaken in relation to Landscape and Visual matters (Chapter 13).
	An assessment of recreation receptors is welcomed for all phases of the Project (paragraph 3.74).	Refer to the Impact Assessment section for details.
Bournemouth Borough Council, 2011 Scoping Opinion	It is stated that the Planning Board are concerned that the impacts on tourism and leisure are not going to be satisfactorily assessed; and that the impact on tourism and leisure needs to be stronger, to include how the developer intends to assess the impacts (paragraph 6.14).	Refer to the Impact Assessment section for details of the potential impacts on recreation receptors. Refer to the offshore Socio-economics and Tourism assessment (Chapter 21) for details in relation to wider tourism matters.

Natural England, 2011 Scoping Opinion	Concerns related to landscape/seascape and visual matters, noting that focus should be given to: "…3. Direct effects on the visual amenity of visual receptors, for example changes in views and their content for stakeholders (walkers, tourists etc.) caused by the development; "4. Indirect effects on visual receptors in different places, for example an altered visual perception leading to changes in public attitude, behaviour and how they value or use a place; "Consider visual impacts on Access Land (under the Countryside and Rights of Way Act 2000) and statutory designated localities for the enjoyment of nature, such as National and Local Nature Reserves (LNR) and Country Parks."	The Impact Assessment section undertaken in support of recreation receptors has been informed by the assessments undertaken in relation to Landscape and Visual matters (Chapter 13).
Tourism officers for local authorities in the study area 2012/2013	Various correspondence was had (via email, telephone and a Tourism Liaison Group meeting) with tourism officers to input into the recreation research programme. Representatives from Hampshire County Council, Isle of Wight Council, Purbeck District Council, New Forest National Park Authority and Dorset County Council (DCC) attended the January 2013 Tourism Liaison Group Meeting.	Refer to the Assessment Methodology section of this chapter for details.
Tourism officers for local authorities in the study area 2013	Various correspondence was had (via email, telephone and personal interviews the tourism officers) to ascertain details of recreational activity and relevant supporting research. Interviews were undertaken with Hampshire County Council (HCC), Isle of Wight Council (IWC), Poole Borough Council (PBC) and New Forest District Council (NFDC).	Refer to the Assessment Methodology section of this chapter for details.
Bournemouth Borough Council – Transport 23/4/13	Information regarding: the characteristics of cycling in the study area, the likely sensitivity of these to the Project; and provision of cycle count data was obtained.	Refer to the Baseline Environment section of this chapter for details.
Poole Borough Council – Transport 22/4/13	Information regarding: the characteristics of cycling in the study area, the likely sensitivity of these to the Project; and provision of cycle count data was obtained.	Refer to the Baseline Environment section of this chapter for details.

22.3.3. Scope of the assessment

22.51. **Error! Reference source not found.**Table 22.3 sets out the recreational activities included within this assessment.

Table 22.3 Recreation impact assessment scope

Assessment topic	Scope
Recreational angling	Shore based angling within the study area and boat based angling from ports and harbours in the study area and on marks in the study area
Bathing	Sea bathing from beaches in the study area
Recreational diving	Recreational sub-aqua diving within the study area
Sailing	Recreational rowing and sailing, including motorised boating (motorboats, jet skis/personal watercraft, water skiing, and wakeboarding)
Surfing	Surfing, windsurfing and kitesurfing
Paragliding	Coastal paragliding and hang gliding
Nature study	Bird watching and marine mammal watching
Horse riding	Horse riding on coastal Public Rights of Way (PRoW) and open space within the study area
Recreational cycling	Cycling for recreation purposes in the study area (excluding journeys to work, school or other non-recreational journeys) in the study area
Recreational walking	Walking for recreation purposes in the study area (excluding journeys to work, school or other non-recreational journeys)

22.52. This scope was determined having regard to feedback to consultation received to date, a review of the recreational activity that has the potential to be affected by visual, obstruction or other disturbances from the offshore aspects of the Project and professional judgement.

22.3.4. Issues scoped out

22.53. Recreational activities scoped out relate to:

- River based recreation such as coarse fishing or river kayaking, as the type of effects produced by the Project (e.g. visual, noise/vibration, water quality) are not relevant to these receptors due to their location. Note that estuary-based recreation is scoped in, including the use of marinas located in estuaries.
- Other onshore outdoor sports (e.g. tennis, football and rugby) as there are no known obstructions to any facilities (e.g. golf courses, sports pitches) within the study area. This is reinforced by the findings from the surveys with recreational users (see Table 33.2 onshore recreation chapter), as no users come forward to notify NBDL that there would be an adverse impact on their amenity provision.

22.3.5. Impact assessment methodology

22.54. Given that there is no specific guidance in relation to the assessment of impacts on recreation the methodology applied accords with that detailed Chapter 3. The criteria to determine receptor sensitivity, magnitude of effect and impact significance are detailed in Tables 22.4 to 22.6.

Sensitivity of a receptor

22.55. Table 22.4 outlines the criteria used to assess the sensitivity of recreation receptors, which has been informed by the baseline characteristics and interviews with recreation groups. The sensitivity for each receptor is detailed in the Impact Assessment section of this chapter.

22.56. The assessment of recreational receptor sensitivity does not take explicit account of tolerance and recoverability, as these are concepts most suited to known, measureable populations against which estimates of change and rates of recovery can be calibrated. Impact on recreational receptors relies on a systematic qualitative approach more appropriate to changes in human behaviour. However, where it is possible to form views on the tolerance of activities, these are referred to in the text supporting the assessments.

Table 22.4 Definition of sensitivity of a receptor

Sensitivity of receptor	Criteria
High	Where the receptor or activity is defined as being of international status or formal designation; important in an international context and/or is not flexible in relation to the locations in which activities can be carried out (e.g. there is only one discrete location in the country where a recreational activity can take place).
Medium	Where the receptor or activity is defined as being of national/regional status or formal designation; is important in a national/regional context and is flexible in terms of the locations where the activity can be carried out and can avoid obstructions.
Low	Where the receptor or activity is defined as being of local status or formal designation; is important in a local context and is flexible in terms of the locations where the activity can be carried out and can avoid obstructions.
Imperceptible	Where the receptor or resource is defined as being of less than local status or has no formal designation.

Magnitude of effect

22.57. The magnitude of an effect is defined in Table 22.5, having regard to the duration and spatial extent of an effect. The magnitude of effect was informed by interviews with recreation groups and information from other impact assessments undertaken in relation to the Project (e.g. visual impact, changes to fish stocks in relation to angling, changes to bird populations for bird watchers).

Table 22.5 Definition of magnitude of effect

Magnitude	Criteria
High	Where the extent of effects on receptors (activities, resources, or businesses) is across a wide area (such as the whole of the study area) and a large number of people or activities would be affected; or where there is an obvious immediate view of the Project with potential to cause significant visual impact or other disturbance. Duration is a consideration, with effects over at least the medium or long-term duration (3-5 years and 6+ years respectively).
Medium	Where the extent of effects on receptors is medium in scale (i.e. a discrete location or set of locations within the study area), but a large number of people or activities would be affected; or alternatively this would be where the extent of impacts on activities, resources and/or businesses is large in scale (i.e. the majority of the study area) but only a small proportion of people or activities would be affected. Duration is a consideration, with effects over at least the medium-term duration (1-3 years).
Low	Where the extent of effects on receptors is small in scale (e.g. a discrete location within the study area) and would only affect a small proportion of people or activities or is of very short duration (i.e. less than a year); or where the project would be unlikely to be visible or heard (as it would be obscured by hills or woodland) or would be at a distance.
Imperceptible	Where the effect would not be noticeable by recreation users.

Impact significance

22.58. Impact significance is the term used to categorise the impact (e.g. negligible, minor, moderate and major); and can be positive, neutral or negative. It takes into account the sensitivity of the receptor and the magnitude of effects, as detailed in Chapter 3, EIA Methodology.

22.59. Likely impacts are reported in this chapter as either 'Significant' (those determined to have a significance rating of major or moderate) or 'Not Significant' (those determined to have a significance rating of minor or negligible) as shown in Table 22.6.

Table 22.6 Matrix of impact significance

Magnitude of effect	Sensitivity of a receptor: High	Medium	Low	Imperceptible
High	Major	Major OR Moderate	Moderate OR Minor	Negligible
Medium	Major OR Moderate	Moderate Minor	Minor	Negligible
Low	Moderate OR Minor	Minor	Minor	Negligible
Imperceptible	Negligible	Negligible	Negligible	Negligible

22.60. Table 22.7 illustrates the types of impact related to a given significance.

Table 22.7 Definition of impact significance

Significance	Criteria
Major	The value of the receptor and the magnitude of effects are predicted to give rise to impacts that are fundamental and may be material in the decision-making process. This would indicate that a recreational activity of some importance would be lost to many residents and visitors.
Moderate	The value of the receptor and the magnitude of effects are predicted to give rise to impacts that are material but not likely to cause fundamental change to the activity. This would indicate that a recreational activity of some importance in the study area was reduced in scale or attractiveness for many of the people pursuing it.
Minor	The value of the receptor and the magnitude of effects are predicted to give rise to impacts that are detectable but alone are not likely to be material to the activity. This would indicate that a recreational activity in the study area was reduced in scale or attractiveness for many of the people pursuing it.
Negligible	The value of the recreation receptor and the magnitude of effect are not predicted to give rise to impacts that are detectable or outside the normal variance in participation that might be expected.

22.3.6. Limitations and embedded mitigation

Limitations

22.61. Limitations to the impact assessment relate to a lack of availability of consistent data for the different recreational receptors, particularly in relation to year on year variations in scale and choice of locations. There is no specific locally applicable data source that details locations and levels of recreation activities and so pragmatic use has been made of different information sources. This includes estimates of participation based on national participation rates, which is useful for generating an indication of order of magnitude in the absence of other estimates, but may vary within the study area.

22.62. There is no register of those taking part in recreational activities. Therefore, the method adopted builds on professional judgement and makes the best use of information available.

Assumptions

22.63. The assessment of impacts upon recreation activities has been informed by the assessments undertaken in relation to other topics. The assumptions used in other assessments that are relevant to this recreation assessment are as follows:

Noise

22.64. Noise impacts are assessed in Chapter 8, In-air Noise, where consideration has been given to the potential for offshore construction noise effects (e.g.

construction activities such as piling) to impact recreation activities. The result of the assessment is that noise from piling work that may be used to construct the Project would be negligible at the shore. The assessment scopes out impacts to transient offshore receptors (e.g. recreational sea users, ferry passengers and offshore workers) due to the limited exposure time and because these receptors would also generate their own noise sources that would serve to mask or partially screen noise emissions from the wind farm.

Water quality

22.65. Chapter 6, Water Quality, considers impacts upon water quality offshore and at the coast arising from all phases of the offshore components of the Project. The impacts are assessed as being of minor significance at most.

Physical processes

22.66. Chapter 5 describes impacts on Physical Processes, including the potential changes to tides, currents, waves and sediment transport as a result of the offshore components of the Project, and their potential impact on receptors, including the coast and seabed. With regard to the interface with assessment of impacts upon recreation the key area of concern for stakeholders is the impact of the presence of the wind farm upon waves at the coast and any implications for surfing, windsurfing and kite surfing. Chapter 5 indicates that there would be reductions in wave heights of up to a maximum of10 %, at a small number of sites on the south-west and south Isle of Wight coast. Average wave height reduction is in the region of 0-5% for all locations. However, this effect would be much less apparent on the longer period swell waves (those used for surfing) than on other shorter period waves. The assessment concludes that predicted maximum impacts upon wave height are assessed to be of minor significance for south-westerly waves that reach the south-west coast of the Isle of Wight, and negligible for wave heights at other locations.

Subsea noise

22.67. The construction phase would result in piling which would produce subsea noise.

Marine mammals

22.68. Chapter 11 considers the potential impact of the Project upon marine mammals. In summary, the predicted impact significance for marine mammals for all phases of the Project ranges from minor to negligible, following the application of appropriate mitigation.

22.69. The main impact of the construction phase is predicted to be the effect of underwater noise generated by piling of the turbine foundations.

22.70. The impact assessment has concluded that there is a minimal risk of auditory damage (damage to hearing abilities) to marine mammals; this would be further reduced to negligible through the implementation of a soft start procedure a ramp up in piling energy and therefore noise generated, combined with monitoring of an agreed mitigation zone around the noise source. Seals are at slightly greater risk than cetaceans (whales, dolphins and porpoises) due to their lower frequency sensitivity and a lower threshold for injury.

22.71. The greatest predicted impact is the potential displacement of fauna away from areas surrounding each turbine installation. Impact ranges around piling locations for 'strong avoidance' are expected to be up to 14 km for seals, 13km for bottlenose dolphins and 20km for harbour porpoises. The worst-case impact is that marine mammals would be displaced from these areas surrounding the location of piling over the whole construction phase. However, due to the low numbers of these species in the area, and the fact that this is highly unlikely to be an important area for feeding or breeding, this level of displacement would not be expected to significantly impact any individual animals or at the level of the population.

22.72. The predicted impact zone for strong avoidance does not reach the coast to the north of the Offshore Development Area. Therefore, there is a coastal corridor that marine mammals would still be able to utilise. There may be some lower levels of disturbance in this coastal area, although noise levels are predicted to be of the magnitude that marine mammals are considered to be used to experiencing, due to the fact that this offshore area is very busy (shipping and other marine activities). However, there may be local reductions in the numbers of bottlenose dolphins (and other species) sighted from the coast over the construction phase.

22.73. Other impacts which were assessed but are not expected to cause significant impacts to any marine mammals include: increased vessel traffic,

other noise-inducing construction activities (dredging, rock placement, cable laying), increased suspended sediment concentrations, and indirect effects as a result of impacts on potential prey species.

22.74. Once the construction phase is complete, it is anticipated that marine mammal activity across the site would return to pre-construction levels.

Fish

22.75. The availability of fish is a consideration for angling. Chapters 10 and 17 consider impacts on fish ecology and commercial fisheries respectively. The availability of fish could be affected by noise and seabed disturbance during the construction and decommissioning phases, and electric and magnetic fields from cables and changes to seabed conditions (e.g. through the introduction of rock placement for scour protection) during the operation and maintenance phase of the Project. All impacts are assessed to minor or negligible for key species assessed. However the impacts of piling noise during construction predicts potential significant effects for some species of angling interest. This includes Black Bream, Dover Sole and Seabass. Where potential significant effects are predicted discussions are ongoing with relevant statutory consultees. All other impacts are assessed as 'not Significant'.

22.76. Set against any losses in habitat are the benefits of habitat creation resulting from the use of scour protection material and cable protection, as well as the area foundations provided by turbine.

Visual impact

22.77. Chapter 13 considers that recreational users would have a medium to high sensitivity to visual impact. Activities where participants have to focus on the activity rather than taking in the surroundings would have a medium sensitivity and those pursuing activities where appreciation of the landscape is fundamental would have a high sensitivity.

22.78. However, for the purposes of this assessment, it is assumed that the sensitivity of receptors to changes in the landscape does not necessarily imply that behaviour would change as a result, as landscape is one of many factors influencing recreational behaviour.

Wind

22.79. Some recreational activities are dependent on natural wind conditions for their enjoyment, particularly hang gliding and paragliding, windsurfing, kitesurfing and sailing. An assessment is being undertaken in relation to the potential effects of the Project on wind conditions; and further details are available in Chapter 5, Physical Processes detailing the assessments in relation to wake effects undertaken to date.

22.80. For the purposes of this assessment it is assumed that the layout of the Turbine Area would utilise the maximum efficiency for each turbine. Therefore, any noticeable change to the power of wind caused by the energy taken by the turbine is replaced within the spacing between rows, which is estimated to be 1,408 m for the largest turbines. Where turbulence is caused, this is similarly dissipated within the inter-row distance.

22.81. The Royal Yachting Association (RYA) has prepared a position statement on offshore wind farms (RYA, 2012). This does not include any reference to effects on wind conditions, although it does include the importance of being able to sail within Turbine Areas.

Embedded mitigation measures

22.82. Embedded Mitigation are those measures built into project design. In some instances, embedded mitigation is sufficient to prevent any significant impacts from occurring.

22.83. Embedded mitigation measures that are of relevance to this assessment include:

- Offshore elements have been sited to avoid known dive sites; in particular to reduce the potential for disturbance or damage to known dive sites within the Turbine Area during construction (e.g. from anchor and jack up leg placement);
- A communications protocol to disseminate information to groups during the construction phase;
- Promulgation of Notices to Mariners to ensure all recreation user groups are aware of areas to be avoided during construction and operation;
- Provision of a 500 m 'rolling' safety zone around structures and partially completed structures during construction works;

- Provision of guard vessels during construction works to enforce safety zones.

22.4. Baseline Environment

22.4.1. Baseline data gathering methodology

Data sources

22.84. Table 22.8 details the data sources used to form the baseline and support the assessment of impacts.

Table 22.8 Recreation data sources

Source	Information
Sport England (2011) Active People Survey 5	Participation rates in active recreation
British Equestrian Trade Association (2011) National Equestrian Survey 2010-11	Horse riding participation
Arkenford (2012) National Water Sports Participation Survey	Participation in watersports
VisitEngland (2013) GB Day Visitor Survey 2012	Participation in recreation activities as part of leisure days out
Bournemouth Borough Council	Cycle count data 200-2012
Surfers Against Sewage	Bournemouth and Isle of Wight surfing locations and characteristics

22.85. The following assessments have been used to inform this assessment: Physical Processes (Chapter 5); Water Quality (Chapter 6); Fish and Shellfish Ecology (Chapter 10); Marine Mammals and Megafauna (Chapter 11); Ornithology (Chapter 12); Landscape and Visual (Chapter 13), which includes the ZTV; Offshore Archaeology (Chapter 14); Shipping and Navigation (Chapter 16); Commercial Fisheries (Chapter 17) and Other Offshore Infrastructure (Chapter 19).

Survey methodology

22.86. Desk-based research was compiled along with a review of the project characteristics and an initial assessment of potential effects in order to identify recreation and amenity groups within the study area. Interviews were then held in April and May 2013, with some of the groups identified, where possible by telephone (or, by request, email). Using a discussion guide, interviewees were asked about the scale and location of their activities and their views on the potential impact of the Project on those activities. These interviews have been complemented by data provided by some of those interviewed. In total 141 user groups were contacted and 82 responses were received (approximately a 60% response rate).

22.4.2. Recreation activities

Summary of available studies and strategies

22.87. Various studies and a review of local plan and other documents have provided useful baseline information in relation to recreation activities taking place within the study area. These include the following, which are referred to where relevant in the proceeding paragraphs:

- The Strategy for Water Based Recreation in the South West (Ravenscroft *et al*, 2009) was produced for the Environment Agency. It notes that the main uses of the coast and sea are: sea canoeing, swimming, sailing, angling, surfing (including kite and windsurfing), diving, cruising, water-skiing and the use of personal watercraft. The Strategy sets out a list of strategic waters and resources, which includes some locations within the study area:
- Weymouth and Portland - UK's elite sailing venue (Olympic sailing venue), sea angling (one of the largest charter fleets in the region), wind and kitesurfing; jet skiing (Weymouth).
- Christchurch Bay - Windsurfing (Youth World Championships, 2005).
- Poole Harbour - Marine industry centre; sailing, windsurfing, powered craft, water skiing, wakeboarding, sea angling (one of the largest charter fleets in the region), and kitesurfing (one of the top training areas in region).

22.88. The Strategy includes recommendations for the development of multi-activity centres, and Weymouth and Portland is suggested for sailing, canoe sailing and outdoor activities; and Poole is suggested for powered craft. There are also recommendations for water-based recreation training centres to be developed, including marine design engineering at Poole; marine

businesses in Weymouth and Portland; and tourism enterprise in Bournemouth. The Hamworthy waterfront in Poole is suggested as a multi-activity centre for powered craft.

22.89. Factors affecting demand for water-based recreation are reviewed in the Strategy. These include:

- Demographics – the aging and wealthier population has a greater focus on the 'experience economy', resulting in increasing demand for surfing, body-boarding, canoeing and kayaking, sailing and rowing.
- Resources – there is a need for 'doorstep' recreation opportunities and where these exist they should be protected

22.90. The National Water Sports Participation Survey (Arkenford, 2012) was commissioned by the British Marine Federation, Royal Yachting Association, British Canoe Union and the Marine Management Organisation (MMO), and details participation in 22 boating and water-based leisure activities. It notes:

- Almost a quarter of the population took part in a water based activity in 2012, of which spending general time at the beach is the most accessible and has the highest participation.
- Of the boating activities, canoeing has the highest participation by some margin, followed by small sailboats, motor boating/cruising, yacht cruising and power boating.
- Of the other activities, after spending time at the beach, outdoor swimming and coastal walking have high participation rates. Activities such as angling also have relatively high participation rates (similar to canoeing), followed by surfing.

22.91. The Dorset Area of Outstanding Natural Beauty (AONB) Management Plan (Dorset AONB Partnership, 2009) states that the AONB provides a focus for recreation for Dorset residents as well as people from Bournemouth, Poole, Yeovil and further afield. The AONB covers the coast from Poole Harbour to the west of the study area. Walking is the most popular recreational activity and other activities include: cycling, riding, country sports, hang gliding, climbing, sailing, fossil hunting, and bird watching. Many recreational users relax and enjoy the view.

22.92. The Purbeck Sport and Recreation Audit (Purbeck District Council, 2006) notes that 25% of respondents stated they used natural green spaces on a daily basis in the last 12 months and that the most popular reasons for using open space were for walking (51% of respondents), to walk the dog (13%) and cycling (12%). The hills and Studland Beach were amongst the key strengths of open space in Purbeck. The Purbeck Local Plan (2012) notes the importance of the coastal landscape characteristics and that Studland/Shell Bay receive 1 million visitors per year and nearly half a million go to Lulworth Cove.

22.93. The Poole Core Strategy (Poole Borough Council, 2009) states that the harbour is of recreational importance as well as the beaches. Poole also has a high quality and variety of restaurants, located in the settings of the Quay and the Old Town. Poole Harbour Management Plan (2011) states:

- Around 5,000 yachts visit Poole each year and the eight yacht clubs situated within the Harbour have around 7,500 members.
- The conditions within the harbour are ideal for windsurfers of all levels. Many more experienced windsurfers also launch from the shore at Hamworthy and use the open waters of the western harbour.
- Kitesurfing is a growing sport within the Harbour and activity is generally centred around the windsurfing zone at Whitley Lake.
- There is a designated water skiing area in the Wareham Channel.
- Personal watercraft (e.g. jet skis) are permitted to use the harbour and there is a designated area to the north of Brownsea Island.
- Swimming is not a common activity within Poole Harbour. It is however a popular summer activity from the beaches of Sandbanks, Shell Bay and Studland.
- Rowers and canoeists also use the harbour and there are several clubs, particularly around the Hamworthy area.
- Some recreational diving takes place within the harbour.

22.94. The Bournemouth Core Strategy (Bournemouth Borough Council, 2012) notes that Bournemouth has seven miles of beaches as well as historic gardens. A critical aspect of encouraging walking and cycling is to make these modes of travel safer, more desirable and attractive for a range of types of journey. The Stour Valley runs from Hengistbury Head to Bear Cross and beyond the Borough to the north and west, and has potential for

a significant recreation and habitat resource. Consultation work to inform the Bournemouth Seafront Strategy Summary notes:

- Bournemouth Pier was the most visited part of the seafront, followed by Hengistbury Head, Southbourne, the area between Bournemouth Piers and Boscombe Pier.
- The most popular pursuits were promenade activities such as walking, jogging, cycling and sitting on the beach, followed by attending special events such as the air show, eating and drinking and beach related activities (sunbathing, beach sports, relaxing).
- The factors that most influenced a decision not to visit were the cost of car parking, followed by crowds and car park provision.
- Factors that would encourage more use were more special events, more organised/self-guided walks and return to a natural beach environment.

22.95. The Christchurch and East Dorset Core Strategy pre-submission draft (Christchurch and East Dorset District Councils, 2012) notes the importance of the historic urban environments in the two districts as well as the high quality natural environments. Important natural features include Christchurch Harbour, the coast, rivers and beaches. Christchurch town centre and Highcliffe district centre are the main shopping centres for Christchurch Borough and provide a focus for leisure, entertainment and recreation.

22.96. The Isle of Wight Core Strategy (Isle of Wight Council, 2012) includes the objective to promote and enhance community leisure and recreational facilities. It notes the role of the island in hosting Cowes Week as well as the Isle of Wight Festival and Bestival. The Isle of Wight Green Infrastructure Mapping Study 2010 (Isle of Wight Council, 2010) notes the role of the Tennyson Heritage Coast from Steephill Cove in Ventnor to Widdick Chine at Totland including The Needles. The Rights of Way Improvement Plan indicates that the Isle of Wight already has a good network of well-maintained paths, as well as the coastal footpath around the island. The Esplanade from Shanklin to Sandown is an important green corridor and is a series of connected spaces linking a number of strategic open spaces.

22.97. The New Forest District Core Strategy (New Forest District Council, 2009) covers the area outside the National Park. The southern coastal strip includes Lymington, noted as a popular sailing area. Most of the coast is publically accessible. The area caters for a wide range of outdoor recreational pursuits, including: organised sports, walking, cycling, riding, sailing, fishing and golf. The Open Space, Sport and Recreation Study for the New Forest Area (2007) states that the National Park meets the sea along the north-west Solent shores between Calshot and Hurst Castle and provides some of the most untouched coastal landscape in south-east England, with public access largely confined to Calshot Spit, Lepe Country Park and Hurst Castle. Formal and natural green space areas are highly valued for a variety of reasons; outdoor open spaces are a key factor in local quality of life (especially for walking, watching nature, relaxing and socialising) and informal recreation. The most visited type of open space is the New Forest National Park, with 75% of respondents visiting it at least monthly. Nevertheless, for the majority of respondents, their 'local area of open space' lies outside the Park.

Angling

22.98. Both shore and boat based angling take place in the study area, with anglers often participating in both. Species pursued include: sea bass, cod, bream, smooth hound, turbot, brill, coalfish, conger, flounder, garfish, gurnard, huss, ling, sole, mackerel, mullet, plaice, pout, rays, tope, trigger fish, spurdog, whiting and wrasse. The use of shore locations is driven by the location of anglers and angling clubs but also includes locations within Poole Harbour as well as Sandbanks, Studland, Shell Bay, Boscombe, Southbourne, Hengistbury Head and Mudeford Quay. Isle of Wight shore fishing locations include a number of locations on West Wight. Purbeck locations include Dancing Ledge, Peveril Point and Swanage.

22.99. Boat based sea fishing trips take place over a wide geographical area, from Portland Bill in the west to St Catherine's Point in the east and as far south as the French coast. The fishing grounds vary according to species sought, local knowledge of good fishing grounds and time of year. Charter boats commonly operate from Poole, Weymouth, Swanage, Lymington, Bembridge, Ryde and Yarmouth visiting wreck, reef and deep sea fishing marks. Charter vessels are able to easily reach a variety of marks with; for example, some Poole charter boats using marks off the Isle of Wight and the Purbecks. The Commercial Fisheries assessment indicates that some charter-angling vessels are regularly active at fishing grounds in the vicinity

of the Offshore Development Area. The charter angling vessels make up approximately 6% of the fishing vessels registered in Poole (the nearest administrative port to the study area), and approximately 40 % of the total number of vessels involved in charter fishing in Poole Bay/Christchurch Bay. Poole and Weymouth and Portland are identified as having regionally significant concentrations of charter fishing vessels.

22.100. Angling is a year-round activity, albeit one that is weather dependent especially during the winter months. The frequency of club angling trips varies from one trip per month up to 2-3 trips per week. There are shore based and boat based angling competitions, such as the West Wight British Cod Championship and the Poole Open Boat Bream Competition. Both competitions and regular angling activity are weather dependent and angling is often rescheduled as a result of poor conditions.

Bathing

22.101. The study area includes popular bathing locations, particularly the beaches from Sandbanks to Hengistbury Head, as well as Studland/Shell Bay, West Wight and Swanage. There are 40 designated bathing waters on the Purbeck, Hampshire and Isle of Wight coasts, and there are 11 Blue Flag beaches (awarded for both water quality and beach management criteria):

- Ventnor, Isle of Wight;
- Sandown, Isle of Wight;
- Shanklin, Isle of Wight;
- Alum Chine, Bournemouth;
- Durley Chine, Bournemouth;
- Fisherman's Walk, Bournemouth;
- Southbourne Beach, Bournemouth;
- Sandbanks Peninsular, Poole;
- Shore Road, Poole;
- Canford Cliffs Chine, Poole;
- Branksome Chine, Poole.

22.102. The locations of recognised bathing beaches are illustrated in Figure 22.2.

Cycling

22.103. The UK National Cycling Strategy (HM Government, 1996) noted that leisure cycling has potential for growth, it can be a stimulus to tourism, it is a high-quality way to enjoy the countryside and a good way to introduce people to cycling for their everyday transport needs. To encourage more leisure cycling there needs to be small-scale improvements, better signposting, marketing and information. Flagship leisure routes, using quiet roads or disused railway paths, can increase the profile and boost leisure cycling in town and countryside.

22.104. The UK Active Travel Strategy (Department for Transport, 2010) notes that deterrents to cycling are seen to include: confidence, concerns about safety, lack of cycle parking, poor road design and inadequate cycle signing.

22.105. Cycling takes place across the study area on roads, traffic free cycle paths mountain bike trails and from cycle centres.

22.106. The study area includes part of the National Cycle Network (NCN); NCN 2 runs through Purbeck from Wareham, across the Sandbanks Ferry, along the Poole and Bournemouth Coast, through Christchurch (crossing the path of the cable corridor near Burton) and the New Forest to the Hythe Ferry; NCN 25 runs north from Westbourne in Bournemouth, through Poole and Broadstone, Wimborne Minster and north to Blandford Forum. NCN routes are promoted through organisations such as Sustrans, are suitable for long distance cycling as well as shorter rides and are signed. Cycle routes are illustrated in Figure 22.3.

22.107. The study area also includes the round the Isle of Wight Route 67 Regional Cycle Route.

22.108. The promenade next to the beach in Bournemouth and Poole is used for cycling although bicycles are not permitted between 10 am and 6 pm during July and August. Despite this, the location has a three year annual average daily flow of 345 cycle trips west of Bournemouth Pier and 201 cycle trips east of Bournemouth Pier, according to cycle count data provided by Bournemouth Borough Council. The promenade has seen a 7% average annual growth in cycle use over the last 12 years.

Diving

22.109. A study has identified 145 dive sites between Lyme Regis and the east of the Isle of Wight, including 13 within the Offshore Development Area

(Figure 22.4). Sites are either accessed directly from shore or by boat. While all of these sites attract some diving interest, Portland Harbour is particularly notable for its number of easily accessible sites for divers of different experience.

22.110. The main areas for diving varied from specific locations such as Kimmeridge Bay, Poole Harbour and Swanage Bay to the entire coastal strip running from the Isle of Wight along to Weymouth. The interviews with divers indicate that popular dive sites include the wrecks of the Kyarra, The Betsy Anna and the Venezuela. Most of the dive clubs indicated that they use sites within or near the Offshore Development Area, including the wrecks of SS Eleanor, SS Hazelwood, SS Hartley, Baron Garioch, Fluent, Start, HMS Sargasso, SS Albert C. Field, Ajax and SS Coquetdale, and Christchurch Ledge.

22.111. Popular embarkation locations are Poole (Harbour and Harbourside Park), Swanage and Kimmeridge Bay. The reasons for embarking from these points were ease of access to dive sites and convenience/locality for members. Weymouth and Lymington are also important embarkation areas for divers.

22.112. The Turbine Area is one of the locations used for deep water diving. This type of diving often involves decompression stops during ascent, during which the diver may drift over a substantial distance.

22.113. The average number of divers per dive trip ranged from three to ten and the majority of clubs owned their own boats. Clubs vary in size from small clubs with fewer than 15 members to larger clubs with over 50 members. The majority of members are from the local area with only a few clubs drawing members from further afield. Most diving is during May to October i.e. the months with better weather. However, some clubs dive throughout the year (subject to favourable weather conditions). Clubs will arrange dives at least once a week, with some diving multiple times a week.

Horse riding

22.114. Interviews and desk-based research indicates that many of the popular horse riding routes are inland, such as through the New Forest, Hurn Forest and Town Common Christchurch with no likely view of the turbines). Reasons for choosing these locations were the scenery and safety (as a number of routes are off main roads) and the ability of horse riders to access these routes, particularly direct access from base. There is beach riding on Studland Beach and on the Purbeck cliffs, as well as coastal and beach rides on the Isle of Wight.

22.115. Many of the riding centres in the study area serve a mainly local customer base and operate throughout the year, with typically riders in a group of five to ten people.

560000 590000 620000 650000

5630000 5600000

ID	Status	Year awarded
8	Blue Flag	1988
11	Blue Flag	1997
13	Blue Flag	1988
14	Blue Flag	2004
16	Blue Flag	2000
17	Blue Flag	1993
20	Blue Flag	1993
37	Blue Flag	1988
38	Blue Flag	1988
39	Blue Flag	1988

ID	Location	ID	Location
1	Ringstead Bay	28	Christchurch
2	Durdle Door West	29	Milford-on-sea
3	Durdle Door East	30	Totland Bay
4	Lulworth Cove	31	Colwell Bay
5	Kimmeridge Bay	32	Compton Bay
6	Poole Harbour Rockley Sands	33	Lepe
7	Poole Harbour Lake	34	Calshot
8	Swanage Central	35	Gurnard
9	Studland Knoll House	36	Cowes
10	Shell Bay North	37	Ventnor
11	Poole Sandbanks Peninsular	38	Shanklin
12	Poole Harbour Sandbanks	39	Sandown
13	Poole Shore Road Beach	40	Yaverland
14	Poole Canford Cliffs Chine	41	Whitecliffe Bay
15	Poole Branksome Chine	42	Bembridge
16	Bournemouth Alum Chine	43	St Helens
17	Bournemouth Durley Chine	44	Seagrove
18	Bournemouth Pier	45	Ryde
19	Bournemouth Boscombe Pier	46	Hillhead
20	Bournemouth Fisherman's Walk	47	Lee-on-Solent
21	Bournemouth Southbourne	48	Stokes Bay
22	Bournemouth Hengistbury West	49	Southsea
23	Christchurch Mudeford Sandbank East	50	Eastney
24	Christchurch Avon Beach	51	Beachlands West
25	Christchurch Friar's Cliff	52	Beachlands Central
26	Christchurch Highcliffe Castle	53	Eastoke
27	Highcliffe	54	West Wittering
		55	Bracklesham Bay

0 2.5 5 NM 0 5 10 km

Legend

- Turbine Area
- Offshore Export Cable Corridor
- Bathing Water Sample Collection Locations
- Bathing Water & Blue Flag Award Winner

Scale @A3 1:300,000	**Coordinate System:** WGS 1984 UTM Zone 30N	
Date: 08/08/2013	**Datum:** WGS 1984	
Ref. No.: PMSSRM/130705232	**Data Source** RTP DEFRA Bathing Water Directive & Blue Flag Awards	
Fig. No.: Figure 23.2		
Author: NDU		
Rv.No.: 01	**Checked:** RM	**Approved:** SMF

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Navitus Bay Development Ltd

Bathing

NAVITUSBAY

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Blandford Forum Ringwood New Forest Fareham Portsmouth Wimborne Minster A354 A31(T) A348 A338 A350 A35(T) A35 A3049 Lymington Christchurch Bournemouth Poole Wareham Swanage Yarmouth Cowes Ryde Newport Shanklin Ventnor

0 4 8 km 0 2.5 5 NM

Legend

- Turbine Area
- Offshore Export Cable Corridor
- Local Cycle Route
- Regional Cycle Route
- National Cycle Route

Scale @A3 1:250,000	**Coordinate System:** WGS 1984 UTM Zone 30N		
Date: 12/08/2013	**Datum:** WGS 1984		
Ref. No.: PMSSRM/130704233	**Data Source** OS SeaZone Sustrans		
Fig. No.: Figure 22.3			
Author: NDU			
Rv.No.: 01	**Checked:** RM	**Approved:** SMF	

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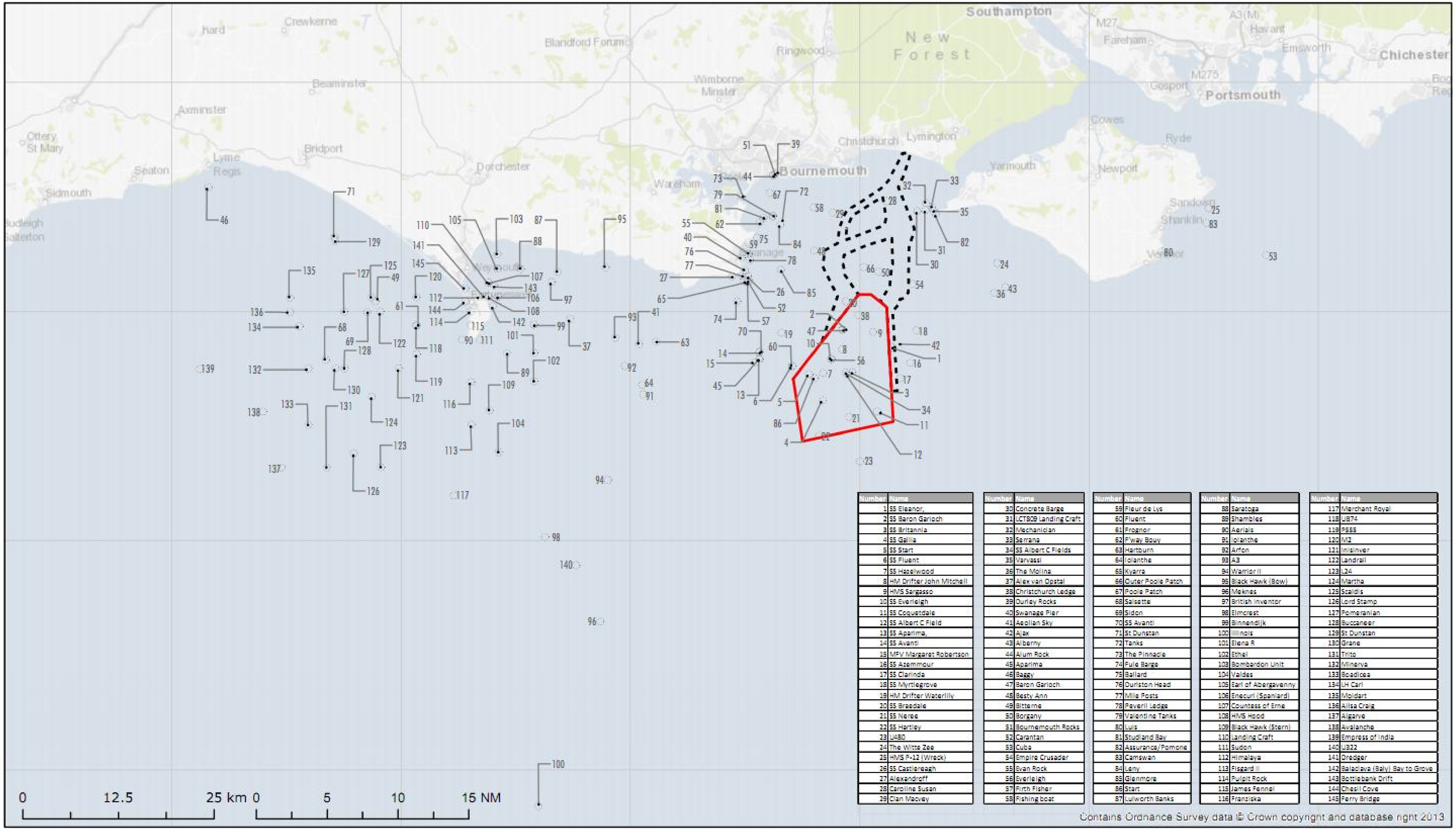
Cycling Routes

NAVITUSBAY



Number	Name
1	SS Eleanor,
2	SS Baron Garioch
3	SS Britannia
4	SS Gallia
5	SS Start
6	SS Fluent
7	SS Hazelwood
8	HM Drifter John Mitchell
9	HMS Sargasso
10	SS Everleigh
11	SS Coquetdale
12	SS Albert C Field
13	SS Aparima,
14	SS Avanti
15	MFV Margaret Robertson
16	SS Azemmour
17	SS Clarinda
18	SS Myrtlegrove
19	HM Drifter Waterlily
20	SS Braedale
21	SS Neree
22	SS Hartley
23	U480
24	The Witte Zee
25	HMS P-12 (Wreck)
26	SS Castlereagh
27	Alexandroff
28	Caroline Susan
29	Clan Macvey
30	Concrete Barge
31	LCT809 Landing Craft
32	Mechanician
33	Serrana
34	SS Albert C Fields
35	Varvassi
36	The Molina
37	Alex van Opstal
38	Christchurch Ledge
39	Durley Rocks
40	Swanage Pier
41	Aeolian Sky
42	Ajax
43	Albenny
44	Alum Rock
45	Aparima
46	Baggy
47	Baron Garioch
48	Besty Ann
49	Bitterne
50	Borgany
51	Bournemouth Rocks
52	Carantan
53	Cuba
54	Empire Crusader
55	Evan Rock
56	Everleigh
57	Firth Fisher
58	Fishing boat
59	Fleur de Lys
60	Fluent
61	Frognor
62	F'way Bouy
63	Hartburn
64	Iolanthe
65	Kyarra
66	Outer Poole Patch
67	Poole Patch
68	Salsette
69	Sidon
70	SS Avanti
71	St Dunstan
72	Tanks
73	The Pinnacle
74	Fule Barge
75	Ballard
76	Durlston Head
77	Mile Posts
78	Peveril Ledge
79	Valentine Tanks
80	Luis
81	Studland Bay
82	Assurance/Pomone
83	Camswan
84	Leny
85	Glenmore
86	Start
87	Lulworth Banks
88	Saratoga
89	Shambles
90	Aerials
91	Iolanthe
92	Arfon
93	A3
94	Warrior II
95	Black Hawk (Bow)
96	Meknes
97	British Inventor
98	Elmcrest
99	Binnendijk
100	Illinois
101	Elena R
102	Ethel
103	Bombardon Unit
104	Valdes
105	Earl of Abergavenny
106	Enecuri (Spaniard)
107	Countess of Erne
108	HMS Hood
109	Black Hawk (Stern)
110	Landing Craft
111	Sudon
112	Himalaya
113	Fisgard II
114	Pulpit Rock
115	James Fennell
116	Franziska
117	Merchant Royal
118	UB74
119	P555
120	M2
121	Inisinver
122	Landrail
123	L24
124	Martha
125	Scaldis
126	Lord Stamp
127	Pomeranian
128	Buccaneer
129	St Dunstan
130	Grane
131	Trito
132	Minerva
133	Boadicea
134	LH Carl
135	Moidart
136	Ailsa Craig
137	Algarve
138	Avalanche
139	Empress of India
140	U322
141	Dredger
142	Balaclava (Baly) Bay to Grove
143	Bottlebank Drift
144	Chesil Cove
145	Ferry Bridge

Legend

Turbine Area

Offshore Export Cable Corridor

Diving Site

Scale @A3 1:500,000

Coordinate System: WGS 1984 UTM Zone 30N

Date: 09/07/2013

Datum: WGS 1984

Ref. No.: PMSSRM/130703234

Fig. No.: Figure 22.4

Author: NDU

Data Source RTP Based on dive club websites & www.wrecksite.eu/wrecksite.aspx

Rv.No.: 01 **Checked:** RM **Approved:** SMF

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Diving Sites

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Nature study

22.116. While birdwatching takes place across the study area, with specific areas of interest at Christchurch Harbour/Stanpit Marsh, Durlston, Ballard Down, Studland, Dancing Ledge, Swineham Point (Wareham), Upton Country Park, Hengistbury Head, Calshot and Hurst. The cliffs from the Needles to Culver Cliff on the Isle of Wight are also used for birdwatching, as is Freshwater Bay. National Nature Reserves include Arne Reedbeds (Poole Harbour), Durlston, Hartland Moor (near Poole Harbour) and Studland and Godlingston Heath in Dorset; North Solent in Hampshire and Newtown Harbour on the Isle of Wight. European designated Special Areas of Conservation (SAC) include Dorset Heaths, Briddlesford Copses (Isle of Wight), Chesil and the Fleet, Isle of Portland to Studland Cliffs, Solent and Isle of Wight Lagoons, Solent Maritime and St Albans Head to Durlston Head.

22.117. Marine mammals are known to frequent Poole and nature study includes watching dolphins, porpoises and seals, either from boats or from Durlston. Chapter 11'Marine Mammals' suggests that bottlenose dolphins can occasionally be seen from multiple vantage points along the coastline to the north-west of the Turbine Area. Seals may also be seen at various points in the study area. Chapter 11 states that the Offshore Development Area was generally low in species diversity and abundance for marine mammals. However, there is enough activity and interest for Durlston Head to have dolphin watching information boards.

Sailing (including yachting, motor boating and other powered craft)

22.118. The Dorset, Hampshire and Isle of Wight area, including the Solent, are some of the busiest waters in the UK for recreational sailing and rowing, as is suggested by the National Water Sports Participation Survey (Arkenford, 2012) and the RYA Atlas of Recreational Sailing (RYA, 2013). Within the study area, the coastal towns of Poole and Christchurch are positioned on large natural harbours, which provide sheltered waters and safe haven for the numerous sailors and rowers who keep their boats there. Further east, the waters of the Solent, extending to Keyhaven, Lymington, Yarmouth and Cowes, provide numerous marinas, clubs and organised sailing and rowing.

22.119. The RYA Sailing Atlas indicates that general sailing and yacht racing occurs all along the coast of the study area and coincides with the export cable corridor. The Offshore Development Area is crossed by recognised sailing routes of high and medium levels of use. The data from the RYA Sailing Atlas is illustrated in Figure 22.6.

22.120. There is also considerable yachting activity in an east-west direction along the coast between Southampton and Weymouth, with Cowes, Beaulieu, Lymington, Yarmouth, Keyhaven, Christchurch, Poole, Studland and Swanage, proving to be popular destinations in between. There is regular cross channel yachting, with many clubs making regular weekend crossings to Cherbourg, St Malo and the Channel Islands. Rowing, personalised water craft use and dinghy sailing is concentrated close to shore, particularly in areas such as the western Solent, Christchurch Harbour and Poole Harbour. Motor boating often involves short journeys.

22.121. Sailing events take place throughout the year and various well known sailing races take place in the vicinity of the Offshore Development Area including the annual Cowes Round the Island Race, the Cowes Week regatta and the annual Fastnet race.

Surfing

22.122. There are 23 surfing locations identified around the study area, as illustrated in Figure 22.7. Most of these are on West Wight and the south coast of the Isle of Wight, as well as between Poole and Milford. Based on the survey work undertaken for this recreation assessment, the most popular surfing locations are Kimmeridge Bay, Bournemouth Pier, Boscombe, Highcliffe and Purbeck. Compared to Atlantic facing coasts, surfing in most of the study area is less favoured in terms of conditions (with the exception of West Wight which does face the Atlantic), although the interest in the sport and proximity to population centres means that surfing is an interest sport in the area. Along the south coast of England the surfing waves are described to be of low quality, low consistency but very high in popularity (Surfers against Sewage, pers.comm., (2009), as quoted in the Chapter 5). The survey work undertaken for this recreation assessment suggests that there can be between 50 to 100 days a year suitable for surfing. On a busy day at Bournemouth Pier there can be between 60 to 100 surfers in the water at one time. Surfing takes place all year round, although it is weather dependent.

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5630000

5600000

North Solent
Calshott
Hengistbury Head
Stanpit Marsh
Upton Country Park
Arne Reedbeds
Swineham Point
Dorset Heathlands
Studland
Ballard Down
Hurst Castle
Newtown Harbour
Solent and
Isle of WIght Lagoons
Briddlesford Copses
Hartland Moor
Cliffs from The Needles
to Culver Cliff
Chesil & The Fleet
Studland &
Godlingston Heaths
Dancing Ledge
Isle of Portland
Durlston Head

New Forest

0 5 10 km 0 3.5 7 NM

Legend

Turbine Area

Offshore Export Cable Corridor

Scale @A3 1:350,000	**Coordinate System:** WGS 1984 UTM Zone 30N
Date: 15/08/2013	**Datum:** WGS 1984
Ref. No.: PMSSRM/130704231	**Data Source** OS SeaZone Natural England
Fig. No.: Figure 22.5	
Author: NDU	
Rv.No.: 01 **Checked:** RM	**Approved:** SMF

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Nature Study

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NAME	ID
UKSA	1
Bembridge Harbour Improvements Co Ltd	2
Bucklers Hard Yacht Harbour	3
Christchurch Marine Ltd	4
Cobb's Quay Marina	5
East Cowes Marina	6
Cowes Yacht Haven	7
Davis's Boatyard	8
Fareham Marine	9
The Gosport Marina Ltd	10
Hamble Point Marina	11
Hamble Yacht Services Ltd	12
Haslar Marina	13
The Hayling Yacht Co Ltd	14
Hythe Marina Village	15
Island Harbour	16
Kemps Quay	17
Berthon Lymington Marina	18
Lymington Yacht Haven	19
Mercury Yacht Harbour	20
Parkstone Bay Marina	21
Ocean Village Marina	22
Port Hamble Marina	23
Port Solent Marina (Premier Marinas Ltd)	24
Fareham Yacht Harbour	25
Quay West Marina	26
R.K. Marine	27
Ridge Wharf Yacht Centre	28
Ryde Harbour	29
Salterns Marina	30
Shamrock Quay	31
Southsea Marina (Premier Marinas Ltd)	32
Sparkes Yacht Harbour	33
Emsworth Yacht Harbour	34
Thornham Marina	35
Town Quay Marina	36
Universal Marina	37
Weymouth Old Harbour	38
Weymouth Marina	39
Swanwick Marina (Premier Marinas Ltd)	40
Stone Pier Yard Marina	41
Saxon Wharf	42
Poole Quay Boat Haven	43

0 5 10 km 0 5 10 NM

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Legend

- Turbine Area
- Offshore Export Cable Corridor
- Racing Area
- General Sailing Area
- Marina

UK Cruising Routes

- Heavy Recreational Use
- Medium Recreational Use
- Light Recreational Use

Scale @A3 1:350,000	**Coordinate System:** WGS 1984 UTM Zone 30N
Date: 04/07/2013	**Datum:** WGS 1984
Ref. No.: PMSSRM/130704235	**Data Source** OS; SeaZone; RYA
Fig. No.: Figure 22.6	
Author: NDU	
Rv.No.: 01	**Checked:** RM **Approved:** SMF

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Sailing

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Avon Beach
Hengistbury Head
Southbourne
Boscombe Artifical Surf Reef
Highcliffe
Bournemouth
Boscombe
Swanage
Kimmeridge Bay
Chapman's Pool
Freshwater
Compton Bay
Chilton
Grange Chine
Butterflies
Atherfield
Sandown Beach
Whitecliff Bay
Ventnor
Steephill Cove
The Undercliff
Niton
Watershoot Bay

0 5 10 km 0 4 8 NM

Legend

- Turbine Area
- Offshore Export Cable Corridor
- Surfing Locations

Scale @A3 1:300,000	**Coordinate System:** WGS 1984 UTM Zone 30N
Date: 09/08/2013	**Datum:** WGS 1984
Ref. No.: PMSSRM/130705236	**Data Source** OS SeaZone Marine ALSF
Fig. No.: Figure 22.7	
Author: NDU	
Rv.No.: 01	**Checked:** CG **Approved:** SMF

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Surfing Locations

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22.123. Windsurfing is also pursued in this area, particularly in Poole Harbour as well as Kimmeridge Bay. Kitesurfing locations include Sandbanks and Poole Harbour, as well as Knoll Beach (Studland) and various locations around Christchurch Harbour and Bay, and the Isle of Wight. Nationally, participation in surfing is much higher than windsurfing and kitesurfing (Arkenford, 2012).

Paragliding

22.124. Paragliding locations in the study area are coastal hills or cliffs facing the prevailing wind. The most popular sites on the Isle of Wight are on the south-west of the island, including sites along the cliffs such as Isle of Wight Pearl, Compton Reds, Compton Whites and Compton Freshwater. There are sites around Bournemouth, Barton-on-Sea, Swanage and Purbeck. On a day when conditions are favourable for the activity there can be up to ten people flying on one site at a time.

22.125. Hang gliding and paragliding is an all year activity, although very weather dependent. There is more activity in the summer months due to better weather.

Walking

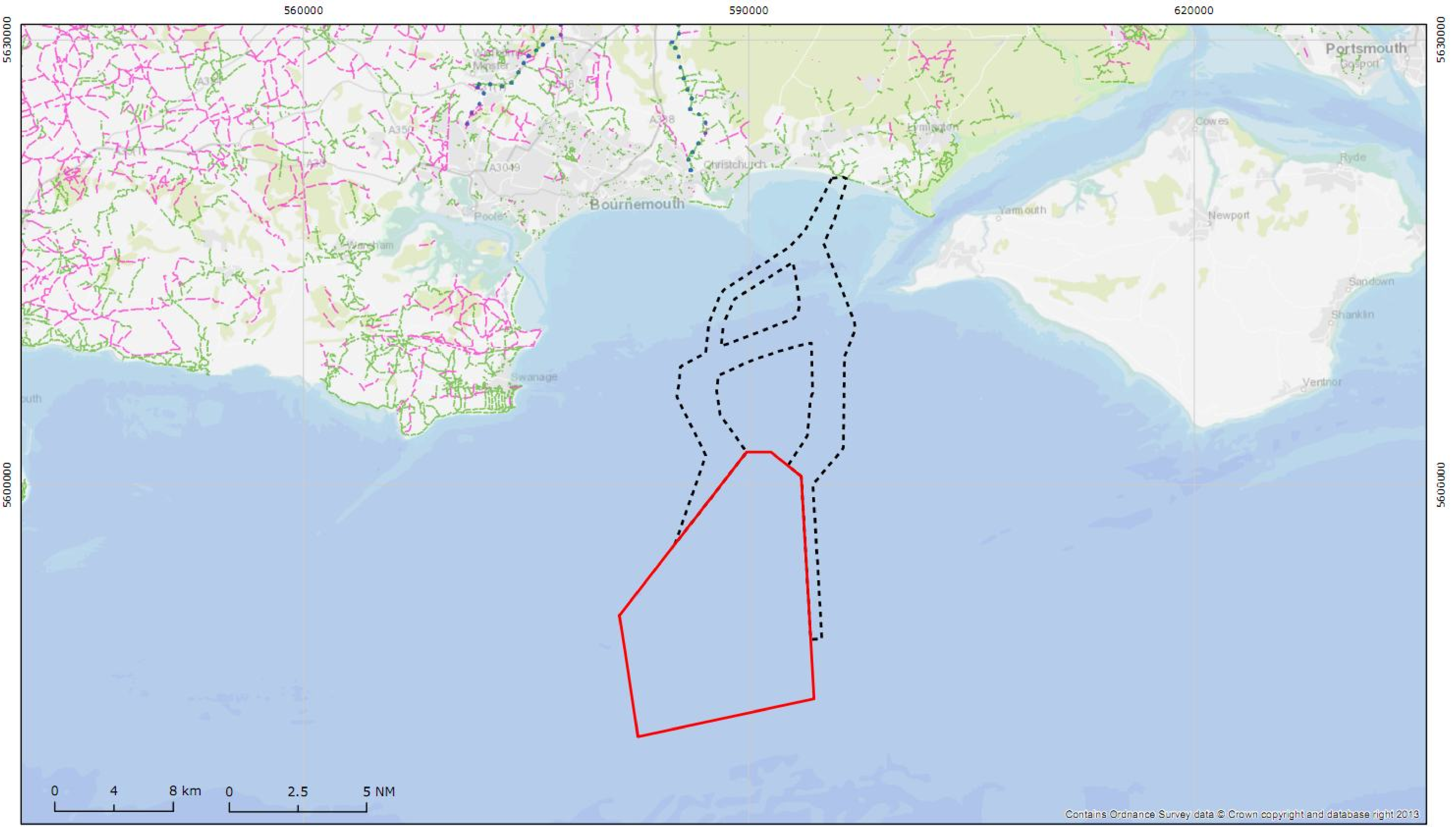
22.126. Walking takes place across PRoW and open access countryside and beaches. There are about 4,800 km of public rights of way in both Dorset and Hampshire, and 840 km of PRoW on the Isle of Wight. Figure 22.8 shows the public rights of way in the study area. In addition there are popular locations such as the seafront promenades in Poole and Bournemouth, and around Hengistbury Head. Walks around Studland and Old Harry (Handfast Point, near Studland) are also known to be popular.

22.127. Within the study area is the 580 km South West Coast Path National Trail, which runs from Poole to Minehead; and the Isle of Wight Coast Walk.

22.128. The survey work indicates that walking is a year-round activity and that the factors influencing choice of location included scenery/views, availability of circular routes, terrain, accessibility and suitability for dogs.

22.4.3. Participation

22.129. Estimates of national participation rates for different recreational activities are presented in Table 22.9. It should be noted that these estimates are drawn from a variety of surveys, and are generally national participation rates, that will vary locally (particularly as many participants in national surveys will be in non-coastal locations). The table also includes what these rates might mean in terms of the number of local participants in these activities i.e. applying the proportions to the 676,000 adult residents of Purbeck, Poole, Bournemouth, Christchurch, East Dorset, New Forest and the Isle of Wight. This approach is crude but is useful in generating an indication of the order of magnitude of involvement in activities in the absence of other estimates.



Legend

- Turbine Area
- Offshore Export Cable Corridor
- Bridleway
- Footpath
- Long Distance Walk

Scale @A3 1:250,000	**Coordinate System:** WGS 1984 UTM Zone 30N	
Date: 09/08/2013	**Datum:** WGS 1984	
Ref. No.: PMSSRM/130704237	**Data Source** OS SeaZone	
Fig. No.: Figure 22.8		
Author: NDU		
Rv.No.: 01	**Checked:** RM	**Approved:** SMF

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Public Rights of Way

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Table 22.9 Recreation participation estimates

Activity*	Participation rate (% of adult population)	Source	Local participants estimate
Recreational angling	2.1	National Watersports Participation Survey (Arkenford, 2012)	14,000
Outdoor bathing	7.1	National Watersports Participation Survey Arkenford, 2012)	48,000
Recreational diving	0.4	National Watersports Participation Survey (Arkenford, 2012)	3,000
Sailing (includes small sail boats, rowing, personal watercraft, motor cruising, yacht cruising, power boating, and racing).	4.1	National Watersports Participation Survey (Arkenford, 2012)	28,000
Surfing, windsurfing and kitesurfing	1.6	National Watersports Participation Survey (Arkenford, 2012)	11,000
Paragliding (at least once a month)	<0.01	Active People Survey 5, (Sport England, 2011)	<70
Nature study	5.9	Based on RSPB estimates (RSPB, 2013)	40,000
Horse riding (at least once a month)	3.2	National Equestrian Survey (BETA, 2011)	21,000
Recreational cycling (at least once a month)	8.6	Active People Survey 5 (Sport England, 2011)	58,000
Recreational walking	9.0	Great Britain Leisure Day Visits Survey (Visit England, 2013)	61,000
*Some participants may use either coastal or inland locations, or both.			

22.130. Of the activities in scope, recreational walking is the largest participant activity, along with cycling and sea bathing. Nature Study and outdoor bathing also have high participation activity. Paragliding, diving and surfing are the smallest in terms of participation.

22.5. Impact Assessment

22.131. In this section, the potential impacts on offshore recreational users resulting from the construction, operational and maintenance, and decommissioning phases of the offshore elements of the Project are assessed.

22.5.1. Realistic worst case scenario

22.132. Project Parameters have been used to define the 'Rochdale Envelope' and to describe the potential realistic worst case scenarios for each potential effect on recreation receptors. Refer to Table 22.10 for details. As the impacts on recreational users are highly dependent on the assessments of other topics, the table is divided into those effects that are directly assessed within this chapter, and those that draw on the results from other chapters for indirect effects.

Table 22.10 Realistic worst case scenario parameters relevant to the recreation users impact assessment		
Potential effect	Realistic worst case scenario	Rationale
Construction		
Direct effects - assessed within this chapter		
Displacement from construction site	Maximum of 218 x 5MW turbines Maximum three offshore substations platform ('OSP') Maximum one meteorological mast ('met mast')	This layout would create the largest footprint of displacement for recreation activities at the site such as yachting, diving and angling.
Disturbance from piling noise	Maximum 218 piled turbine foundations Maximum three piled OSP, using jacket structures, each with four pin piles. Maximum one piled met mast, using a 4 m monopile	This scenario represents the greatest levels and duration of piling noise.
Exclusion from safety zones	Rolling safety zone of 500 m to be applied around each of the wind turbines, substations, met mast and construction vessels and partially completed structures during 4.5 years of construction activity, in three installation phases of 30 months each.	Rolling safety zones affecting the Offshore Development Area during the three installation stages provide for the greatest area of exclusion of recreation activities. The worst case scenario is that the three phases of construction may overlap. Therefore this would result in the greatest number of exclusion zones at any one time. Activities (e.g. angling, yachting) can be excluded from an area of more than 500 m around each structure if concurrent construction activities are taking place.
Interference with recreation activity by construction traffic and plant	Maximum number of heavy vessel movements over total construction period is estimated as 1,141 comprising approximately: ➢ 3 x Foundation installation vessels (400 vessel movements); ➢ 3 x Wind turbine installation vessels (200 vessel movements); ➢ 2 x Substation installation vessels (18 vessel movements); ➢ 2 x Inter array cable laying vessels (100 vessel movements); ➢ 1 x Export cable laying vessel (18 vessel movements); ➢ 2 x Met mast installation vessels (5 vessel movements); ➢ 1 x Scour protection vessel (400 vessel movements). Maximum number of light vessel movements over total construction period	This assumes a maximum construction schedule of 24 hours a day, 7 days a week for a maximum construction period of 4.5 years. Similarly, the maximum estimated number of vessel movements required would cause the greatest interference with recreation activities.

Table 22.10 Realistic worst case scenario parameters relevant to the recreation users impact assessment		
Potential effect	Realistic worst case scenario	Rationale
	is 6,300 comprising: ➢ 300 towing and anchoring vessels movements; ➢ 2,500 crew transfer vessel movements; ➢ 2,500 commissioning vessel movements; ➢ 1,000 guard vessel movements.	
Indirect effects – assessed through results from other chapters: ➢ Chapter 13 Landscape and Visual - Visual effects upon recreation users; ➢ Chapter 11 Marine Mammals and Megafauna - Impacts on marine mammal activity and abundance reducing local presence for wildlife watching ➢ Chapter 12 Ornithology - Impacts on bird activity and abundance reducing local presence for wildlife watching ➢ Chapter 6 Water Quality - Impacts on water quality and bathing ➢ Chapter 10 Fish Ecology - Impacts on fish ecology reducing fish resource for angling		
Operation and Maintenance		
Indirect effects – assessed through results from other chapters: ➢ Chapter 5 Physical Processes - Reduction in wave heights at surfing beaches ➢ Chapter 13 Landscape and Visual - Visual effects upon recreation users ➢ Chapter 6 Water Quality - Impacts on fish ecology reducing fish resource for angling		
Decommissioning		
Direct effects - assessed within this chapter:		
Interference and displacement from decommissioning activities	Removal of the maximum number of structures above the seabed associated with the Project including: 218 foundations, towers and nacelles, 3 x OSP (foundation and tower) and 1 x met mast (foundation and tower). Maximum number of decommissioning vessels required. Maximum decommissioning programme.	Maximum number of structures would result in the maximum decommissioning activities and maximum vessel numbers required. A full decommissioning plan would be agreed with the relevant statutory consultees prior to any decommissioning works taking place. At present, it is assumed that all structures above the seabed would be removed while cables will remain in-situ.

Table 22.10 Realistic worst case scenario parameters relevant to the recreation users impact assessment		
Potential effect	Realistic worst case scenario	Rationale
Indirect effects – assessed through results from other chapters: ➢ Chapter 11 Marine Mammals and Megafauna - Impacts on marine mammal (dolphin) activity and abundance reducing local presence for wildlife watching ➢ Chapter 12 Ornithology - Impacts on bird activity and abundance reducing local presence for wildlife watching ➢ Chapter 6 Water Quality - Impacts on water quality ➢ Chapter 10 Fish Ecology - Impacts on fish ecology reducing fish resource for angling		

22.5.2. Turbine Area

Angling

Construction

22.133. Angling is pursued by approximately 2.1% of the population nationally and takes place from the shore and from boats across the Turbine Area and in the wider study area.

22.134. Some of the activity is relatively flexible in that boat based trips can choose from a variety of locations, although choices can be constrained by weather and the location of target fish species. The study area is regionally important for offshore angling with a number of vessels involved in chartered angling within the Offshore Project Area. People visit from outside of the study area to participate in the activity on an ad hoc basis and for organised competitions. Fishing marks (both within the Turbine Area and outside) are generally seabed features (banks, gullies, rock outcrops) or wrecks that form attractive habitats for fish. Prime locations are commercially sensitive and vary depending on time of year and fish species. Part of the appeal of the area for boat based angling is choice and variety (especially for regular anglers). Reduced angling options may reduce the overall attractiveness of the area for this activity.

22.135. Shore based angling also takes place at many locations along the coast, although ease of access to home base may influence participation. Therefore shore based angling is considered to be of local importance.

22.136. Based on the relative importance of boat based angling, in that it is of regional importance this receptor is assessed as being of medium sensitivity. This assessment of boat based angling sensitivity is higher than the assessment in Chapter 17, as the assessment here considers the importance of this recreational activity and its relative scale in recreation terms, while Chapter 17 considered the flexibility of charter vessels and ability to use other marks.

22.137. Shore based angling is assessed as low sensitivity as it is locally rather than regionally important. There is some flexibility in terms of location of shore based angling but there would be travel time and costs incurred if some participants wish to travel to fish outside the study area.

22.138. Boat based angling is potentially affected by changes in the fish stocks and by obstruction to marks within the Turbine Area during construction. Some of the angling clubs interviewed were concerned about reduced access during construction.

22.139. The information from the Commercial Fisheries assessment (Chapter 17) predicts that there may be impacts of moderate significance upon sea bass, for static gear nets and charter anglers. The realistic worst case scenario is that the duration of the effect on sea bass would occur throughout the construction period at the site and in the surrounding area

22.140. During construction works, it is likely that at times some of the marks within the Turbine Area would not be accessible due to rolling safety zones. Based on this there would need to be adjustments to the marks used in the Turbine Area as some would be unavailable at any one time.

22.141. The magnitude of effect for boat based angling is therefore predicted to be **medium**, as changes would occur over the area used for this activity and for the duration of construction works. Therefore, the impact significance is considered to be **moderate** and the level of significance is **Significant**.

22.142. Shore based angling is also affected by changes to fish stocks and an impact of moderate significance on sea bass would also affect shore based angling. There are no obstruction effects to shore based angling anticipated from the Project.

22.143. The overall magnitude of effect for shore based angling is therefore assessed as **low** for the duration of the construction works. Therefore, the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Operation and Maintenance

22.144. Angling sensitivity would remain unchanged during the operational phase. Therefore boat based angling continues to be assessed as medium sensitivity and shore based angling assessed as a low sensitivity.

22.145. During the operation and maintenance phase, angling boats would suffer a degree of obstruction due to maintaining a safe distance from turbines and offshore substations.

22.146. Recreational anglers would be subject to visual effects, particularly as some of the marks used would be amongst the turbines. However, the key factors

affecting angling are availability of fish and access to good locations to catch them, with no significant concerns about angling locations from visual impact noted through the interviews with groups.

22.147. Chapter 10 'Fish and Shellfish Ecology' assesses the impacts upon fish species and concludes impacts during operation are not significant therefore the overall magnitude of effect for boat based angling is assessed as **low**. Therefore, the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

22.148. No obstruction effects are anticipated on shore based angling.

22.149. Chapter 10 indicates that impacts on fish species are not significant at the coast. Therefore, the overall magnitude of effect for shore based angling is assessed as **imperceptible**. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Decommissioning

22.150. Angling sensitivity would remain unchanged during the decommissioning phase, with boat based angling assessed as medium sensitivity and shore based angling assessed as low sensitivity.

22.151. Boat based angling is potentially affected by changes in the fish stocks and by obstruction to marks within the Turbine Area during decommissioning. The construction piling noise and associated effect on fish stocks would not be apparent during decommissioning, as percussive piling techniques are not required. There would need to be minor adjustments to the marks used in the Turbine Area as some would be unavailable at any one time. Chapter 17 indicates that the decommissioning safety exclusion zones are likely to result in a low impact on charter angling vessels.

22.152. The overall magnitude of effect for boat based angling is therefore assessed as **low**. Therefore, the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

22.153. No obstruction effects are anticipated on shore based angling. The overall magnitude of effect for shore based angling is therefore assessed as **imperceptible**. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Bathing and sea swimming

Construction

22.154. Bathing is one of the most commonly pursued recreational activities in the UK and the area has 55 designated bathing waters and Blue Flag beaches, both of which are national designations. The area is well known for its beaches and bathing is therefore assessed as a receptor of high sensitivity.

22.155. Bathing is potentially affected by changes to water quality. Chapter 5 'Physical Processes' considers suspended sediment concentrations resulting from construction activities and concludes that any effects would typically be towards the east of the study area (i.e. western side of the Isle of Wight) and that the impact on beaches would be negligible. The assessment notes that the majority of additional suspended sediment would be deposited in a short distance from source and remaining levels are within natural variation. In addition, suspended sediment concentrations are naturally higher on the west side of the Isle of Wight due to the surf conditions.

22.156. Chapter 6 'Water quality' considers the impact of water quality changes on Blue Flag beaches. This assessment is necessarily conservative; and is based on the assumption that hitherto unknown contaminants would be disturbed. It states that during construction there may be minor impacts from remobilisation of contaminated sediments, and there may be minor impacts from pollution (spillages of oil, lubricants and building materials).

22.157. Chapter 8 'In-air noise' indicates that the construction noise due to piling, or indeed any other construction activities within the Turbine Area, is not expected to cause any effects on the nearest noise sensitive receptors at the shore.

22.158. The construction works in the Turbine Area would not cause obstruction or other disturbance to sea bathing or beach activities.

22.159. The magnitude of effect for sea bathing is therefore **imperceptible**. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.160. Sea bathing is potentially affected by visual impacts of the offshore components during the operational phase. Chapter 13 (Seascape, landscape

and visual) considers the visual impacts on a range of receptors and considers people visiting beaches as having a **medium** level of visual sensitivity.

22.161. Based on the response received to the user survey from a sea swimming organisation and that the designated bathing waters and Blue Flag beaches would not be adversely affected in terms of water quality during the operation of the Project, it is considered that bathing and sea swimming would continue to be commonly pursued following construction. Bathing sensitivity would remain unchanged during the operational phase and is therefore assessed as **high**.

22.162. During the operational and maintenance phase there are no potential water quality effects or disturbance. There would be some visual impacts and whilst it is clear that there would be changes to the outlook from bathing locations, it is thought unlikely that this in isolation would result in changes to the behaviour of bathers or other beach users. This is based on responses from the interviews with recreation groups and because quality of resource and management regimes attracting people to the sea and beaches would remain. The overall magnitude of effect for bathing is therefore assessed as **imperceptible** even though the Project would be visible from bathing locations**.** Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Decommissioning

22.163. Bathing continues to be assessed as a high sensitivity receptor.

22.164. Bathing is potentially affected by changes to water quality. Chapter 6 'Water quality' considers that decommissioning is expected to have the same effects as construction, with minor impacts from suspended sediment concentrations, remobilisation of contaminated sediments and pollution.

22.165. Chapter 8 'In-air noise' indicates that the noise within the turbine boundary as a result of decommissioning is not expected to cause any impacts on the nearest noise sensitive receptors.

22.166. The overall magnitude of effect for bathing is therefore assessed as **imperceptible**. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Diving

Construction

22.167. In comparison to some of the other recreational activities, diving is undertaken by relatively few participants (see Table 22.9), which is likely to be a function of the technical skills and equipment/costs involved. Dive clubs contacted as part of the interviews indicated that they used sites within or near the Turbine Area. However, there are a wide range of dive sites including wrecks and drift sites in the study area, outside of the Turbine Area and there are concentrations of locations around the coast, including at Weymouth and Portland. The Turbine Area is one of the locations used for deep water diving.

22.168. During construction there would be subsea noise produced from piling and this would result in a 2 km advised safety zone from piling works on safety grounds. Divers may also choose to avoid the wider area due to elevated levels of subsea noise. The noise safety zone of 2 km and a larger potential area where divers may choose not to go during piling would prevent divers from using some of the dive sites currently visited during construction. Whilst there are alternative dive locations available, part of the appeal of the area for divers is choice and variety (especially for regular divers) and the reduction of options would also reduce the overall attractiveness of the area to recreational divers. The survey work amongst dive clubs suggested that reduced access to dive sites over the medium term could jeopardise the survival of some dive clubs. During construction, a 'rolling' 500 m Safety Zone would also be put in place around works taking place within the Turbine Area.

22.169. In addition to noise, divers would also be concerned with visibility. Chapter 5 'Physical processes' discusses the potential extents of the plumes. The plume due to dredging would rapidly decrease, so that sand sized particles were only in suspension up to 1.5 km from the release point (assumed to be adjacent to the pile location). Finer sediments would remain in suspension for longer, but would be widely dispersed. For drilling, as a worst case scenario, if 100 % of the sediment dispersed as fine material, the concentrations in suspension would be of the order of 30 mg/l beyond the immediate vicinity of the drilling, and would disperse within days. This is comparable to visibility during storms. This increased turbidity is an absolute worst case, and is not anticipated to occur. Based on this

assessment, subsea noise is considered to be limiting factor for diving activity.

22.170. Discussions with dive clubs, as well as additional modelling, will be undertaken prior to submission of the application for development, to enable the sensitivity, magnitude and level of impact on divers to be assessed and reported. This will be detailed in the environmental statement submitted as part of the application for Development Consent.

Operation and Maintenance

22.171. Unlike construction, no operational noise impacts are expected.

22.172. Dive boats may have restricted access for safety of operation around the turbines. Divers expect that the presence of turbines and scour protection material may act as a fish aggregation device and improve marine life in and around the Turbine Area.

22.173. It is anticipated that the risk of collisions with turbines during deep water diving drifting decompression ascents may make the Turbine Area less attractive for deep water diving during the operational phase of the Project.

22.174. Discussions with dive clubs, as well as additional modelling, will be undertaken prior to submission of the application for development, to enable the sensitivity, magnitude and level of impact on divers to be assessed and reported.

Decommissioning

22.175. Unlike construction no large impacts are expected as percussive piling techniques are not required. Although there would still be a need for a safety zone around works on collision safety grounds, which is assumed to be 500 m as per the construction phase. Therefore whilst the decommissioning would reduce the choice of dive sites, this is anticipated to be to a lesser extent than the construction phase.

22.176. Discussions with dive clubs, as well as additional modelling, will be undertaken prior to submission of the application for development, to enable the sensitivity, magnitude and level of impact on divers to be assessed and reported.

Recreational sailing and motor boats

Construction

22.177. The study area is considered to be nationally important for sailing, as it hosts various international and national sailing events as well as informal sailing activity and local sailing events. There is also a high density of sailing clubs and marinas in the study area in relation to the rest of the UK. Sailing is assessed as **medium** sensitivity due to its regional importance and its locational flexibility and ability to adapt to avoid obstructions

22.178. There would be obstruction impacts to sailing during construction, from the rolling construction Safety Zone, the movement of construction vessels and from the turbines themselves. These impacts would not affect all types of sailors; those using dinghies and rowing boats are operating close to shore and would be mainly unaffected. However, motor boats, and cruising and racing yachts would be affected, with vessels required to divert and take a potentially longer course to their destination. Some sailors would be wary of sailing through the Turbine Area even when permitted. The area hosts some important sailing events and some of these would be obliged to divert routes (e.g. the Fastnet race, although the diversion is a small proportion of the overall route). Taking account of the obstruction to some sailing receptors, the overall magnitude of effect for sailing is assessed as **low** during the construction phase, as only a small proportion of the sailing receptors are affected and there are limited effects to those who are. Therefore, the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Operation and Maintenance

22.179. Sailing continues to be assessed as **medium** sensitivity, for the reasons given in the preceding section. Chapter 13 'Seascape, landscape and visual' also considers the potential visual impacts on a range of receptors and considers sailors as high-medium visual sensitivity.

22.180. The assumptions discussed above regarding wind and turbulence suggest that there would be no changes to the wind conditions necessary for sailing outside the Turbine Area.

22.181. There would be obstruction and displacement impacts on sailing during operation of the turbines. Again, these impacts would not affect all types of sailors as those using dinghies and rowing boats would be mainly

unaffected. However, motor boats, and cruising and racing yachts would continue to be affected, with vessels required to take a potentially longer course to their destination. Some sailors may continue to self-exclude from sailing through the Turbine Area even when permitted, because of navigational concerns. The overall magnitude of effect for sailing is assessed as **low** during the operational phase. Therefore, the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Decommissioning

22.182. Sailing continues to be assessed as medium sensitivity.

22.183. There would be obstruction effects on sailing during decommissioning, including the Safety Zone of 500 m from the turbines. Again, these effects would not affect all types of sailors, as those using dinghies and rowing boats would be mainly unaffected. However, motor boats, and cruising and racing yachts would continue to be affected, with vessels required to take a potentially longer course to their destination. Some sailors would continue to self-exclude from sailing through the Turbine Area not affected by the Safety Zone even when permitted. Therefore, the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Surfing/windsurfing/kitesurfing

Construction

22.184. Surfing, windsurfing and kitesurfing are undertaken by relatively few participants nationally. Locations around the study area are not high quality surfing venues because of relatively poor wave conditions, with the exception of the west of the Isle of Wight, although because of the proximity of the local population centres, they are more popular than their quality would suggest. However there is a good selection of windsurfing and kitesurfing locations in the study area, and as noted in the Strategy for Water Based Recreation in the South West (Ravenscroft et al., 2009) reviewed in support of establishing the baseline, Poole Harbour is identified as a strategic resource for windsurfing and kitesurfing. Taking into account the quantity of people involved, the positive locational factors for windsurfing and kitesurfing and the weaker locational factors for surfing, the receptor is assessed as **low** sensitivity.

22.185. There are no apparent impacts on surfing, windsurfing or kitesurfing during construction at the Turbine Area. The overall magnitude of effect for surfing, windsurfing and kitesurfing is therefore assessed as **imperceptible** during the construction phase at the Turbine Area. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.186. Surfing, windsurfing and kitesurfing continue to be assessed as **low** sensitivity during the operation and maintenance phase. Surfers, windsurfers and kitesurfers are also potentially affected by visual impacts. Chapter 13 'Seascape, landscape and visual' considers the visual impacts on a range of receptors and considers maritime users as high-medium visual sensitivity. However, whilst it is clear that there would be changes to the outlook for surfers, windsurfers and kitesurfers, it is unlikely that high visual sensitivity by itself would result in changes to the behaviour or their choice of locations, which are governed by presence of wave and wind conditions.

22.187. The potential effects of the proposed wind farm on wave conditions, as set out in the assumptions section above, may have an impact on what are already low quality wave conditions for surfing. However, the changes are assessed as being within natural variation and of negligible magnitude of impact in Chapter 5 'Physical processes'. In addition, there are no apparent impacts on windsurfing or kitesurfing.

22.188. The assumptions above consider the potential effects on natural wind conditions as a result of operation and conclude that there would be no effects on the wind power or characteristics for windsurfers or kitesurfers.

22.189. The overall magnitude of effect for surfing, windsurfing and kitesurfing is assessed as **imperceptible** during this phase. The impact significance is therefore **negligible**. The level of significance is thus **Not Significant**.

Decommissioning

22.190. Surfing, windsurfing and kitesurfing continue to be assessed as **low** sensitivity.

22.191. The potential adverse effects on wave conditions from project operation set out in the assumptions above will diminish as foundations are removed. However this impact will continue to be within natural variation and of

negligible magnitude of effect on surfing. There are no apparent impacts on windsurfing or kitesurfing. The overall magnitude of effect for surfing, windsurfing and kitesurfing is therefore assessed as **imperceptible**. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Hang gliding/paragliding

Construction

22.192. In comparison to some of the other recreational activities, hang gliding and paragliding are undertaken by few participants nationally, which is likely to be a function of the technical skills and equipment/costs involved. The level of activity in the study area is a result of the favourable combination of cliffs and winds plus accessibility, rather than other specific qualities. Paragliding only takes place within 100 m of the coast to ensure safe landing. While powered hang gliders have the ability to travel further this is unlikely to involve extended journeys over the sea. The receptor is therefore assessed as being of low sensitivity.

22.193. There are no construction activities at the Turbine Area that would have an effect on the activity. The overall magnitude of effect for hang gliding and paragliding is assessed as **imperceptible.** Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.194. The receptor continues to be assessed as of **low** sensitivity.

22.195. The assumptions discussed above regarding wind and turbulence suggest that there would be no changes to the wind conditions necessary for hang gliding and paragliding. The interviews undertaken with recreation groups also indicate the wind farm operation would have no impact on the activity.

22.196. Therefore, the overall magnitude of effect for hang gliding and paragliding is assessed as **imperceptible**. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Decommissioning

22.197. The receptor continues to be assessed as of **low** sensitivity and this phase would continue to have no impact on the activity. Therefore, the impact significance is considered to be **negligible** and the level of significance is **Not Significant.**

Nature study

Construction

22.198. Nature study is pursued by a relatively high proportion of the national population compared to many of the other recreation activities considered here. The study area includes some popular birdwatching sites and reserves, including coastal National and European designated conservation sites. Birdwatching is therefore assessed as high sensitivity.

22.199. Chapter 12 'Offshore ornithology' indicates that the construction impact from the Turbine Area on birds would be **imperceptible** in terms of bird numbers or displacement. Therefore the effect on birdwatching would be **imperceptible**. The impact significance is considered to be **negligible** and the level of significance, is assessed as **Not Significant**.

22.200. Marine mammal watching is understood to be a minority occupation as the number of marine mammals currently present in the study area is small and therefore the reliability of gaining sight of these animals is low. Based on its role as a locally significant recreation activity, marine mammal watching is therefore assessed as **low** sensitivity.

22.201. The impacts on marine mammals are such that the reliability of sighting animals could be diminished during construction, due to impacts from piling noise. The overall magnitude of effect for marine mammal watching is expected to be **medium** during the construction phase. the impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Operation and Maintenance

22.202. Birdwatching continues to be assessed as **high** sensitivity and marine mammal watching continues to be assessed as **low** sensitivity.

22.203. Naturalists are also potentially affected by visual impacts. Chapter 13 'Seascape, Landscape and Visual' considers the visual impacts on a range of

receptors and considers users of coastal features (which would include coastal birdwatchers) as high visual sensitivity. However, whilst it is clear that there would be changes to the outlook for birdwatchers, it is unlikely that high visual sensitivity by itself would result in changes to the birdwatchers' behaviour or their choice of locations, which are governed by presence of birds.

22.204. Chapter 12 'Offshore Ornithology' indicates that operational impacts on birds would be **imperceptible** in terms of bird numbers or displacement. Therefore the effect on birdwatching would also be **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

22.205. The operational impacts on marine mammals, as set out in the assumptions section, are that marine mammals would return during operation following cessation of construction and that as a result of habitat changes, there may be increased sightings of marine mammals. Chapter 11 reports impacts on marine mammals during operation as **minor**. The overall magnitude of effect for marine mammal watching would be **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Decommissioning

22.206. Bird watching continues to be assessed as **high** sensitivity and marine mammal watching continues to be assessed as low sensitivity.

22.207. Chapter 12 'Offshore ornithology' indicates that the decommissioning impact from the offshore aspects of the Project on birds would be imperceptible in terms of bird numbers or displacement. Therefore the effect on bird watching would be **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

22.208. While decommissioning would involve some disturbance that may be unfavourable to marine mammals, there would not be subsea piling noise. Therefore the magnitude of effect on marine mammal watching is assessed as **low.** The impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Horse riding

Construction

22.209. Horse riding is pursued by 3.2% of the population nationally. Locally there are a number of popular inland routes (refer to Chapter 33 'Onshore recreation'), as well as routes for coastal and beach riding.

22.210. The key factors influencing choice of riding location are accessibility, scenery and safety. These would not be altered as a result of the offshore components of the Project. Similarly, there would be no obstructions or disturbance on horse riding. This includes potential noise impacts, where findings from Chapter 8 'In-air noise' indicate that the construction noise due to piling, or indeed any other construction operations within the turbine boundary, is not expected to cause any effects on the nearest noise sensitive receptors at the shore.

22.211. The sensitivity of horse riding to construction work at the Turbine Area is **low**. Due to the lack of obstruction and noise effects, the magnitude of effect for horse riding is **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.212. Horse riding continues to be assessed as **low** sensitivity, for the reasons stated in the preceding section.

22.213. As a land-based activity, horse riders would only be potentially affected by visual impacts. Chapter 13 'Seascape, Landscape and Visual' considers the visual impacts on a range of receptors and considers users of bridleways as high visual sensitivity as they are mainly concerned with the enjoyment of the outdoor environment.

22.214. Whilst it is clear that there would be changes to the outlook for coastal horse riders, it is unlikely that high visual sensitivity by itself would result in changes to the behaviour of riders or their choice of routes, which are also influenced by accessibility and lack of traffic, and these factors would not be altered as a result of the operation of the offshore components. Taking account of the lack of disturbance and the continuation of the key factors affecting riding locations, the overall magnitude of effect for horse riding is assessed as **imperceptible**, even though some of the locations would have

a view of the Project. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Decommissioning

22.215. Horse riding continues to be assessed as **low** sensitivity.

22.216. The key factors influencing choice of riding location would not be altered as a result of the decommissioning phase. The overall magnitude of effect for horse riding is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Cycling

Construction

22.217. Cycling is also one of the most commonly pursued recreational activities nationally and there are a number of popular designated and other routes set on the coast of the study area.

22.218. Taking into account the scale of the activity and the designated and other popular routes, cycling is assessed as **medium** sensitivity.

22.219. There would be no obstructions or disturbance from construction at the Turbine Area on cycling. This includes potential noise impacts, where findings from Chapter 8 'In-air Noise' indicate that the construction noise due to piling, or indeed any other construction operations within the Turbine Area, is not expected to cause any effects on the nearest noise sensitive receptors.

22.220. The overall magnitude of effect for cycling is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.221. Cycling continues to be assessed as **medium** sensitivity.

22.222. There would be no obstructions or disturbance from the offshore components during operation. Therefore as a land-based activity, cycling would only be potentially affected by visual impacts. Chapter 13 'Seascape, Landscape and Visual' considers the visual impacts on a range of receptors and considers people cycling as either high visual sensitivity as they are mainly concerned with the enjoyment of the outdoor environment or medium as visual impact would be competing with other inputs (in this case, the process of cycling).

22.223. The baseline review suggests that the key issues relating to choice of cycling route are, safety and the attractiveness of the immediate environment. The interviews and desk-based research undertaken indicates that the offshore components would have no effect on the choice of cycling routes or the frequency of cycling trips. The survey included a minority suggestion that some less regular cyclists using routes such as the Bournemouth to Poole promenade may be more sensitive than regular cyclists to landscape changes, as the cycling may be more incidental to their appreciation of the environment.

22.224. The overall magnitude of effect for cycling is assessed as **low** during operation. The impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Decommissioning

22.225. Cycling continues to be assessed as **medium** sensitivity**.** There would be no obstruction effects anticipated from the decommissioning activities. The overall magnitude of effect for cycling is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Walking

Construction

22.226. Walking is also one of the most commonly pursued recreational activities, nationally and locally, with a number of popular routes along the coast, including the South West Coast Path National Trail.

22.227. Taking into account the regional scale of the activity and the designated and other popular routes, walking is assessed as being of medium sensitivity. Chapter 13 'Seascape, Landscape and Visual' considers the visual impacts on a range of receptors, and considers people walking as being of high visual sensitivity as they are mainly concerned with the enjoyment of the outdoor environment. However, the choice of walking locations also influenced by other factors, including the variety of routes, the quality of

the immediate environment and access to other amenities. These factors would not be altered by the offshore aspects of the Project.

22.228. The overall magnitude of effect is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.229. Walking continues to be assessed as **medium** sensitivity. Chapter 13 'Seascape, Landscape and Visual' considers the visual impacts on a range of receptors, and considers people walking as being of high visual sensitivity as they are mainly concerned with the enjoyment of the outdoor environment. However, the choice of walking locations also influenced by other factors, including the variety of routes, the quality of the immediate environment and access to other amenities. These factors would not be altered by the offshore aspects of the Project.

22.230. The overall magnitude of effect for walking is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Decommissioning

22.231. Walking continues to be assessed as **medium** sensitivity.

22.232. For the same reasons as stated above, the overall magnitude of effect during decommissioning for walking is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

22.5.3. Export Cable Corridor

22.233. The export cables for the offshore aspects of the Project potentially give rise to different effects to the Turbine Area and are therefore assessed separately. Receptor sensitivity remains unchanged from the Turbine Area assessment as the factors determining sensitivity remain unchanged.

Angling

Construction

22.234. Boat based angling continues to be assessed as being of **medium** sensitivity and shore based angling as low sensitivity.

22.235. Boat based angling is potentially affected by changes in the fish stocks and by obstruction to marks within the Export Cable Corridor area during construction. There is no piling associated with the cable construction although there would be some localised suspended sediment. The information from Chapter 17 'Commercial fisheries' set out in the assumptions above, indicates that there would be minor significance of effects during cable construction, except for types of fishing not pursued by angling boats. Based on this there would need to be some minor adjustments to the marks used in the Export Cable Corridor as a minority would be unavailable at any one time.

22.236. The overall magnitude of effect for boat based angling is therefore predicted to be **low** as changes would occur over the area used for this activity and for the duration of construction works. The impact significance is considered to be **minor** and the level of significance is assessed as **Not Significant**.

22.237. Shore based angling is also affected by changes to fish stocks. The information from Chapter 17 indicates that the only construction activities likely to affect fish stocks are piling and this would not take place in the Export Cable Corridor. Therefore on the basis that there would not be effects on fish stocks pursued by onshore anglers, the activity would be unaffected. There would be no obstruction effects on shore based angling anticipated from the cable route.

22.238. The overall sensitivity and magnitude of effect for shore based angling is therefore assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Operation and Maintenance

22.239. Angling sensitivity would remain unchanged during the operational phase. Therefore boat based angling continues to be assessed as **medium** sensitivity and shore based angling assessed as **low** sensitivity.

22.240. Based on the information in Chapter 17 'Commercial fisheries', during operation angling boats would be subject to low adverse effects from interference from electro-magnetic fields (EMF) from buried cabling. The impact significance is considered to be **minor** and the level of significance is **Not Significant** for boat based recreational angling.

22.241. There would be no apparent effects on shore based angling. Therefore the magnitude of effect for shore based angling is assessed as **imperceptible**.

The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Bathing and sea swimming

Construction

22.242. Bathing continues to be assessed as a receptor of **high** sensitivity.

22.243. Bathing is potentially affected by changes to water quality. Chapter 5 'Physical processes' considers suspended sediment concentrations resulting from construction activities including the cable route and concludes that any effects would typically be towards the east of the study area (i.e. western side of the Isle of Wight) and that the impact on beaches would be **negligible**. The assessment notes that the majority of additional suspended sediment would be deposited a short distance from source, remaining levels are within natural variation and in addition, suspended sediment concentrations are naturally higher on the west of the Isle of Wight because of the surf conditions.

22.244. Chapter 6 'Water quality' considers the impact of water quality changes on Blue Flag beaches. This assessment identifies that during construction there would be minor impacts from remobilisation of contaminated sediments; and minor impacts from pollution (spillages of oil, lubricants and building materials).

22.245. This assessment was necessarily conservative and took into account the fact that hitherto unknown contaminants may be disturbed.

22.246. Chapter 8 'In-air noise' indicates that there are not predicted to be any significant in-air noise impacts associated with the cable installation works at the nearest noise sensitive receptors and that the level of significance is **Not Significant**.

22.247. The cable installation work does not include any construction activities that may cause obstruction or other disturbance to sea bathing or beach activities with the possible exception of proximity to the cable landfall at Taddiford Gap. While the beach at Taddiford Gap is not obstructed there would be proximity to the temporary construction activity at this location, with an expected duration of two months during the summer in Year 1, repeated in Year 3 and again in Year 4. In comparison to some beaches in the study area (particularly those between Hengistbury Head and Sandbanks, and at Swanage) the beach at Taddiford Gap is less popular.

22.248. The overall magnitude of effect for sea bathing is therefore assessed as **imperceptible** as effects from the cable installation would not affect bathing beaches. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Operation and Maintenance

22.249. Bathing sensitivity would remain unchanged during the operational phase and is therefore assessed as a **high** sensitivity receptor.

22.250. During operation there are no potential water quality effects, disturbance or visual impacts from cable route operation. The overall magnitude of effect for bathing is assessed as **imperceptible.** The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Cycling

Construction

22.251. Cycling is also one of the most commonly pursued recreational activities nationally and locally; there are a number of popular designated and other routes along the coast.

22.252. Taking into account the scale of the activity and the designated and other popular routes, cycling is assessed as medium sensitivity.

22.253. There would be no effects beyond those considered above for the Turbine Area, therefore the cable route magnitude of effect for cycling is assessed as **imperceptible.** The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Operation and Maintenance

22.254. Cycling continues to be assessed as **medium** sensitivity.

22.255. There would be no obstructions or disturbance from the export cable corridor on cycling. The overall magnitude of effect for cycling is assessed as **imperceptible** during operation. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Diving

Construction

22.256. Diving continues to be assessed as a **medium** sensitivity receptor.

22.257. Cable route construction will not produce piling noise. However there would be localised obstruction, including application of a construction Safety Zone. This will be detailed in the ES submitted as part of the application for Development Consent.

22.258. Discussions with dive clubs are ongoing to enable the sensitivity, magnitude and level of impact to be assessed.

Operation and Maintenance

22.259. Diving continues to be assessed as **medium** sensitivity.

22.260. No operational noise, suspended sediment or obstruction impacts are anticipated.

22.261. Discussions with dive clubs are ongoing to enable the sensitivity, magnitude and level of impact to be assessed. This will be detailed in the ES submitted as part of the application for Development Consent.

Hang gliding/paragliding

Construction

22.262. Hang gliding and paragliding continue to be assessed as a **low** sensitivity receptor.

22.263. There are no cable route construction activities that would have an effect on the activity with the possible exception of proximity to the cable landfall at Taddiford Gap, which is one of the stretches of cliff that is used for hang gliding and paragliding. While access to the beach at Taddiford Gap is not obstructed there would be proximity to the temporary construction activity at this location (including a construction compound) with an expected duration of two months during the summer in Year 1, repeated in Year 3 and again in Year 4. However there is nothing in these arrangements likely to affect hang gliding and paragliding. The overall magnitude of effect for hang gliding and paragliding is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Operation and Maintenance

22.264. The receptor continues to be assessed as **low** sensitivity.

22.265. There would be no operational impact on hang gliding and paragliding. The overall magnitude of effect for is assessed **as imperceptible**. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Horse riding

Construction

22.266. Horse riding is continues to assessed as a **low** sensitivity receptor.

22.267. The key factors influencing choice of riding location would not be altered as a result of the export cable installation works. This includes potential noise impacts, where Chapter 8 'In-air noise' indicates that there are not predicted to be any significant in-air noise impacts associated with the cable installation works at the nearest noise sensitive receptors and that the level of significance is assessed as **Not Significant**.

22.268. The overall magnitude of effect for horse riding is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Operation and Maintenance

22.269. Horse riding continues to be assessed as **low** sensitivity.

22.270. There would be no effects on horse riding as a result of cable operation. The overall magnitude of effect for horse riding is therefore assessed as **imperceptible.** The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Nature study

Construction

22.271. Nature study continues to be assessed as a **high** sensitivity receptor.

22.272. Chapter 12 'Offshore ornithology' indicates that the construction impact from the Export Cable Corridor on birds would be **imperceptible** in terms of bird numbers or displacement. Therefore the effect on birdwatching

would be **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

22.273. Marine mammal watching continues to be assessed as a **low** sensitivity receptor.

22.274. The impacts on marine mammals discussed in relation to the Turbine Area construction subsea noise are not generated by the cable installation as no piling is involved. The overall magnitude of effect for marine mammal watching is therefore assessed as **low** during the cable construction phase. The impact significance is considered to be **minor** and the level of significance is assessed as **Not Significant**.

Operation and Maintenance

22.275. Birdwatching continues to be assessed as **high** sensitivity and marine mammal watching continues to be assessed as **low** sensitivity.

22.276. There would be no operation cable effects on birds or birdwatching. Therefore the effect on bird watching would be **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

22.277. There would be no operation cable effects on marine mammals. The overall magnitude of effect for marine mammal watching is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Recreational sailing

22.278. Construction

22.279. Sailing continues to be assessed as a **medium** sensitivity receptor.

22.280. There would be obstruction impacts on sailing during cable installation, from the application of a 500m 'rolling' safety zone and the movement of construction vessels. Motor boats, and cruising and racing yachts would be affected, with vessels required to divert and take a potentially longer course to their destination. There would be some obstruction impacts from construction vessel movement and Safety Zones on dinghy sailing and racing in this location for the duration of the cable installation although these effects would be restricted to the installation work on the section near the landfall. Landfall works are expected to take place during quarters one and two of year one; quarters two and three in year three and quarters two and three of year four. Chapter 16 'Shipping and Navigation' assesses risks to recreational craft during cable construction and concludes that they are broadly acceptable and that no mitigation is required.

22.281. The overall magnitude of effect for sailing is assessed as **low** during the construction phase. The impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Operation and Maintenance

22.282. Sailing continues to be assessed as **medium** sensitivity.

22.283. There are no anticipated no cable operation effects on sailing. The overall magnitude of effect for sailing is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is **Not Significant**.

Surfing/windsurfing/kitesurfing

Construction

22.284. Surfing, windsurfing and kitesurfing continue to be assessed as **low** sensitivity receptors.

22.285. There are no apparent impacts on surfing, windsurfing or kitesurfing during cable construction as the export cable route is not an important area for these activities. The overall magnitude of effect for surfing, windsurfing and kitesurfing is assessed as **imperceptible**. The impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Operation and Maintenance

22.286. Surfing, windsurfing and kitesurfing continue to be assessed as **low** sensitivity.

22.287. There would be no operation cable effects on surfers, windsurfers or kitesurfers. The overall magnitude of effect for surfing, windsurfing and kitesurfing is assessed as **imperceptible**. The impact significance is considered to be **minor** and the level of significance is **Not Significant**.

Walking

Construction

22.288. Walking continues to be assessed as a **medium** sensitivity receptor.

22.289. The key factors influencing walking would not be altered as a result of the export cable installation. There would be no obstructions or disturbance from export cable on walking. This includes potential noise impacts, where Chapter 8 'In-air noise' indicates that there are not predicted to be any significant in-air noise impacts associated with the cable installation works at the nearest noise sensitive receptors and that the level of significance is **Not Significant.**

22.290. The overall magnitude of effect for walking is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Operation and Maintenance

22.291. Walking continues to be assessed as **medium** sensitivity.

22.292. There would be no operational cable effects on walking. The overall magnitude of effect for walking is assessed as **imperceptible**. The impact significance is considered to be **negligible** and the level of significance is assessed as **Not Significant**.

Decommissioning of export cables

22.293. The cables are anticipated to be left *in situ* as part of decommissioning. The effects of the decommissioned cable would be reduced compared to the operational cable as no current would be flowing through it.

22.6. Potential Mitigation

22.294. Mitigation measures are being identified in discussion with relevant statutory consultees which will seek to minimise predicted impacts.

22.295. The only significant impacts on recreation activities which would require mitigation relates to boat based angling. Refer to the Shipping and Navigation assessment (chapter 16) for details of the potential mitigation measures that will be discussed with stakeholders.

22.296. In terms of diving, mitigation may be required once the level of impact has been identified. If mitigation is considered necessary discussions would be held with the relevant consultees prior to submission of the application for development consent.

References

Arkenford Ltd. (2012). National Watersports Participation Survey

Bournemouth Borough Council, Seafront Strategy

Bournemouth Borough Council, 2012, Summer 2012 e-panel survey top line results http://www.bournemouth2026.org.uk/seafrontepanel

Bournemouth Borough Council (2012). Core Strategy

Bournemouth Poole and Dorset Councils (2011). Local Transport Plan 3 2011-26

British Equestrian Trade Association (2011). National Equestrian Survey 2010-11

Christchurch and East Dorset District Councils (2012). Core Strategy pre-submission draft

Department for Environment Food and Rural Affairs (2011). UK Marine Policy Statement

Department for Transport (2010). Active Travel Strategy

Department for Energy and Climate Change (DECC) (2011a) Overarching National Policy Statement for Energy (EN-1). Ref: 11D/711. Department for Energy and Climate Change.

DECC (2011b) National Policy Statement for Renewable Energy Infrastructure (EN-3). Department for Energy and Climate Change.

Dorset AONB Partnership, 2009, AONB Management Plan

Forestry Commission (2009). Hurn Forest Design Plan

Forestry Commission (2009). West Moors Plantation Forest Design Plan

Hampshire County Council (2011). Local Transport Plan 2011-2013

HM Government (1996). UK National Cycling Strategy

HM Government (2011). Local Transport White Paper

Isle of Wight Council (2010). Green Infrastructure Mapping Study

Isle of Wight Council (2012). Core Strategy

Local Authorities in South East Dorset, Natural England, Environment Agency and Forestry Commission, 2011, South East Dorset Green Infrastructure Study Consultation Draft

Natural England CRoW and Coastal Access Maps - June 2013

Natural England (2012). Public Access To The Countryside Under Part I Of The Countryside And Rights Of Way Act 2000

New Forest District Council (2007). Open Space Sport and Recreation Study

New Forest District Council (2009). Core Strategy

New Forest National Park Authority (2010). Recreation Management Strategy

New Forest National Park Authority (2012). New Forest Adopted Core Strategy and Development Management Policies DPD

Poole Borough Council (2009). Core Strategy

Poole Harbour Commissioners (2011). Harbour Management Plan

Purbeck District Council (2006) Sport and Recreation Audit

Purbeck District Council (2012). Local Plan

Ravenscroft, N., Church, A., Taylor, B., Curry, N. and Young, J. (2009). Enjoying Water – A Strategy for Water Based Recreation in the South West 2009-2014. Environment Agency. Bristol, UK. Available at: http://www.brighton.ac.uk/waterrecreation/files/SW-Strategy.pdf

Royal Society for the Protection of Birds (2013). The birdwatcher's code. Available at: http://www.rspb.org.uk/advice/watchingbirds/code/index.aspx

Royal Yachting Association (RYA) (2012). Position on Offshore Renewable Energy Developments

RYA (2013). Atlas of Recreational Boating

Scottish Natural Heritage (2009). A handbook on environmental impact assessment

Sport England (2011). Active People Survey 5

Sport England (2013). Active People Survey 7

VisitEngland (2013). GB Leisure Day Visitor Survey 2012

Glossary

TERM	DEFINITION
Blue Flag	Beach management and water quality designation
Electric and Magnetic Fields	Force produced by the flow of electrical current that some fish species are sensitive to.
Fishing marks	Location regularly used for sea fishing
Maneges	Maneges are all-weather riding arenas used for the schooling of animals and the training of riders.
Natura 2000 sites	EU wide network of nature protection areas established under the 1992 Habitats Directive
Personal water craft	Motorised vessels for one or two people. Sometimes known as jet skis.

Abbreviations

TERM	DEFINITION
AONB	Area of Outstanding Natural Beauty
DECC	Department for Energy and Climate Change
DECC	Department for Energy and Climate Change
Defra	Department for the Environment, Food and Rural Affairs
EIA	Environmental impact Assessment
EMF	Force produced by the flow of electrical current that some fish species are sensitive to.
ES	Environmental Statement
ha	Hectares
IPC	Infrastructure Planning Commission (now Planning Inspectorate)
km	Kilometres
m	Metres
MCA	Maritime and Coastguard Agency
MCAA	Marine and Coastal Access Act 2009
MCZ	Marine Conservation Zones
MMO	Marine Management Organisation
MPS	UK Marine Policy Statement
MW	Megawatt
NCN	National Cycle Network
NPS	National Policy Statement
O&M	Operation and maintenance
OSP	Offshore substation
PBA	Peter Brett Associates
PRoW	Public rights of way – includes footpaths and bridleways
RYA	Royal Yachting Association
SNH	Scottish Natural Heritage