Chapter 5: The Draft C-SCOPE Marine Plan

5.1 Draft Vision

The Marine Plan helps to fulfil many of the goals of the Dorset Coast Strategy. As such, it shares its vision:

In 2050, the Dorset coast and marine environment, its landscapes and seascapes, cultural heritage and rich biodiversity, are protected and enhanced for current and future generations. Communities living there are healthy, resilient and living in harmony with natural processes, whilst a diverse and thriving coastal economy which uses natural resources sustainably supports those communities. Both residents and visitors alike are using the coast responsibly for enjoyment, education and inspiration.

5.2 Draft Marine Plan objectives

In setting objectives for the Marine Plan, the High Level Marine Objectives set in the UK Marine Policy Statement have been taken into account, adapted to reflect the particular needs and opportunities within the area covered by the plan:

Objective 1: healthy, diverse, productive marine and coastal environment
A healthy, productive marine environment where diversity and natural beauty is protected and enhanced, and whose resources are used sustainably, maintaining the integrity of marine eco-systems.

Objective 2: thriving, resilient coastal communities
Coastal communities that have a high quality of life, that can thrive and prosper in harmony with a healthy marine environment.

Objective 3: successful, sustainable marine economy
Successful, efficient marine enterprises that operate safely and responsibly, making innovative and sustainable use of the environment on which they depend while respecting the limits of that environment to accommodate change and development.

Objective 4: responsible, equitable and safe access
Opportunities to experience the marine environment responsibly, enjoyably and safely are made available to all, managed at a level the environment can sustain and in a way which is compatible with commercial and other strategic uses.

Objective 5: adaptation and mitigation for coastal and climate change
Maritime communities and businesses are well prepared for the physical, economic and management challenges they face, and well placed to take advantage of the opportunities presented by coastal and climate change, particularly where they benefit the local economy.

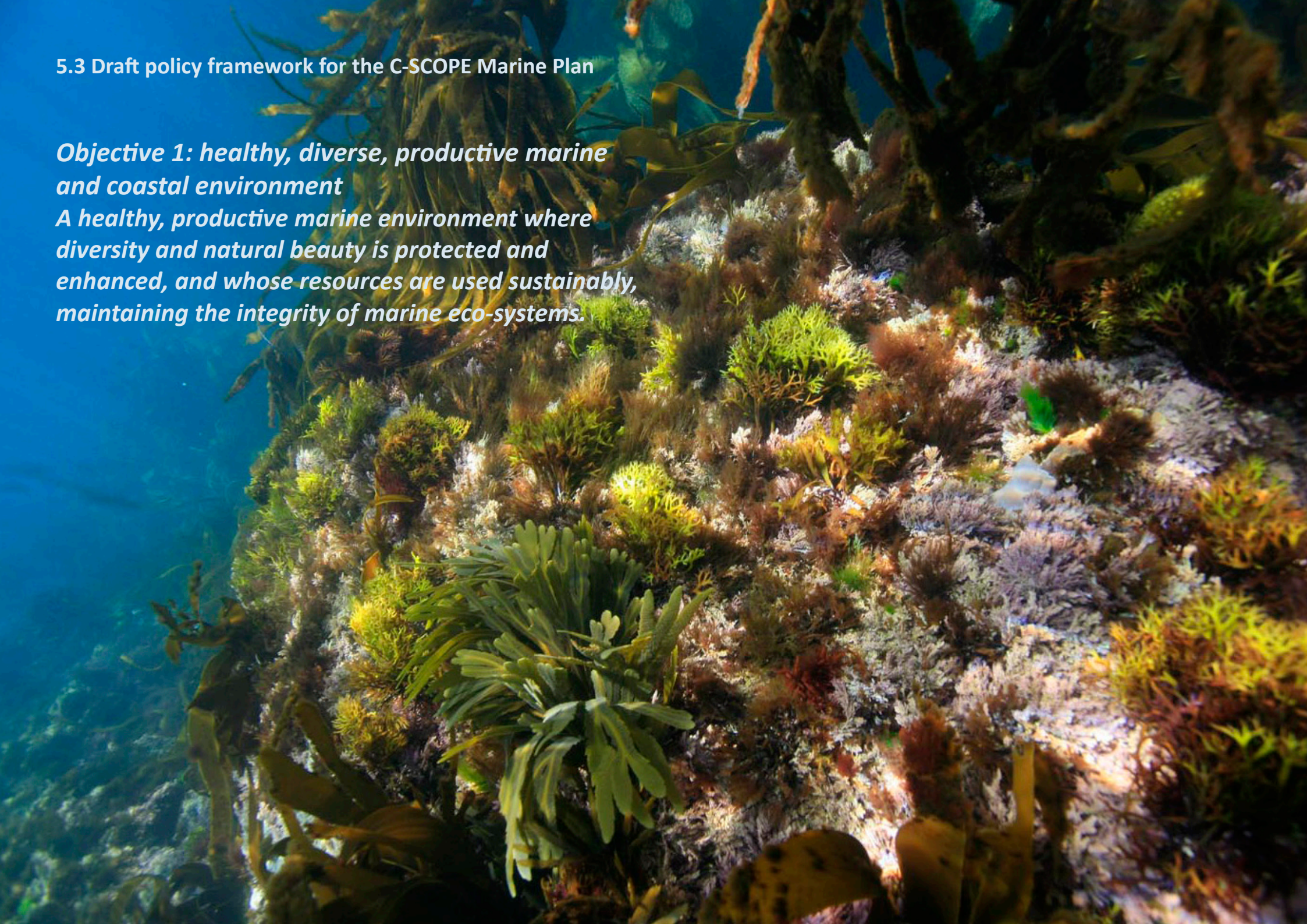
Objective 6: strategic significance of the marine environment
Decisions about and uses of the marine environment recognise its strategic significance to the UK's national security and it's social, economic and environmental well-being.

Objective 7: valuing, enjoying and understanding the marine and historic environments, and wider cultural heritage
Organisations and individuals value, understand and conserve the character and diversity of the marine environment, including its significant natural and cultural heritage.

Objective 8: Using sound science and data, and ensuring integration with existing plans and policies
Decisions should be made for the long-term on the basis of sound science and evidence, informed by local knowledge and priorities, or robust assessment of risk where evidence not available. The Plan should integrate with SMPs, terrestrial plans, LDFs and other relevant plans and policies.

Policies designed to take forward each objective, and a summary of the evidence and justification for each policy, are detailed below. Where necessary, maps accompany policies and these should be consulted alongside the specific policy. For the final C-SCOPE Marine Plan these maps will be available on the Coastal Explorer Planning Tool, where users will be able to access and interrogate data behind the maps.

5.3 Draft policy framework for the C-SCOPE Marine Plan



Objective 1: healthy, diverse, productive marine and coastal environment

A healthy, productive marine environment where diversity and natural beauty is protected and enhanced, and whose resources are used sustainably, maintaining the integrity of marine eco-systems.

Protecting designated sites and delivering their associated management plans

Justification

Globally, the marine environment is under constant and increasing pressure from human activities. There is a growing body of evidence that Europe's marine habitats are declining significantly, and are continuing to deteriorate, threatened by multiple and cumulative pressures such as pollution from land-based activities, commercial fishing, mineral extraction, marine incidents, marine litter and coastal and offshore developments[6].

Climate change is already starting to impact on the marine environment, causing changes to biological, chemical and physical processes. The main impacts include loss of inter-tidal habitat due to sea level rise, increased sea temperatures leading to changes in complex food-webs, and acidification of sea water - which is becoming a critical problem threatening a wide range of marine organisms, especially corals and molluscs. Additionally, these changes are likely to lower the resilience of ecosystems to the human pressures discussed above[7].

If we are to continue to benefit from the many goods and services that the sea provides, it is essential that marine biodiversity is protected and conserved. This is recognised in both European and UK legislation, most particularly the Habitats Directive and the Marine and Coastal Access Act (2009). The Habitats Directive requires member states to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In addition to existing protection from SSSI, SPA and SAC sites with marine elements, the UK government has committed to have an *"ecologically coherent network of marine protected areas (MPAs) substantially in place by the end of 2012"*; this network will include SACs and MCZs.

Each individual designation has, or will have, its own management plan which amongst other criteria sets out the human activities that are acceptable within the site. To ensure the integrity of designated sites, and avoid substantial fines from the European Union, it is important that all potential developments and activities within the Marine Plan area must not only ensure they are causing no adverse effects on those areas and species with statutory protection, but also comply with its management plan.

The Marine Plan area also contains two important landscape and heritage designations with substantial coastal elements; Dorset AONB and the Dorset and East Devon Coast World Heritage Site, the latter of which extends to MLW. Both sites have statutory management plans which must also be considered by any potential development.

HME 1: Development or activities will respect the purpose of international and national environmental designations within the marine and coastal environment and contribute to their enhancement where possible.

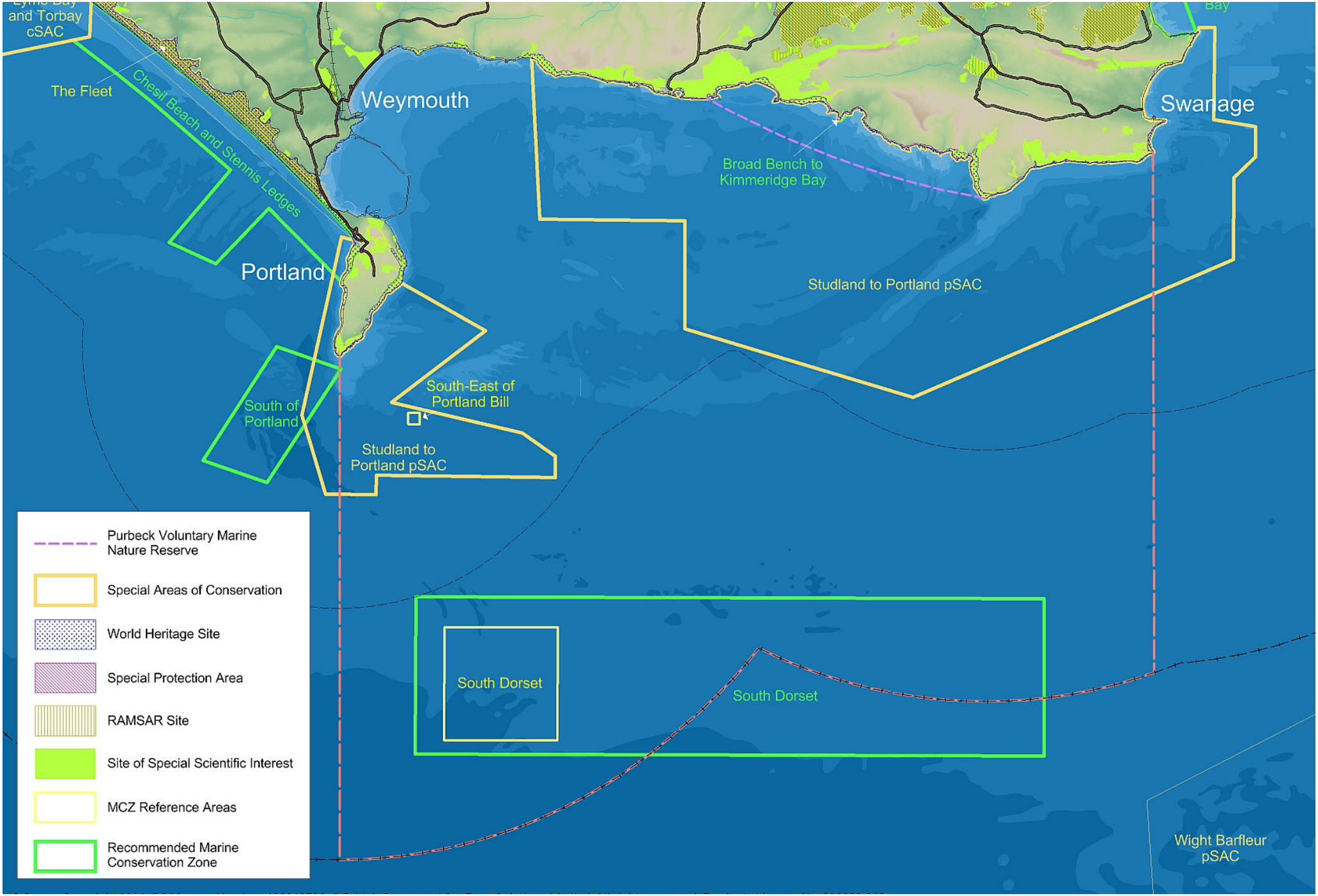
HME 2: Future development will take account of, and support delivery of, the management plans for, European and national environmental designations, including Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) and Marine Conservation Zones (MCZs), Areas of Outstanding Natural Beauty (AONB) and World Heritage Sites.

Refer to Figure 34.

6 Charting Progress 2, UK National Ecosystem Assessment, Composite Report on the Conservation Status of Habitat Types and Species as required under Article 17 of the Habitats Directive, 2009.

7 http://www.oursouthwest.com/climate/scopingstudy.htm, Marine Climate Change Impacts Partnership 2010-2011 Annual Report Card

Figure 34: HME 1 & HME 2 Designated coastal and marine sites



These policies comply with:

- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- EC Marine Strategy Framework Directive (2008/56/EC)
- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- The Conservation of Habitats and Species Regulations 2010
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

Protecting important species and habitats not covered by European or National legislation

Justification

European and UK legislation makes provision for protecting a wide range of species and habitats, and delivery mechanisms include the designation of SACs, SPAs SSSIs, and MCZs. However, these provisions cover priority species and habitats and do not necessarily protect wider ecosystem function outside designated areas.

Marine ecosystems are complex and there are still many interactions which are not fully understood. The regulating, cultural, supporting and provisioning services that these ecosystems provide are also strongly interlinked; but the relationship between biodiversity processes and the provision of services remains un-quantified. By adopting the precautionary principle and ensuring developments and activities have regard to adverse affects on all habitats and species, this policy will help to sustain and potentially increase ecosystem services within the Marine Plan area.

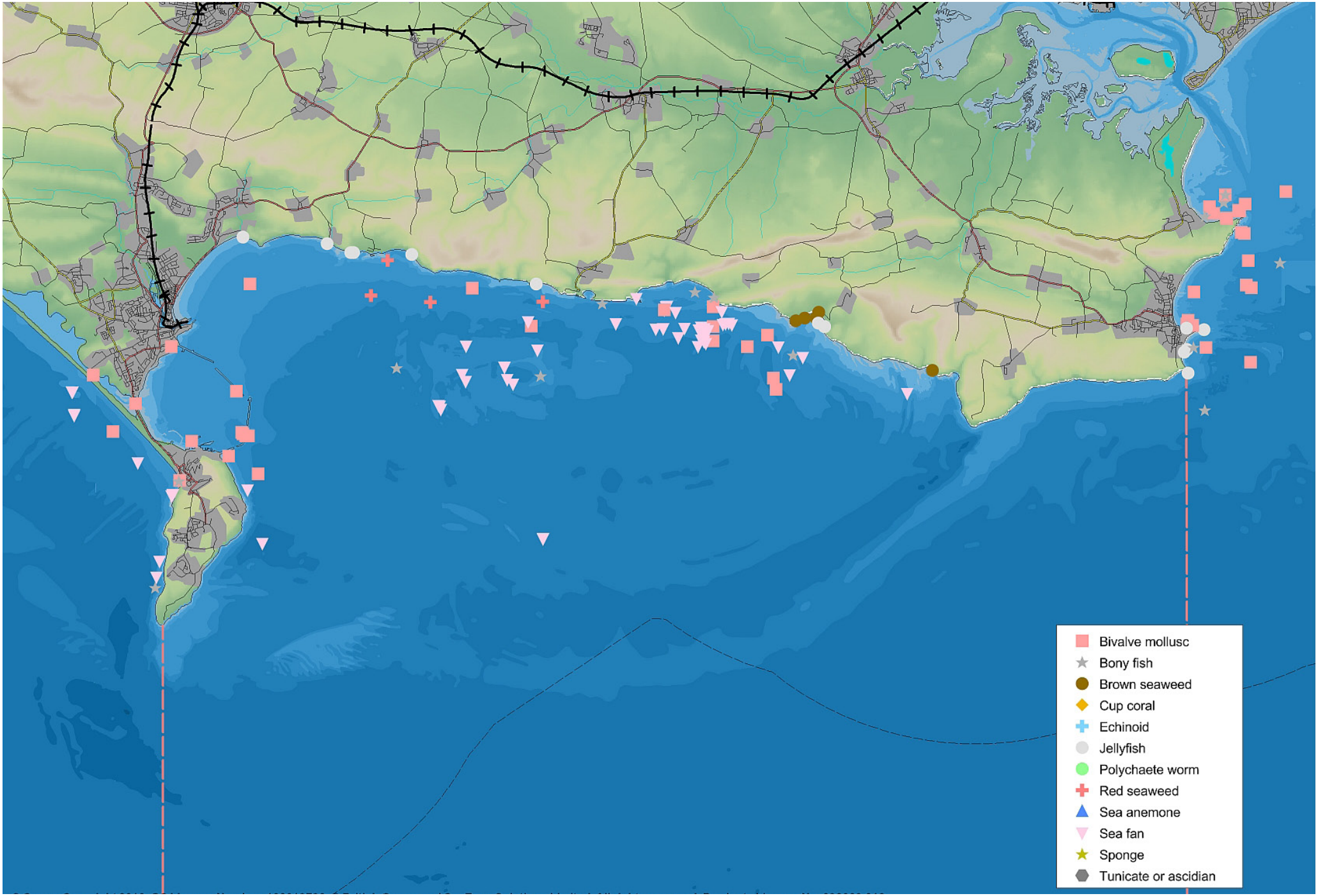
HME 3: Developments or activities should have regard to the potential adverse effect either directly, indirectly or cumulatively on habitats or species which are not designated under European or National legislation but which warrant protection to maintain wider ecosystem function, or as providers of marine goods and services.

Refer to Figure 35.

This policy complies with:

- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- EC Marine Strategy Framework Directive (2008/56/EC)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- PPS9: Biodiversity and Geological Conservation (2005)
- Dorset Local Biodiversity Action Plan
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011 - 2021

Figure 35: HME3 UK Marine Biodiversity Action Plan Species



Restoration of degraded ecosystems

Justification

There is growing evidence that the UK's marine habitats are declining[8]. The Habitats Directive requires member states to take measures to maintain or restore these habitats and wild species. Marine Protected Areas and their associated management plans are the primary delivery mechanism to achieve this requirement, by removing stressors and allowing the conditions for suitable natural recovery.

Active restoration techniques are also possible and, whilst they are not particularly effective in open coastal and marine habitats, can be very successful in coastal bays, estuaries and fringing habitats. Habitat restoration may be a mitigation requirement in granting permission for certain developments, but this policy encourages developers and other users of the marine and coastal environment within the Marine Plan area to take opportunities beyond statutory requirements by helping to enhance the natural goods and services that they are taking advantage of.

HME 4: Where habitat or ecosystem degradation is apparent, the opportunity to restore the integrity of the site should be taken where possible.

This policy complies with:

- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act 2009
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011 - 2021

Ensuring commercial exploitation of fish and shellfish are within safe biological limits.

Justification

Although fishing mortality has declined significantly in 67% of assessed fish stocks in UK waters over the last ten years, fishing activity remains the most widespread human pressure on the marine environment. The large majority of scientifically assessed stocks continue to be fished at rates well above the values expected to provide the highest long-term yield, whilst Illegal, unreported and unregulated (IUU) fishing is a significant threat to fish stocks, marine biodiversity and to the livelihoods and food security of coastal communities[9].

Within the Marine Plan area shellfish make up the majority of targeted species (2,415 tonnes of shellfish landed into Weymouth in 2010 compared to 120 tonnes of demersal fish). Static gear used to target shellfish is highly selective and any non-target species or undersized specimens can be returned live. Although it is deemed to be a less intensive fishing method and there are minimum landing sizes for most non-quota species, over-fishing is still possible.

It is currently estimated that there are 6000 crab and lobster pots around the Weymouth and Portland areas. Lack of data makes objective assessment of the health of inshore stocks unreliable. There is no evidence of serious declines, but the safest working assumption is that exploitation levels are close to the sustainable limit. A substantial increase in effort would therefore be a cause for concern. With the probable adoption of both the Studland to Portland potential SAC and recommended MCZ network, there could be increased pressure on the surrounding areas caused by displacement fishing. Fishermen who currently use mobile gear could also turn to static methods, causing greater competition and pressure - particularly on rocky reefs.

By ensuring the commercial exploitation of fish and shellfish are kept within safe biological limits as a minimum requirement, stocks will be given a chance to return to sustainable levels, the fishing industry will have a more secure future and food security both locally and nationally will improve.

HME 5: In addition to complying with the Common Fisheries Policy and Southern Inshore Fisheries and Conservation Authority byelaws, as a minimum requirement the commercial exploitation of fish and shellfish should be within safe biological limits.

8 Charting Progress 2, UK National Ecosystem Assessment, Composite Report on the Conservation Status of Habitat Types and Species as required under Article 17 of the Habitats Directive, 2009.

9 Charting Progress 2, Sustainable Production and Consumption of fish and shellfish; Environmental Impact Analysis, 2007. Royal Haskoning Report for Defra, Sea fisheries: steps to sustainability. Natural England, 2009. ISBN 978-1-84754-157-4. Catalogue Code: NE193

This policy complies with:

- World Summit on Sustainable Development in Johannesburg
- EC Marine Strategy Framework Directive (2008/56/EC)
- EU Common Fisheries Policy
- Marine and Coastal Access Act (2009)
- Dorset Coast Strategy 2011-2021

Supporting sustainable Dorset fisheries

Justification

Small-scale fishing, which constitutes the majority of commercial fishing effort within the Marine Plan area, makes a significant economic and social contribution to the lives of individuals and coastal communities. It not only provides jobs and high quality fresh fish but also attracts tourists, and contributes to the character and cultural identity of the villages and towns throughout the area.

Recent years have seen a slow decrease in the numbers of fishing vessels in Dorset, but with a shift from part-time to full-time work, fishing effort has probably increased. However, the inshore fleet is currently facing increased pressure due to rising costs, most notably fuel prices which have increased operating costs and reduced profitability. Fishermen using mobile-gear also face the possibility of being excluded from fishing grounds closer to their home ports, requiring them to travel further and bear additional fuel costs. With a decreasing fishing fleet, strong financial barriers to purchasing new boats and high property values within the Marine Plan area, there is anecdotal evidence that young people are not able or willing to work in fishing, which could result in further decline of the industry.

Fisheries enhancement initiatives, such as appropriately located artificial reefs, developments which improve the ease of access to markets or add value to catches, and projects which seek to develop new more sustainable ways of working, could help to secure the long-term future for the local fishing industry and increase food security for communities living within or near the Marine Plan area.

HME 6: Fisheries enhancement initiatives which contribute to the maintenance and development of a sustainable fishing industry in Dorset will be encouraged where consistent with other policies in this plan.

This policy complies with:

- World Summit on Sustainable Development in Johannesburg.
- EC Marine Strategy Framework Directive (2008/56/EC)
- EU Common Fisheries Policy
- Marine and Coastal Access Act (2009)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Coast Strategy 2011-2021

Ensuring good long-term water quality

Justification

During the construction, operation and decommissioning phases of developments, there can be discharges to water and adverse ecological effects resulting from physical modifications to the water environment. Whilst many of these effects will be short term, cumulative impacts may result in damage to sensitive seabed habitats and create further changes to tidal regimes, sediment and freshwater transport, currents or wave action. Such changes have the potential to affect marine ecosystems at a broad scale.

Most developments which have the potential to change hydrographical regimes will be subject to strict licensing conditions, and will most likely require an Environmental Impact Assessment (EIA) before they are granted development consent. This policy encourages developers and decision makers to identify those seabed habitats that are most sensitive to these pressures prior to the EIA and licensing process, ensuring developments are directed to the most appropriate location within the Marine Plan area.

HME 7: Developments which have the potential to create sustained or long term changes to temperature, salinity, or pH should avoid seabed areas highly sensitive to these pressures as shown in Appendix 5, Sensitivity Maps. Developments must demonstrate that Best Available Technique[10] will be used during survey and construction and a Best Practicable Environmental Options assessment conducted for the operating phase.

10 Under EC Directive 96/61

This policy complies with:

- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011-2021

Ensuring coastal development does not affect water quality

Justification

Nearly all sewage treatment facilities within the Marine Plan area discharge into the marine environment either directly, or via streams and rivers close the sea. Under several pieces of European and UK legislation, all discharges are consented and must adhere to strict numeric conditions. Further consented, intermittent, discharges occur via storm drains and combined sewer and emergency overflows.

However, these systems have a finite capacity and it is possible that increased water volume in times of peak rainfall could lead to untreated sewage being discharged into the marine environment through a combined sewer overflow. Diffuse runoff from urban areas can also be a problem during heavy rain. Climate change predictions include an increase in storm events, and this could put more pressure on systems already close to capacity.

Untreated sewage discharging straight into the marine environment creates serious human health problems; directly through exposure to coliform bacteria at bathing beaches and indirectly via shellfish contamination. Additional economic impacts result from loss of tourism, health care costs and additional depuration requirements for shellfish producers. Whilst some marine species and habitats thrive on increased nutrients in the water, eutrophication can also occur following heavy sewage discharges, leading to losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.

It is therefore essential that developers and local authority planners liaise closely to ensure any development within the catchments of systems discharging into, or close to, the sea will not overload existing sewage discharge systems and/or that provisions are made to improve capacity.

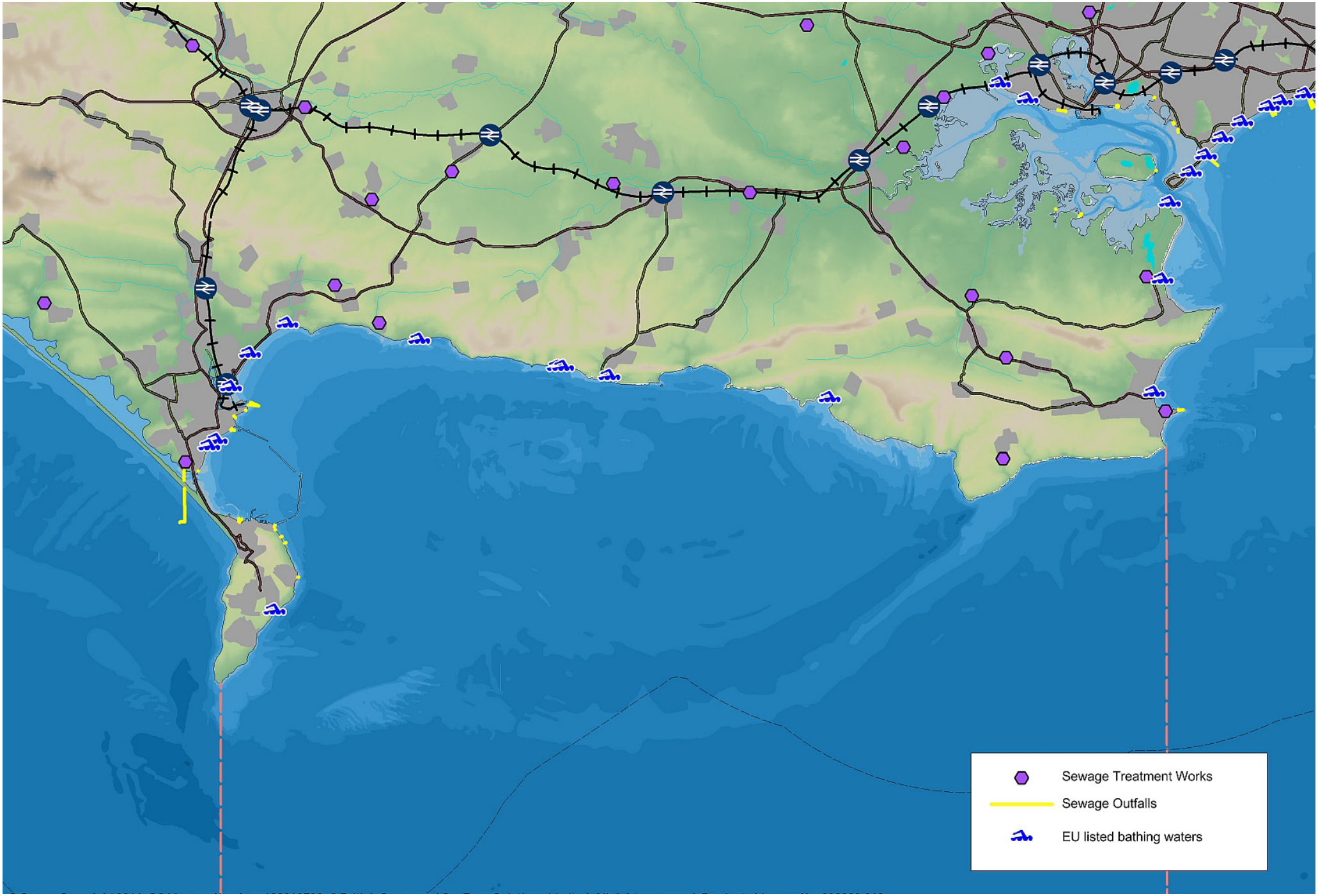
HME 8: Developments near the coast must consider the capacity of emergency/ storm drains, combined (surface and sewer) systems and sewage treatment facilities with a view to minimising potential impacts on the marine environment and human health via short and long-sea outfalls.

Refer to Figure 36.

This policy complies with:

- Water Framework Directive (2000/60/EC)
- EC Marine Strategy Framework Directive (2008/56/EC)
- Urban Waste Water Treatment Directive (91/271/EEC)
- Bathing Water Directive Bathing Water Directive (2006/7/EC)
- Shellfish Waters Directive 79/923/EEC
- Water Resources Act 1991
- Dorset Coast Strategy 2011-2021

Figure 36: HME8 Current outfalls and sewage treatments, bathing waters



Minimising the risk of pollution by hazardous and organic substances

Justification

The coastline within the Marine Plan area and its surrounding waters is known for its outstanding environmental quality, with a wide range of designations including SSSIs, SACs, SPAs and a future possible SAC and recommended MCZs. During the assessment to identify Marine Environmental High Risk Areas (MEHRAs) the Portland cell was also identified as the second highest ranking area in the UK, in terms of having high environmental sensitivity and being at risk from shipping activity. The Purbeck coast was also rated as high risk.

Land-based coastal industries (e.g. boat building), ship-to-ship transfer, oil and gas exploration and production and other offshore developments all have the potential to release hazardous substances into this high risk environment. As well as having immediate catastrophic environmental effects, chemicals, hydrocarbons, and heavy metals can remain locked in sediments for many years, whilst bioaccumulation and biomagnification not only impact on marine species, but also has human health implications if species are used as a food source. A major oil spill within the Marine Plan area would also impact on tourism, which could have a severe effect on the local economy.

Some of these developments and activities will most likely require an Environmental Impact Assessment (EIA) before they are granted consent. This policy encourages developers and decision makers to identify those seabed habitats that are most sensitive to hazardous substances prior to the EIA and licensing process, ensuring developments are directed to the most appropriate location within the Marine Plan area.

Ship-to-ship transfer is of particular concern in Dorset and the Marine Plan area; Lyme Bay having been proposed as one of two regulated transfer areas in the UK. The Merchant Shipping (Ship-to-Ship Transfers) Regulations 2010 makes provision that ship-to-ship transfer must take place within harbour authority areas, and it is now proposed that outside of harbour authority areas it is restricted to just one location off the Suffolk coast. However, the Regulations have recently been delayed for a third time and the end result is not certain.

Additional pollution risks include the input of organic substances, including carbon, nitrogen and phosphorus, through sewage discharge systems, storm drains and combined sewer and emergency overflows. Policy HME 8 addresses this issue.

Urban run-off from roads and buildings can be a problem in Weymouth and Portland Harbours, and surface agricultural runoff is a major concern in The Fleet and Poole Harbour; there are numerous terrestrial plans including the South West River Basin Management Plan (SWRBMP) and the Poole Harbour Aquatic Management Plan which address this problem. The SWRBMP, prepared under the Water Framework Directive by the Environment Agency, has jurisdiction out to one nautical mile and it is essential that this Plan is taken into account in conjunction with policies HME 8 and HME 9.

HME 9: Developments or activities which present risk of systematic and or accidental release of hazardous or organic substances should only take place under licensed conditions with appropriate safety measures and contingency plans in place. New developments should avoid seabed areas highly sensitive to these pressures as shown in Appendix 5, Sensitivity Maps.

This policy complies with:

- United Nations Convention on the Law of the Sea (UNCLOS)
- Marine Pollution Convention/Protocol (1974) as amended
- EC Marine Strategy Framework Directive (2008/56/EC)
- Water Pollution by Discharges of Certain Dangerous Substances EC Directive 76/464/EEC
- The Pollution Prevention and Control Act (1999)
- Portland Harbour Management Plan 2006
- Dorset Coast Strategy 2011-2021

Minimising adverse-effects of habitat removal

Justification

Any development which takes place on the seabed will cause unavoidable removal of benthic habitats and animals. For developments with a small footprint, such as sub-sea cabling, this may be minimal whereas marine aggregate extraction or capital dredging can lead to the removal of large areas of habitat. Such developments will be subject to strict licensing conditions, and will most likely require an Environmental Impact Assessment (EIA) before they are granted development consent. Policy HME10 encourages developers and decision makers to identify those seabed habitats that are most sensitive to removal prior to the EIA and licensing process, ensuring developments are directed to the most appropriate location within the Marine Plan area.

Secondary impacts from development construction, capital and maintenance dredging and marine aggregate extraction include the deposition of sand, silt or clay on the seabed from sediment plumes which can temporarily, or permanently, affect seabed habitats and species by a number of means. The footprint is generally more extensive than that associated with direct impacts of removal. The Marine Plan area contains large areas of Annex I Rocky Reef habitat, consisting of many species highly sensitive to smothering by sedimentation. Directing developers to use established and appropriate techniques which are proven to create the least impact will help to protect these sensitive species and habitats.

HME 10: Developments or activities which have the potential to physically damage or smother habitat should avoid seabed areas highly sensitive to this type of pressure as shown in Appendix 5 (Sensitivity Maps). Such developments should use Best Available Technique during survey and construction and a Best Practicable Environmental Options assessment should be conducted for the operating phase.

This policy complies with:

- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- Dorset Coast Strategy 2011-2021

Minimising construction and operational effects of development

Justification

Construction and operating phases of coastal and offshore developments have the potential to produce a wide range of emissions which are damaging to both marine species and humans.

Man-made sound and vibrations emitted within the marine environment are known to affect many marine species, particularly maMarine Plan areals; impacts are thought to range from minor behavioural changes through to death in the case of sonar activity. Noise pollution has risen significantly in the last few decades, and sources include explosions, shipping, seismic surveys, offshore construction and offshore industrial activities[11]. With the exception of ships, most commercial activities which generate high levels of sound and affect relatively broad areas are executed under regulated conditions and subject to the issuing of a licence. By following JNCC guidance and protocols, developers can minimise sound and vibration impacts.

Within the Marine Plan area, the Purbeck coast is valued for its areas of tranquillity, and it is important that operational noise does not affect this perception. Policy REA 9 addresses the issue of tranquillity in more detail. Operational noise can also damage human physiological and psychological health.

Sub-sea cabling, particularly power transmitting cables associated with offshore renewable energy production, is known to produce electromagnetic fields (EMF). There is strong evidence that EMF can disrupt some marine species, particularly elasmobranchs, affecting feeding patterns and altering behaviour. COWRIE has conducted extensive research on the effects of EMF in the marine environment, and measures to reduce impacts and mitigation solutions. It is believed that the impact on sensitive species is not significant if cables are buried more than 1m below the seabed.

Poor air quality is acknowledged as a major impact on human health and can seriously affect vulnerable individuals. Air quality is less likely to be affected by offshore developments, but the cumulative effect of developments and activities in the coastal zone, particularly around ports and harbours, has the potential to add to already severe air quality problems caused by traffic congestion on busy roads around Weymouth and Portland. It is therefore essential that developers ensure air emissions are not considered in isolation and levels remain within Defra's standards and objectives.

HME 11: Developments or activities which have the potential to generate noise, vibration, and electromagnetism, or affect air quality during construction or operation should be avoided unless it can be demonstrated that the effects on both the environment and people can be made acceptable. Developers should adopt Best Available Technique during construction, in line with Joint Nature Conservation Committee (JNCC) guidance[12].

11 Charting Progress 2, UK National Ecosystem Assessment, Composite Report on the Conservation Status of Habitat Types and Species as required under Article 17 of the Habitats Directive, 2009.

12 Including *"Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise"* and *"JNCC guidelines for minimising the risk of injury and disturbance to marine mammals from seismic surveys."*

This policy complies with:

- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act (2009)
- Wildlife and Countryside Act (1981)
- Dorset Coast Strategy 2011-2021

Sustainable waste management and marine litter

Justification

Marine litter is a global issue, with both terrestrial and marine sources, making reduction a difficult challenge. Marine litter mainly consists of material that degrades slowly, if at all, so a continuous input of large quantities of these items results in a gradual build-up in the marine and coastal environment. There are clear indications of a negative trend, confirmed by a number of studies[13].

Marine litter impacts not just on marine habitats and species, but also has serious implications for human health, the local economy and coastal communities. Research has shown that some local councils in Dorset are spending up to £800,000 per year to keep beaches clean and the emergency services are commonly called out to fouled propellers; costing up to £5,300 per incident[14]. Responses to an interactions matrix conducted for the Plan revealed that marine litter was seen by almost every sector as a major problem.

In Dorset and East Devon the general public are the main source of marine litter, with plastic accounting for almost 70% of all marine litter found[15]. However, industrial waste and fly tipping is also a problem in the area. The most effective way of dealing with waste and marine litter is to reduce it at source, which is why appropriate recycling and disposal sites are so essential. Recreational developments should ensure that public bins are in keeping with the setting.

As marine litter has no boundaries, a coordinated approach at local, national and even international level is the only way that marine-sourced litter can be reduced. Sectoral engagement with initiatives such as KIMO's Fishing for Litter, the RYA's Green Blue and the MCS' Beachwatch campaigns should be encouraged wherever possible.

HME 12: All new developments should include appropriate facilities for the sustainable disposal and recycling of waste and litter.

HME 13: The volume and impacts of marine litter should be reduced through both local initiatives, and national and international action to address the issues at source. These policies conform to:

- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act (2009)
- Dorset Coast Strategy 2011-2021
- Purbeck Heritage Strategy 2010-2015
- Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-1014

Preventing and reducing the introduction and spread of non-indigenous species

Justification

The effects of non-indigenous species on marine ecosystems may range from almost undetectable to catastrophic. Known negative impacts include the displacement of native species, genetic pollution, habitat alteration, changes in food webs, fouling of ships, marinas, moorings and mariculture structures and the introduction of new disease vectors.

The main mode of introduction and transfer of non-indigenous species to their non-native environment is by the transport and discharge of ballast water, which is regulated by the 2004 Convention for the Control and Management of Ships Ballast

13 United Nations Environmental Programme Marine Litter webpages: http://www.unep.org/regionalseas/marinelitter/default.asp, Charting Progress 2, UNEP/IOC Guidelines on Survey and Monitoring of Marine Litter. Regional Seas Reports and Studies No. 186 IOC Technical Series No. 83.

14 Dorset and East Devon Litter Group webpages: http://www.dorsetforyou.com/marineandbeachlitter, KIMO International report –Economic Impacts of Marine Litter

15 Dorset and East Devon Litter Group webpages: http://www.dorsetforyou.com/marineandbeachlitter

Water & Sediments. Other pathways include transport of fouling organisms on hulls or through mariculture, deliberate or unintentional release of species by scientists and the public, deliberate commercial introductions and transport on wet fishing nets. The introduction of species such as the pacific oyster and manila clam for mariculture is of particular concern, bringing with them new and often virulent diseases. The increasing popularity of recreational sailing and associated expansion of marinas are also adding to the problem.

Of particular concern in Dorset is the carpet sea squirt, Didemnum vexillum, which can blanket mooring chains, pontoons and aquaculture equipment, and can even smother areas of the sea bed, forcing out native plants and animals. The Non-Native Species Secretariat (NNSS) assesses that this organism presents a high risk to the UK; populations were detected in the Dart estuary and the Solent in 2009, and recent modelling predicts further spread in the Solent/Isle of Wight area. Furthermore, the NNSS risk assessment identified Weymouth mariculture businesses to be of medium risk from D. vexillum and Weymouth shellfish fisheries to be at medium-low risk. Regular marina surveys have proved invaluable in the early detection of invasive marine species. It is a relatively cheap solution which could save the local economy significant money in the future.

HME 14: New developments and activities which could potentially introduce or spread non-indigenous species should take appropriate measures to minimise this risk. Marinas, mariculture developments and port operators are encouraged to set up early detection systems for known threats.

This policy complies with:

- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011-2021

Objective 2: thriving, resilient coastal communities

Coastal communities that have a high quality of life, that can thrive and prosper in harmony with a healthy marine environment.

Tackling deprivation in coastal towns and communities

Justification

Throughout the UK, seaside towns generally have a lower-than-average employment rate, an above average share of working age adults on benefits, lower average earnings and are more affected by seasonal unemployment than the rest of England[16]. Whilst the majority of the Marine Plan area is relatively wealthy, parts of Weymouth, Portland and Swanage display many of these national characteristics. Weymouth Town Centre is one of the most deprived areas of Dorset, and within the urban borough of Weymouth and Portland there are areas of significant deprivation. Five Lower Super Output Areas (LSOA) are within the top 20% most deprived areas nationally for indices of multiple deprivation. Five further areas fall into the top 40% most deprived nationally within the borough[17].

For people without easy access to private transport such as older people, low income households, young people and those with mobility problems, poor access to services can have a significant impact on their quality of life. Within the indices of deprivation, geographical access measures distances to a range of important services including post offices, schools, shops and GPs. Ten of the LSOAs within the Marine Plan area fall within the top 20% most deprived nationally for this measurement.

Encouraging developments in sectors such as offshore renewable energy, ports and shipping and mariculture offers great potential to create jobs, increase skill levels and reduce the area's reliance on seasonal employment. Redevelopment of disused or run-down waterfront areas, providing it does not exclude those on lower incomes, also has the potential to create jobs and better living environments for deprived communities. Close liaison with local authorities will need to be maintained to ensure that the benefits from any potential coastal or offshore developments are directed at local communities and businesses and are not out-sourced.

TCC 1: Developments which provide opportunities to help tackle deprivation in coastal towns and communities and to drive community regeneration will be supported where consistent with the other policies in this plan.

16 England's Seaside Towns: A 'benchmarking' study, 2008. Department for Communities and Local Government, Crown Copyright.

17 A socio-economic Study of the C-SCOPE Marine Plan Area. Dorset County Council Research Team. 2011.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan

Supporting developments which provide skilled, year-round employment

Justification

Two key issues related to deprivation within coastal towns are the seasonal nature of many jobs, and a lack of skills amongst workers. In Weymouth and Portland 14% of 16-64 year old residents have no qualifications, compared to the England & Wales average of 12%. This is reflected in workplace based earnings which are just 80% of the England & Wales average; a report in 2007 showed Weymouth men to have one of the lowest hourly income rates of England's principle seaside towns. Younger age groups of 16-24 years and 25-34 years within the Marine Plan area show a higher proportion of benefits claimants than the national average, and those moving into government supported training is just 8% compared to a national average of 11%[18] .

Potential developments within the Marine Plan area include the Portland Gas Project which, subject to funding, is due to commence construction shortly. It is anticipated to take seven years to build, employing up to 300 skilled and semi-skilled workers and offering 24 permanent jobs on completion. Subject to the relevant planning permissions, the proposed Navitus Bay offshore windfarm offers major opportunities for skilled labour, particularly in the construction phase as well as maintenance and associated supply chains.

However, a 2009 report by the Mair Partnership highlights a shortage of skilled labour in the supply chain in terms of wind turbine suppliers and offshore installation vessels, and advises the offshore renewables industry is having difficulty in meeting demand in Dorset. Osprey Quay in Portland is aiming to be a centre of excellence for specialist marine industries to support yachting and other sporting activities, but

18 A socio-economic Study of the C-SCOPE Marine Plan Area. Dorset County Council Research Team. 2011.

again a lack of specialist boat and equipment building skills is a concern. Developments which offer skills training as part of their employment policy, especially in the form of apprenticeships that will bring younger people into industry, will therefore be particularly supported, as will those that aim to employ and retain local graduates.

TCC 2: Developments which can demonstrate benefits to the local population through skills development and training, and which contribute positively to the economy of coastal areas will be supported.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan

Supporting year-round employment and the Green Knowledge Economy

Justification

Like many of the UK's seaside towns, Weymouth & Portland relies heavily on tourism for employment; a sector which is highly seasonal in nature. Within the Marine Plan area as a whole, 13% of employees work within the leisure and tourism sector, and more than a third of employment in the area is within the broader sector of distribution, hotels and restaurants; considerably more than national levels. In addition to this, the Marine Plan area has an above average proportion of part time employees; 45% compared with 31% in England & Wales, and in Weymouth & Portland this figure rises to 48%. In 2010 the five wards within the Marine Plan area with the highest average benefits claimant rates were in the Weymouth & Portland borough[19].

If the economy within the Marine Plan area is to develop and grow, it is essential that the area reduces its reliance on tourism, and continues to diversify and develop opportunities in other sectors. This policy works alongside TCC 1 and TCC 2 in encouraging developments which help people in the area to move away from seasonal, low-skilled employment into skilled full-time employment, particularly in low-carbon and other 'green' sectors. With developments such as the proposed Navitus Bay offshore windfarm, and the potential tidal resource off Portland Bill, the future offers major opportunities for a 'green knowledge economy' in the area. It is important that marine planners and local authorities work closely to maximise these opportunities.

TCC 3: Developments or activities which provide employment opportunities in coastal areas outside the existing seasonal market should be promoted, particularly where these support the Dorset, Bournemouth & Poole Local Enterprise Partnership (LEP) vision for a 'green knowledge economy'.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan

Protecting and enhancing the historic character of coastal areas

Justification

Coastal villages and towns within the Marine Plan area have been shaped over centuries by the way in which the sea and the coast have provided jobs, wealth and enjoyment, either through trade, industry or leisure. There is no coast road in Dorset, and many of the Marine Plan area's coastal villages lie at the end of narrow, single track lanes giving them a remote, tranquil setting. Fishing has always played an important role in the area, and there are families which have fished the same marine ledges for many generations. Weymouth, renowned for its Georgian seafront, has a strong maritime history going back to Roman times, whilst Portland is famous world-wide for its quarrying heritage (see Chapter 4 for more detailed description of the Marine Plan area).

19 A socio-economic Study of the C-SCOPE Marine Plan Area. Dorset County Council Research Team. 2011.

The whole area has a unique and distinctive character which is one of its greatest assets. It is a major attraction for tourism and has inspired, and continues to inspire, scientists, artists and writers. It draws people to the area, to live and work by the sea or visit for leisure. Developments which are detrimental to the character of the area could have a significant impact on quality of life which communities currently enjoy and the tourism on which many of them rely. VEU 1 and VEU 3 provide more guidance on the design and scale of developments within the Marine Plan area.

TCC 4: Development should respect the historic character of coastal villages and towns and the maritime occupations that exist there.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- PPS5 - Planning for the Historic Environment
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan

Promoting local fisheries and mariculture

Justification

Shellfish are the dominant catch within the Marine Plan area, primarily made up of mussels, crab, whelks and scallops. Weymouth is the main landings port, and in 2009 a total catch of 1,952 tonnes worth £2,153,000 was recorded. There is also a mussel farm within Portland Harbour which produces up to 800kg of mussels a week. However, the main markets for much of Dorset's fishing catch are abroad. There are a number of successful local outlets within the area, but the overall profile of locally produced fish is low.

There is a growing movement in the country which supports the promotion of locally produced seasonal food products and, with the advent of campaigns such as 'Hugh's Fish Fight', consumers are starting to expect fish to be caught in a more environmentally responsible way. There is also evidence that people are willing to try different types of fish.

Initiatives to improve investment in the local marketing and use of fish, both in service industries and in the home, will provide a direct social, cultural and economic benefit to coastal communities. Fishermen will be able to be more responsive to local demand and command and higher prices for their catch, whilst it will be easier for local businesses to demonstrate that the fish and shellfish they are using are safe as well as legally and sustainably caught.

TCC 5: Initiatives which promote locally caught or farmed sustainable seafood will be supported.

This policy complies with:

- Marine & Coastal Access Act 2009
- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Coast Strategy 2011 - 2021

Encouraging communities to re-engage with the marine environment

Justification

Throughout more rural areas within the Marine Plan area there has been a shift in community structure. Many local people have moved away from traditional maritime occupations, and in recent years there has been an influx of new inhabitants employed in non-maritime occupations. This has led to some communities having less connection with the marine and coastal environment than there might have been in the past.

There are, however, significant opportunities for people to re-engage with their coastal environment and maritime heritage. Developments or activities, such as local heritage centres or community beach cleans, which enable people to become more knowledgeable about the marine environment and the rich heritage of the area will help to engender a sense of ownership and a desire to safeguard these valuable assets. This policy also helps to support local authority objectives to improve health, education and social inclusion.

TCC 6: Developments and activities which encourage sensitive use of the coast and marine environment, promote community involvement and increase awareness of the value of the cultural and natural environment will be supported.

This policy complies with:

- Sustainable Development in Rural Areas (PPS7, 2004)
- PPG 17: Planning for Open Space Sport and Recreation
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan
- Dorset Coast Strategy 2011–2021

Promoting marine and coastal recreational activities which enhance health and well-being

Justification

As a nation, the UK is becoming less active, which is resulting in increasing levels of obesity and other health problems[20]. Within the Marine Plan Area, eleven LSOAs in the borough of Weymouth and Portland fall into the top 10% most deprived nationally for the Health and Disability Deprivation Domain[21]. This has knock-on effects on the locally economy as less people are able to work, and local health services become more stretched.

Participation in sport and recreation is central to improving the quality of life and wellbeing in all communities, and the coastal and marine environment offers opportunities to get local people involved in new activities. Initiatives such as SailLaser Weymouth's OnBoard and Race Clubs, which have been developed to get children from the local community sailing – including Sail for £5 weeks – and C-Waves diving which received funding to provide free snorkelling lessons to the local community are good examples of how this can be achieved.

The local marketing and promotion of iCoast (www.icoast.co.uk) another output of the C-SCOPE project which acts as a portal to a wealth of information on coastal recreation, will also allow people to discover new activities and facilitate easier access to the marine environment.

TCC 7: Developments and activities which will enable and encourage local communities to use the marine and coastal environment to become more physically active, and thus increase health and well-being, will be supported.

This policy complies with:

- Sustainable Development in Rural Areas (PPS7, 2004)
- PPG 17: Planning for Open Space Sport and Recreation
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan
- Dorset Coast Strategy 2011-2021

20 Department of Health. Healthy Lives, Healthy People White Paper. 2011.

21 A socio-economic Study of the C-SCOPE Marine Plan Area. Dorset County Council Research Team. 2011.

Objective 3: successful, sustainable marine economy
Successful, efficient marine enterprises that operate safely and responsibly, making innovative and sustainable use of the environment on which they depend while respecting the limits of that environment to accommodate change and development.

Supporting sustainable economic development in the marine and coastal environment

Justification

To deliver the Dorset LEP Prospectus and vision of a green economy, this policy helps to define the kind of economic development which should be supported and promoted.

SME 1: Sustainable economic development in the coastal and marine environment will be supported. Sustainable marine industries will be defined as those which:

- Respect and where possible enhance the environment in which they operate, and on which they depend for their existence;
- support the coastal communities in which they operate through high quality employment and training opportunities; and
- make efficient, equitable use of natural and human resources available to them.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)

Identifying the social, environmental and economic impacts and benefits of a development

Justification

The criteria in Box A have been identified as a 'check-list' for developers and decision makers to ensure the potential benefits and anticipated adverse impacts (which may be economic, environmental and/or social) of proposals have been identified and taken into account. The criteria have been selected either because they are statutory requirements, material planning consideration in terrestrial planning, regulatory matters and/or agreed as being important in a Dorset context by the C-SCOPE MSP Task and Finish Group.

SME 2: In addition to complying with the other policies in this plan, major development in the marine and coastal environment should be tested for its contribution to, and impact on, the criteria presented in Box A (below).

Mitigation and compensation

Justification

Development will inevitably have an impact on at least one or more of the criteria laid out in Box A. The precise nature of these impacts will depend on a number of factors, including the type of development or activity under consideration, compatibility with other activities, and the multiple and cumulative impacts of proposals when viewed with other projects and activities.

Many of these impacts can be mitigated for, and developers must work with relevant licensing bodies and statutory consultees to ensure appropriate and practicable mitigation measures are in place. Where there is unavoidable habitat loss, compensatory habitat creation and developer contributions must be considered. If suitable mitigation or compensation measures cannot be made, the impacts will be considered adverse, and the development should be avoided in its proposed location.

SME 3: Development which would have an adverse impact, directly, indirectly or cumulatively on the criteria laid out in Box A, and which can not be satisfactorily mitigated or compensated for, should be avoided.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- EC Marine Strategy Framework Directive (2008/56/EC)
- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011-2021

Box A – see accompanying figures

Existing activities

- Tourism and Recreation interests (Figure 25 and 26, pages 50 & 52)
- Mariculture sites (Figure 24, page 48)
- Areas of high density commercial inshore fishing (Figure 37, page 89)
- Shipping routes and navigational interests (Figure 38, page 90)

Natural Environment

- Designated sites including Special Protected Areas, Special Areas of Conservations, Marine Conservation Zones, Sites of Special Scientific Interest (Figure 16, page 33)
- Species with statutory protection (Figure 39, page 91)
- UK and Local Biodiversity Action Plan species and habitats (Figure 17, page 34)
- Other sensitive species and habitats (Figure 40, page 92)
- Migratory bird routes, important breeding and over-wintering areas (Figure 41, page 93)
- Wider ecosystem functions and the goods and services they provide
- Water quality (Figure 22, page 44)
- Air quality
- Geological features, geomorphology and geodiversity (Figure 42, page 94 and Appendix 6)
- Greenhouse gas emissions

Cultural Heritage

- Landscape and Seascape Character (Figure 19a and 19b, pages 37 & 38)
- Designated Heritage Assets (Figure 20 and 21, pages 40 & 42)
- Historic or archaeological sites (Figure 43, page 95)
- Protected landscapes (Figure 18, page 36)

Infrastructure

- Cables and pipelines (Figure 44, page 96)
- Buoys and navigational aids (Figure 45, page 97)
- Moorings and coastal infrastructure and access to these (Figure 46, page 98)
- Existing offshore development

Communities

- Communities and settlements (Figure 47, page 99)
- Public health and safety
- Navigational safety implications

Figure 37: Commercial inshore fishing

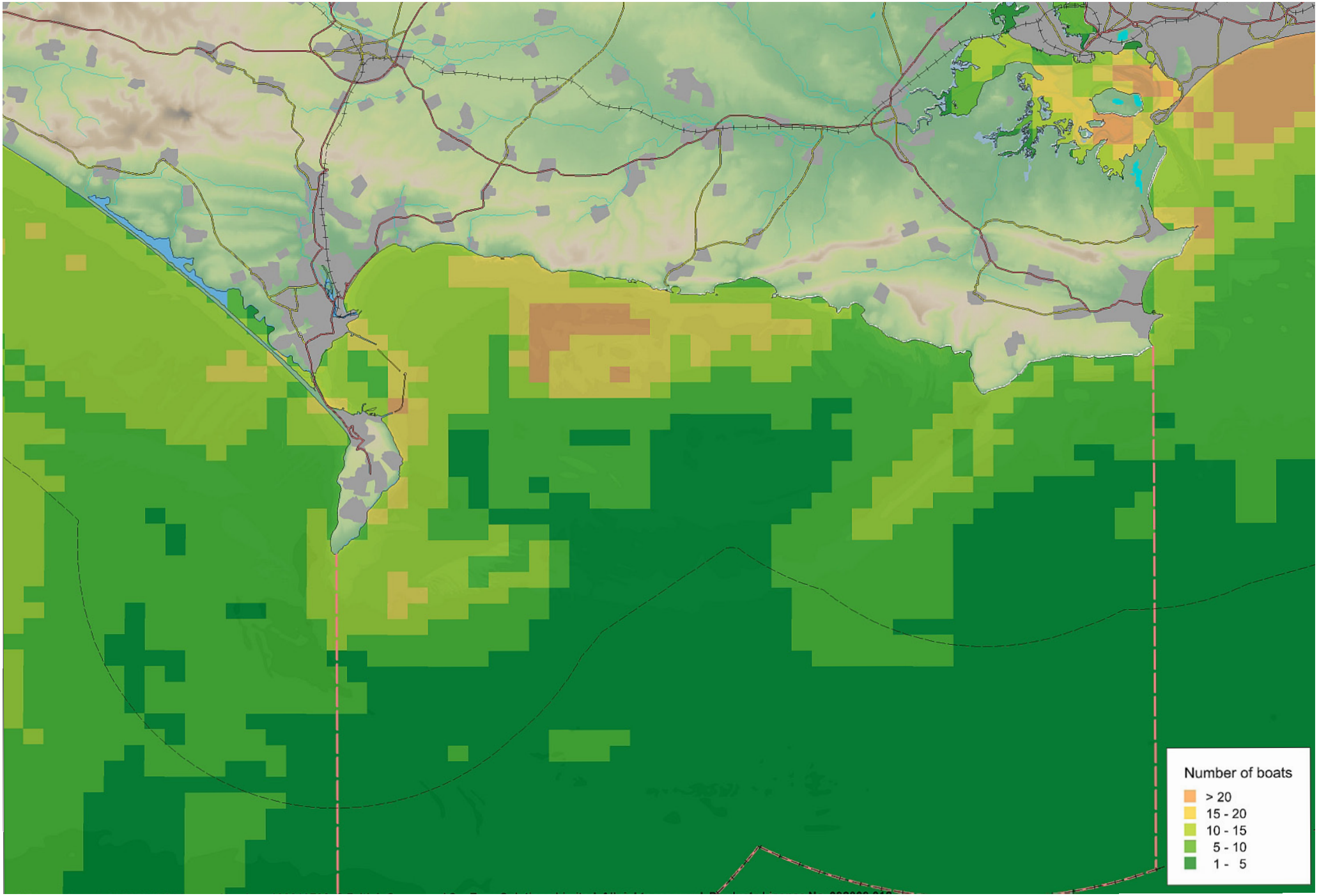


Figure 38: Shipping routes

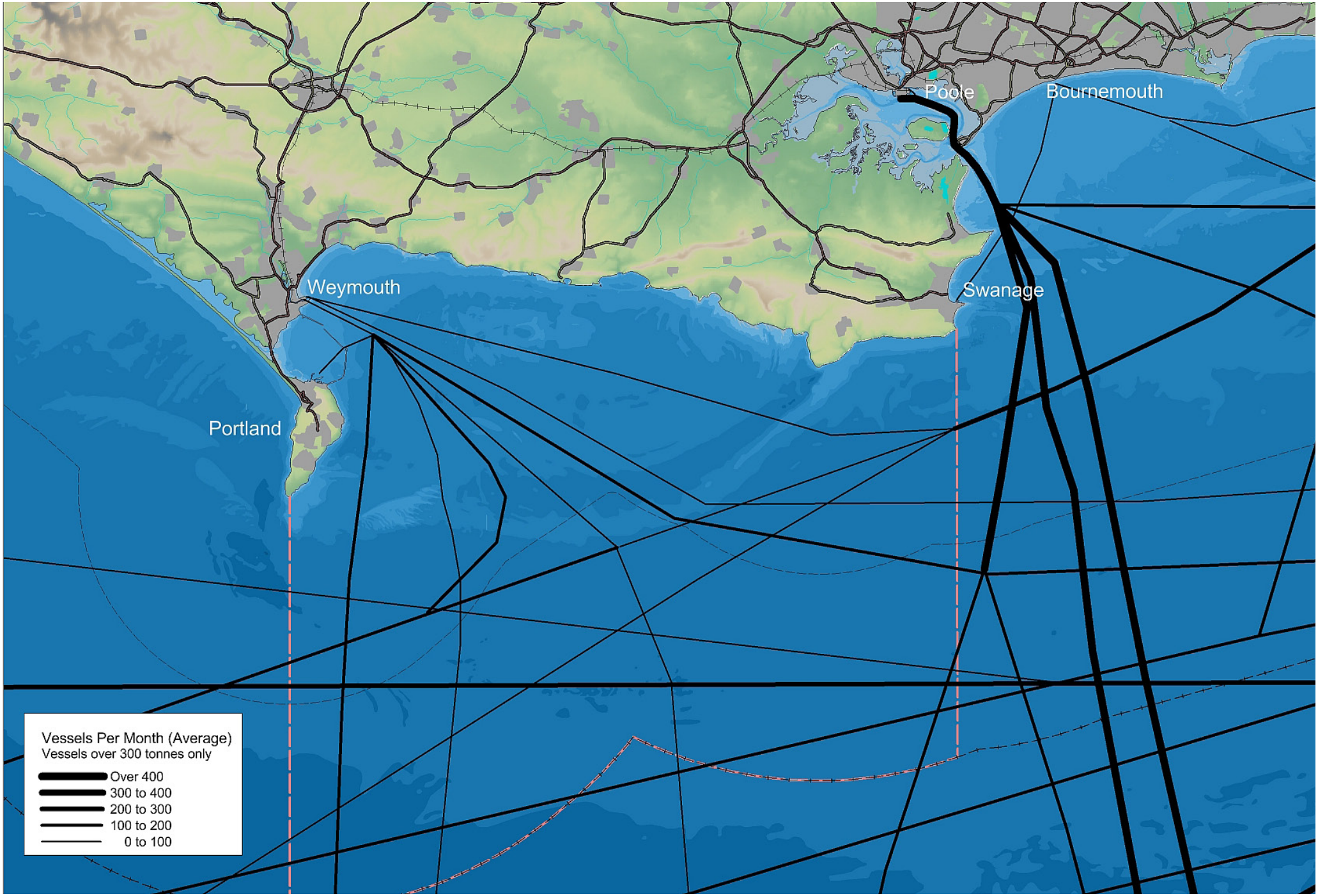


Figure 39: Designated species

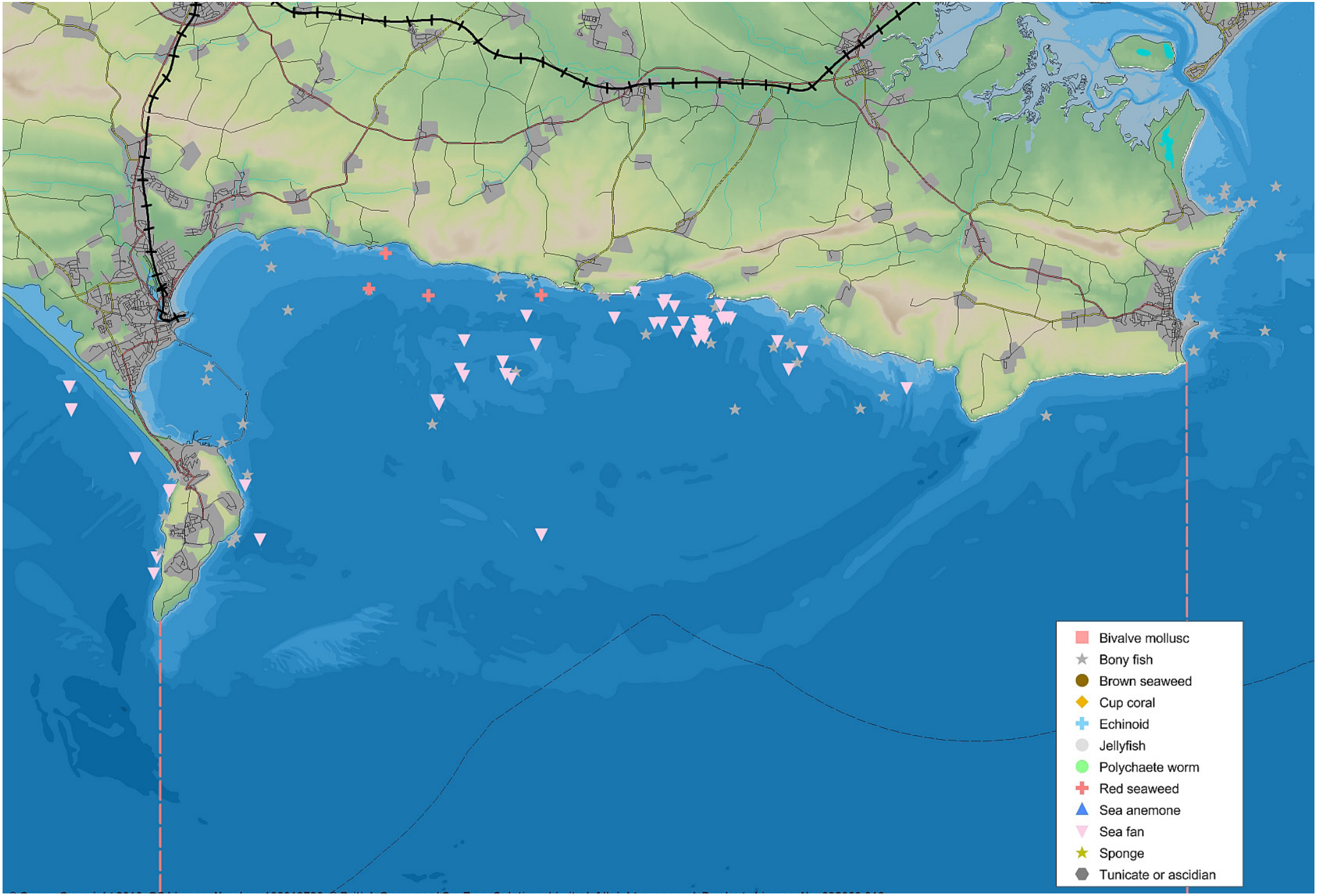


Figure 40: National Important Marine Feature Species

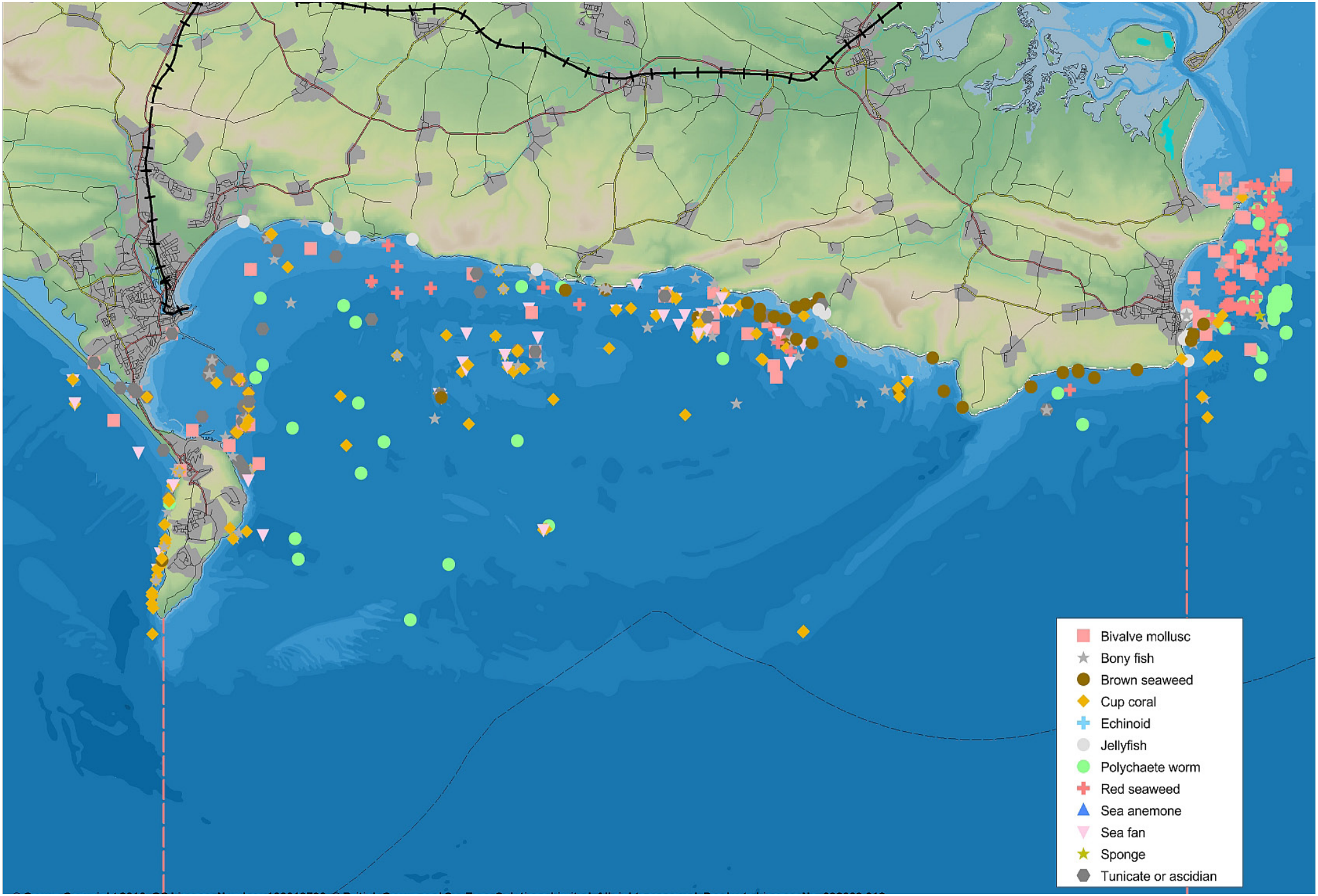


Figure 41: Over wintering birds

Figure 42: Geological features

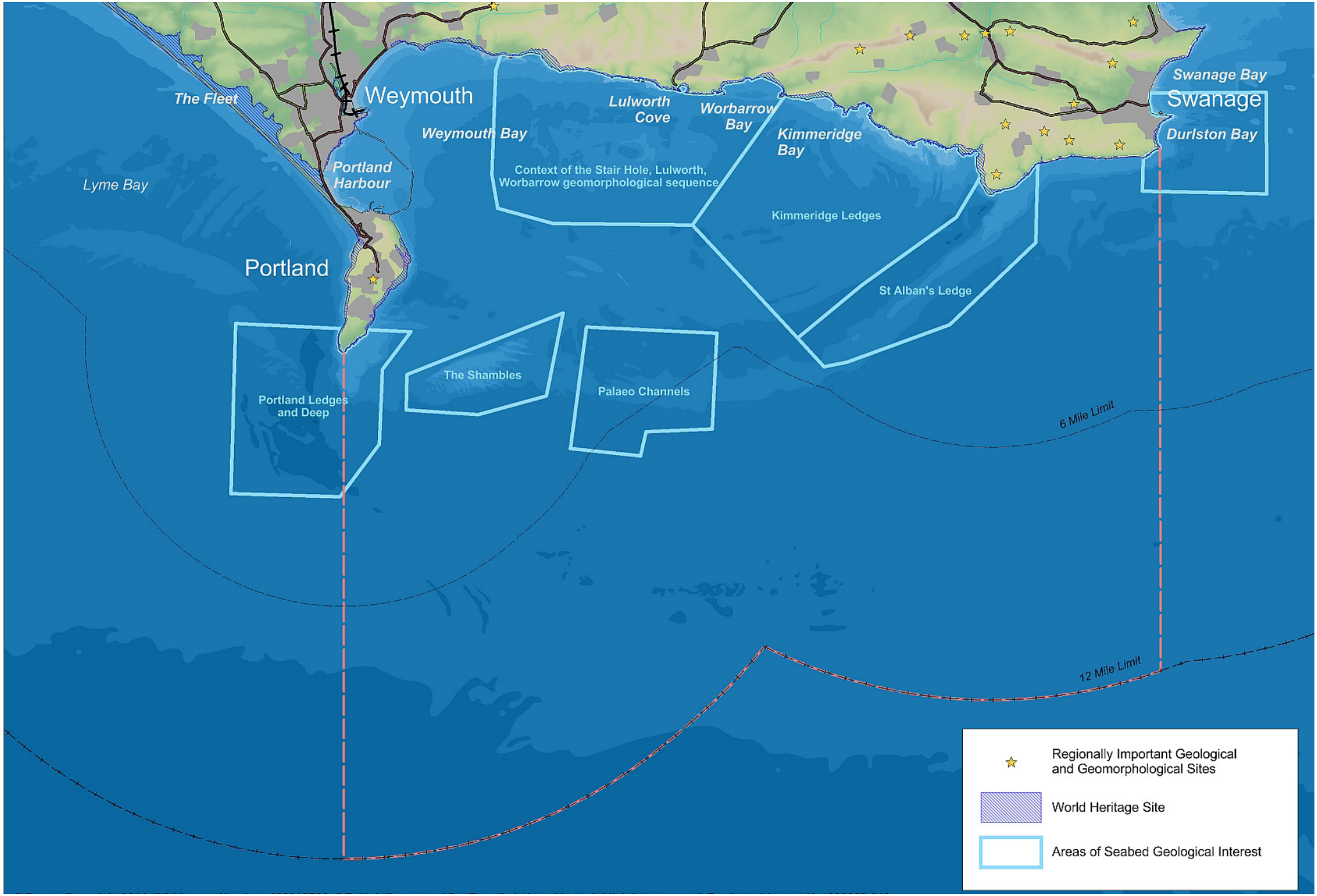


Figure 43: Areas of Archaeological Potential

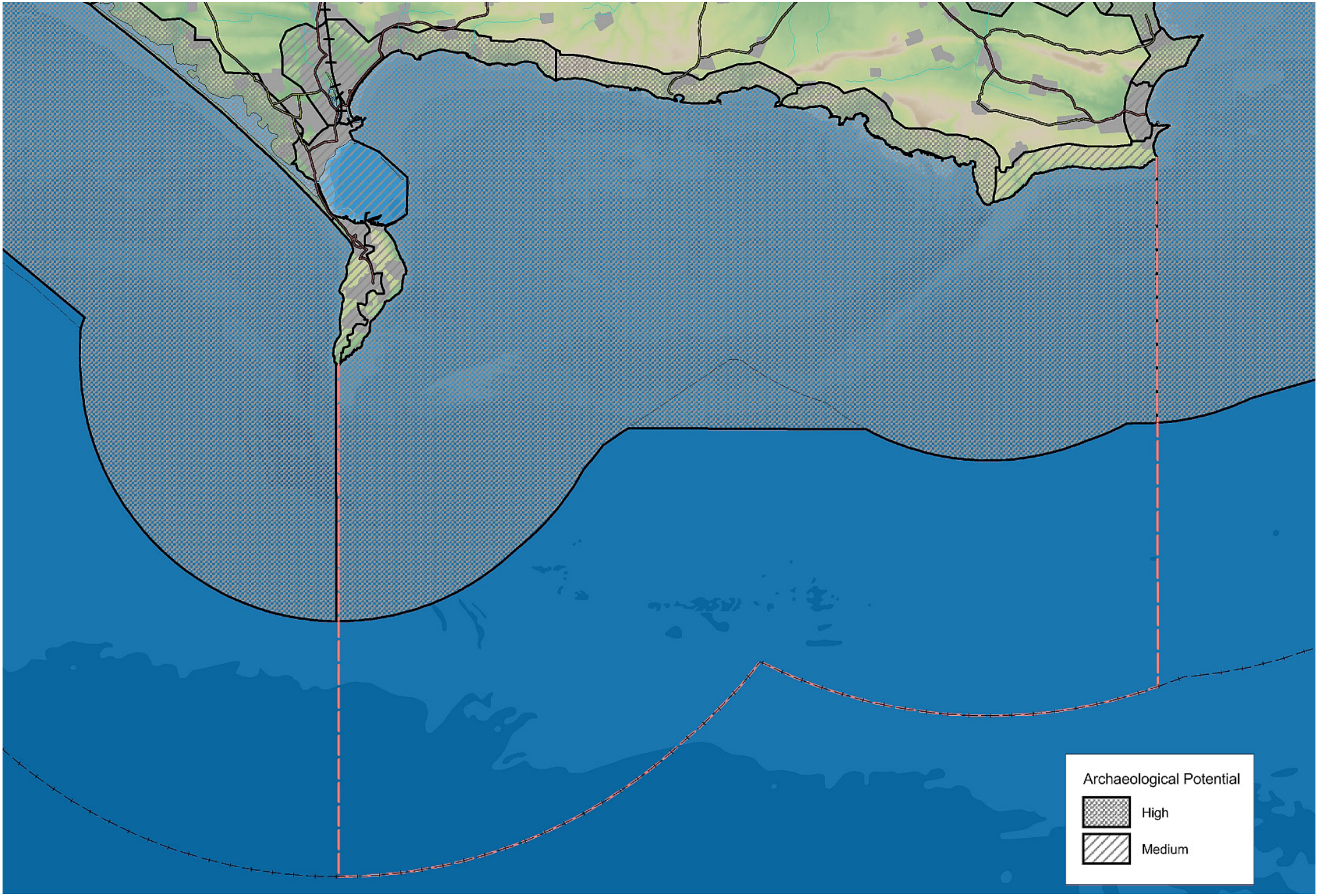


Figure 44: Cables and pipelines

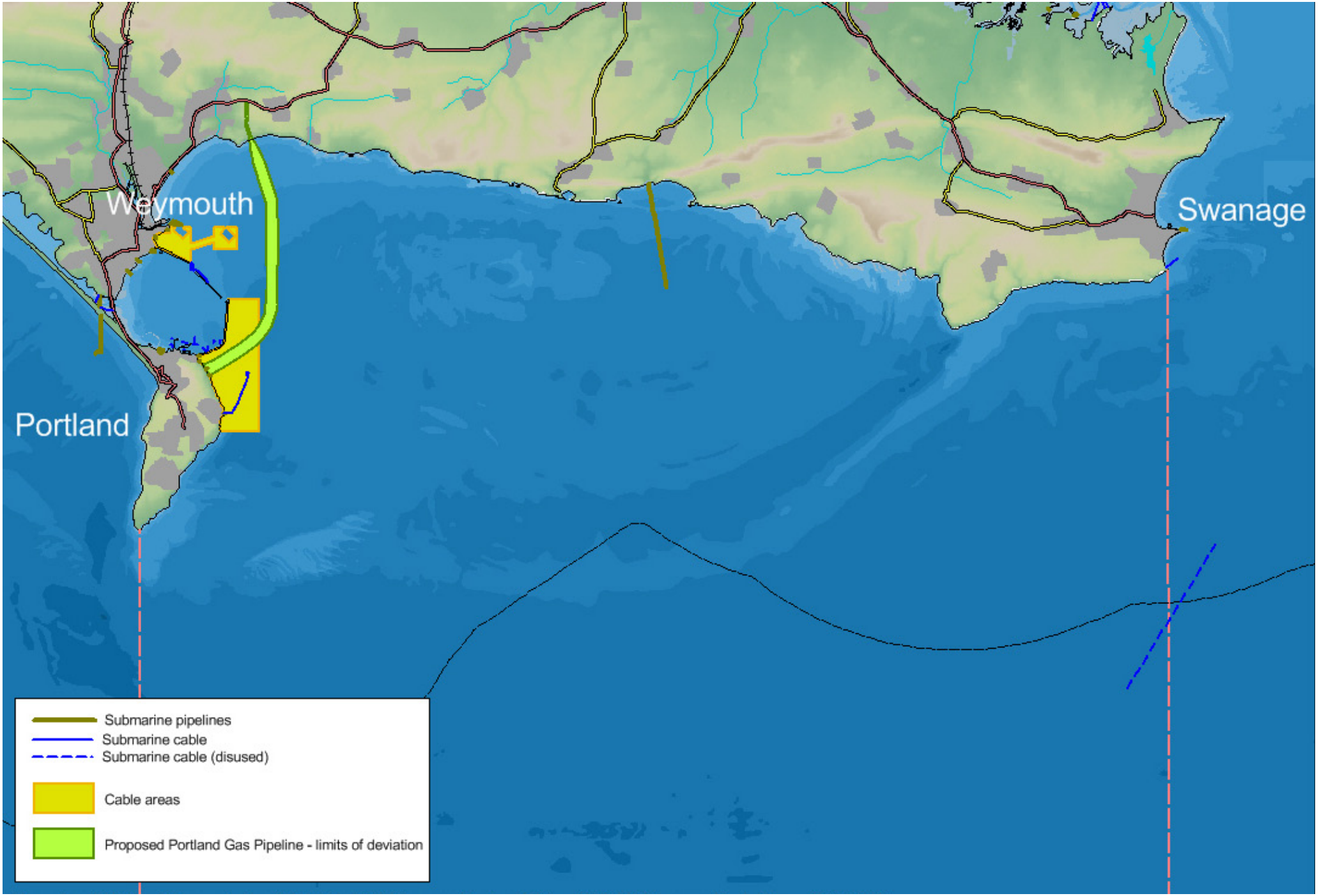


Figure 45: Buoys and navigation aids

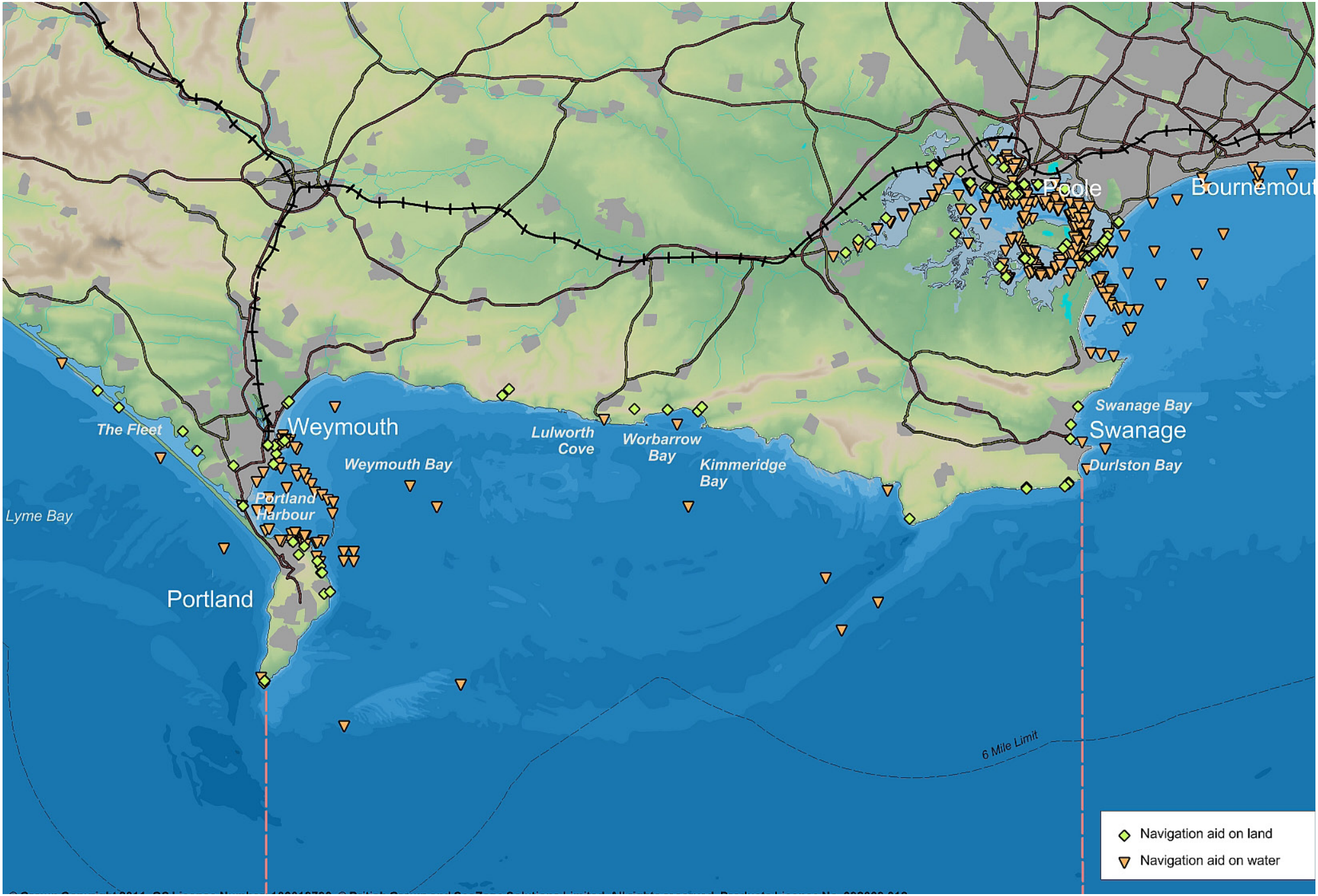


Figure 46: Moorings and coastal infrastructure

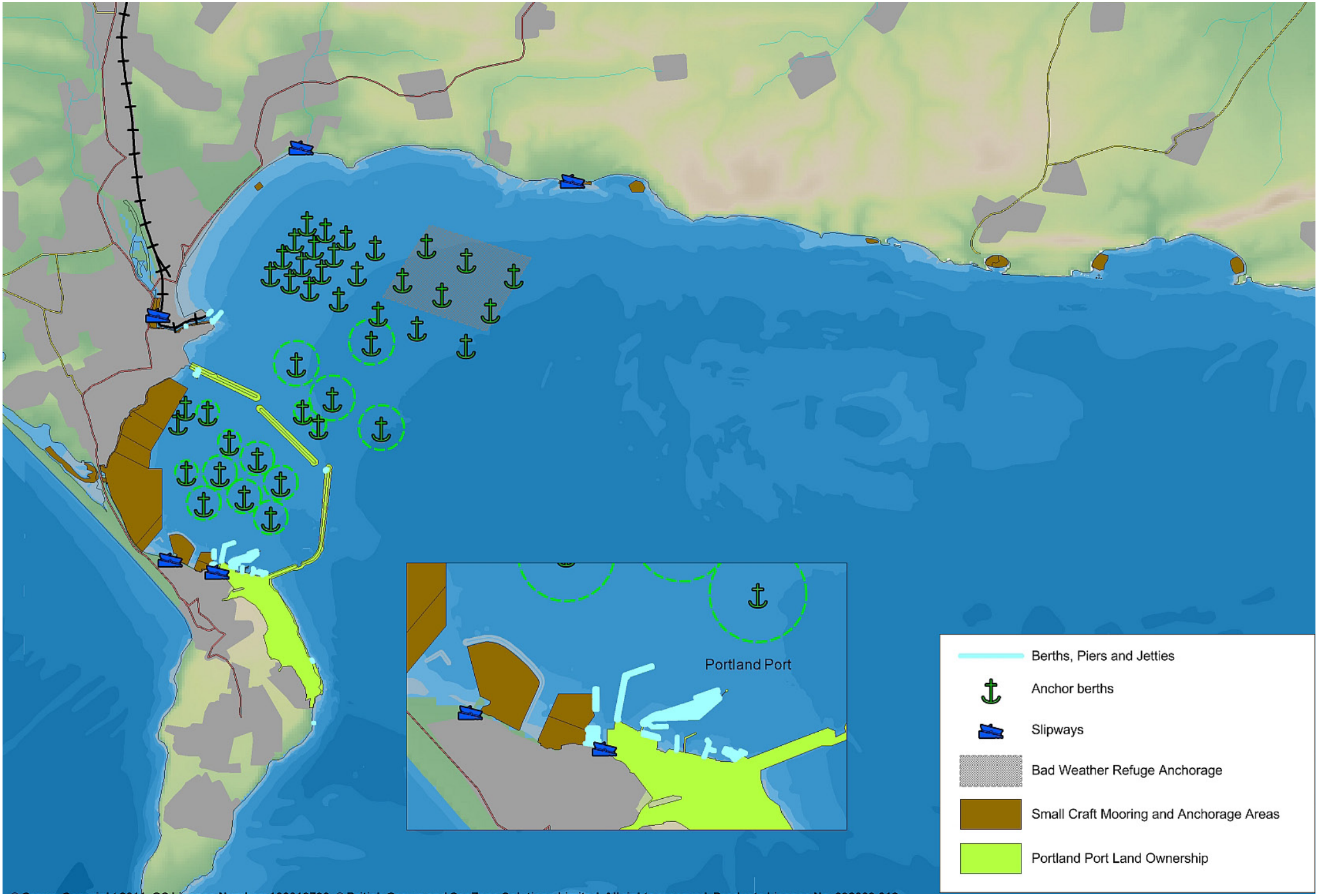
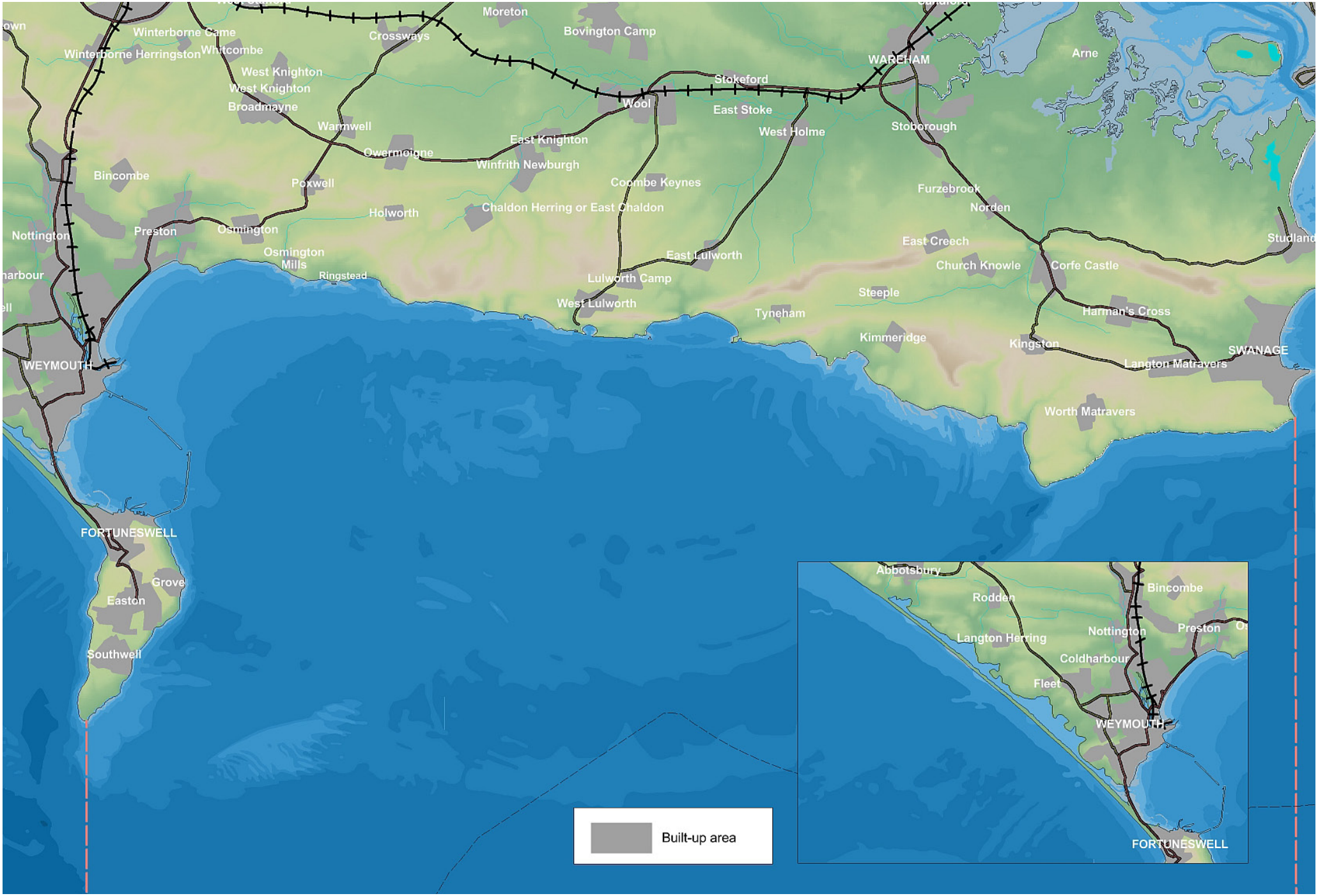


Figure 47: Communities and settlements



Encouraging compatibility with existing sectors, coastal plans and policies

Justification

There is a strong inter-relationship between terrestrial and marine environments; offshore developments such as windfarms must land their power cables to connect to the national grid, they require construction and service ports as well as adequate infrastructure to support those ports. Parts of the Marine Plan area coastline are subject to rapid change and others susceptible to coastal flooding. Local authorities have their own targets for renewable energy, employment and economic growth. It is therefore essential that developers and decision makers are aware of the connection between offshore activities and resource use and the onshore communities that are dependent on them. They must ensure that proposals have considered existing plans, policies and programmes, and that they are not going to conflict with them as far as possible. By doing so, they may also identify opportunities to strengthen their own proposals. Once complete, the Coastal Explorer Planning tool will detail all plans, policies and programmes which are relevant to the C-SCOPE Marine Plan area.

Equally, developers must consider the effects of their proposals on other marine and coastal users; a full sectoral interactions matrix can be found in Appendix 7. Spatial analysis of the interactions matrix reveals that in general most existing interests within the Marine Plan area co-exist with minimum competition and incompatibility. New developments or activities could disrupt this balance, so where a development may impact on other sectors, early dialogue will help all parties to understand each other's position and agree satisfactory mitigation measures before proposals become too advanced. Potential consultees with interests in the Marine Plan area are listed in Appendix 8.

SME 4: Development proposals must demonstrate that:

a) Where possible, they are compatible with existing plans, policies and programmes (PPP), especially Shoreline Management Plans, coastal change management areas and Local Development Frameworks/Local Plans.

b) They have considered any potentially negative interactions with other sectors, satisfactory negotiation has occurred where they exist, and mitigation agreed where necessary.

This policy complies with:

- Sustainable Development in Rural Areas (PPS7, 2004)
- Marine & Coastal Access Act 2009
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan
- Dorset Coast Strategy 2011-2021

Infrastructure to support sustainable development of marine industries

Justification

Marine industry cannot function in isolation and needs suitable supporting infrastructure for it to succeed; for most marine industries, ports and harbours provide the primary interface between land and sea. Ships need anchorages, berths, re-supply and cargo-handling facilities. The fishing industry requires berths, landing and handling facilities, slipways, and boat repair yards whilst any future shellfish farms will require depuration and packaging facilities.

Ports are also essential to offshore developments such as the proposed Navitus Bay windfarm, which will require a large construction area and ongoing maintenance facilities as well as access to supporting marine services usually found in larger ports. Policies SME 9 and SS 3 focus more specifically on ports and harbours within the Marine Plan area. Beyond ports and harbours, efficient terrestrial transport links are essential to facilitate movement of goods and people to and from them. Integration with terrestrial development plans and cooperation with local authorities and local transport partnerships will be needed to ensure sustainable marine industry is successfully supported and the full economic benefits can be realised.

SME 5: Infrastructure necessary to support the sustainable development of marine industry, and associated transport infrastructure, will be supported where consistent with the other policies in this plan.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Marine & Coastal Access Act 2009
- Department for Transport National Policy Statement for Ports (2011)
- Bournemouth, Poole and Dorset Local Transport Plan 2011-2026
- Dorset Coast Strategy 2011-2021

Co-location and sharing of infrastructure

SME 6: Offshore development should consider complementary opportunities for co-location and sharing of infrastructure.

Justification

As pressure on the marine environment continues to grow, space will increasingly become a limiting factor on development. Although currently most interests within the Marine Plan area occur together with minimum competition and incompatibility, this may change in the future. The co-location and sharing of infrastructure can help to alleviate potential spatial conflicts, minimise cumulative environmental impacts and even offer many benefits.

Examples include the co-location of offshore windfarms and Marine Protected Areas, which reduce the potential socio-economic impacts caused by displacement, on fishermen. In turn, by building-in beneficial features such as artificial shelters for juvenile fish, windfarms could enhance local fish stocks, thus benefiting fishermen and local communities. There is also potential for shoreline wave technologies within the Marine Plan area. These operate at low tidal ranges of less than 2m and can be fixed or embedded into structures such as breakwaters.

Mariculture could also benefit from co-location with offshore windfarms; research has been conducted into mussel cultivation within wind-farms in German Bight. The windfarm acts as a shelter in offshore conditions where cultivation might be more difficult, and it has been shown that shifting production of mussels offshore can increase the health of mussels. Seaweed has also been successfully grown in similar conditions.

Within the Marine Plan area, the 'wreck to reef' project is a small-scale example of co-location; it has been granted permission to create an artificial lobster reef which will benefit local fishermen and sink two ships – one of which will be for divers and the other for sea-anglers. This policy is supported by SME 4 which encourages early dialogue with other sectors.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011-2021

Minimising the footprint of cables and pipelines

Justification

Whilst the footprint of cables and pipelines is relatively small, they nevertheless have both an environmental and socio-economic impact. The laying of cables and pipelines involves some removal of habitat as well as secondary impacts caused by re-settlement of suspended sediments post-lay and, particularly with pipelines, potential seabed scour. Although there are strong safety procedures in place and good dialogue between fishermen and the industry, cables and pipelines remain a safety hazard for fishermen using mobile gears, and there are real risks to both fishermen and the environment if their gear gets caught. Safety buffer zones also mean fishermen may lose some of their fishing grounds. Depending on the type and size of the cable or pipeline and the seabed geology, it can cost from £600,000 to £1.3 million per km to lay. By using existing cable corridors, developers will benefit from reduced EIA costs and have more confidence that they will not have to re-route at great cost. Environmental impacts will be contained within a discreet area, and fishermen will have fewer sites to monitor and avoid.

SME 7: New cables and pipelines in the marine environment should seek to follow existing corridors wherever possible.

This policy complies with:

- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011-2021

Using appropriately sourced materials for beach replenishment

Justification

Mixed sand and shingle beaches are a common component of coastal defences throughout the UK, helping to dissipate wave energy and therefore prevent flooding. Within the Marine Plan area there are several beaches which perform this function. Sandy beaches also provide a valuable recreational resource within the area, most notably those at Weymouth. However, most of these beaches are eroding and replenishment schemes have become more common to maintain adequate sea defences and protect the economic interests of seaside resorts.

The Durlston Head to Rame Head SMP2 divides the coast into smaller 'policy units' and for each unit sets out preferred policies for managing the risks of coastal change over three epochs. The SMP2 identifies several policy units where there could be provision or replenishment of beaches in the short term to mid-term; the Furzy Cliff to Preston Beach unit 5g15 and Bowleaze 5g12 in particular.

However, unless appropriate resources are used in these replenishment works, there is the potential for adverse changes to the geomorphology, ecology and hydrology. This could not only result in increased costs to resolve ensuing problems, but also impact on the Outstanding Universal Value of the Jurassic Coast World Heritage Site, as set out in its Management Plan. A recent example is the use of angular gravel at Ringstead Bay which caused concern as it is very unlike the rounded chert and flint of the local beach and has behaved differently to the natural environment.

It is therefore essential that any future beach replenishment works use appropriate resources which are as similar as possible to the existing sediments or shingles as well as having regard to the hydrological regime in which it will take place.

SME 8: Wherever possible, beach replenishment works should ensure use of appropriate resources, which match that which already exist in the natural environment. Works must also have regard to the hydrographical regime of the area.

This policy complies with:

- Circular on the Protection of World Heritage Sites 07/2009
- EC Marine Strategy Framework Directive (2008/56/EC)
- PPS 9: Biodiversity an Geological Conservation
- Marine & Coastal Access Act 2009
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

Supporting local ports

Justification

Portland Port is a privately owned commercial port, operating as Portland Harbour Authority Ltd (PHAL), which also has statutory powers under the Portland Harbour Revision Order 1997. The Port supports significant employment and economic activity both locally and regionally. The Port employs a number of management plans and tools including byelaws, statutory notices, a Harbour Management Plan, Oil Spill Contingency Plan and Waste Management Plan. It also produced a Marine Spatial Plan in 2008 and is currently producing an Environmental Management Plan.

The Port offers additional economic opportunities for the future, and the Harbour Revision Order 2010 authorises the Port to construct a number of works which will enable it to expand to cope with extra demand on service and shipping trends. In its 2007 HRO application, PHAL estimated that these works could increase employment by approximately 579 jobs. The Port additionally offers solutions to current energy issues including security of supply and meeting renewable targets. It is looking to become a centre of excellence for offshore renewables, and it hopes to provide both construction and service facilities for the proposed Navitus Bay wind farm if it receives the relevant permissions.

On a smaller scale, Weymouth Harbour, a municipal port run by Weymouth and Portland Borough Council, provides services predominantly for local businesses and industries. The Harbour's principle sources of income are the Condor Ferry, inner harbour mooring holders, commercial boat operators and visiting yachts. It too has statutory powers which cover the operations and safe passage within its jurisdiction. There are a number of byelaws, permit requirements for recreational users, and a recreational safety management plan.

This policy supports these important regulatory, economic and safety functions that both ports provide within the Marine Plan Area.

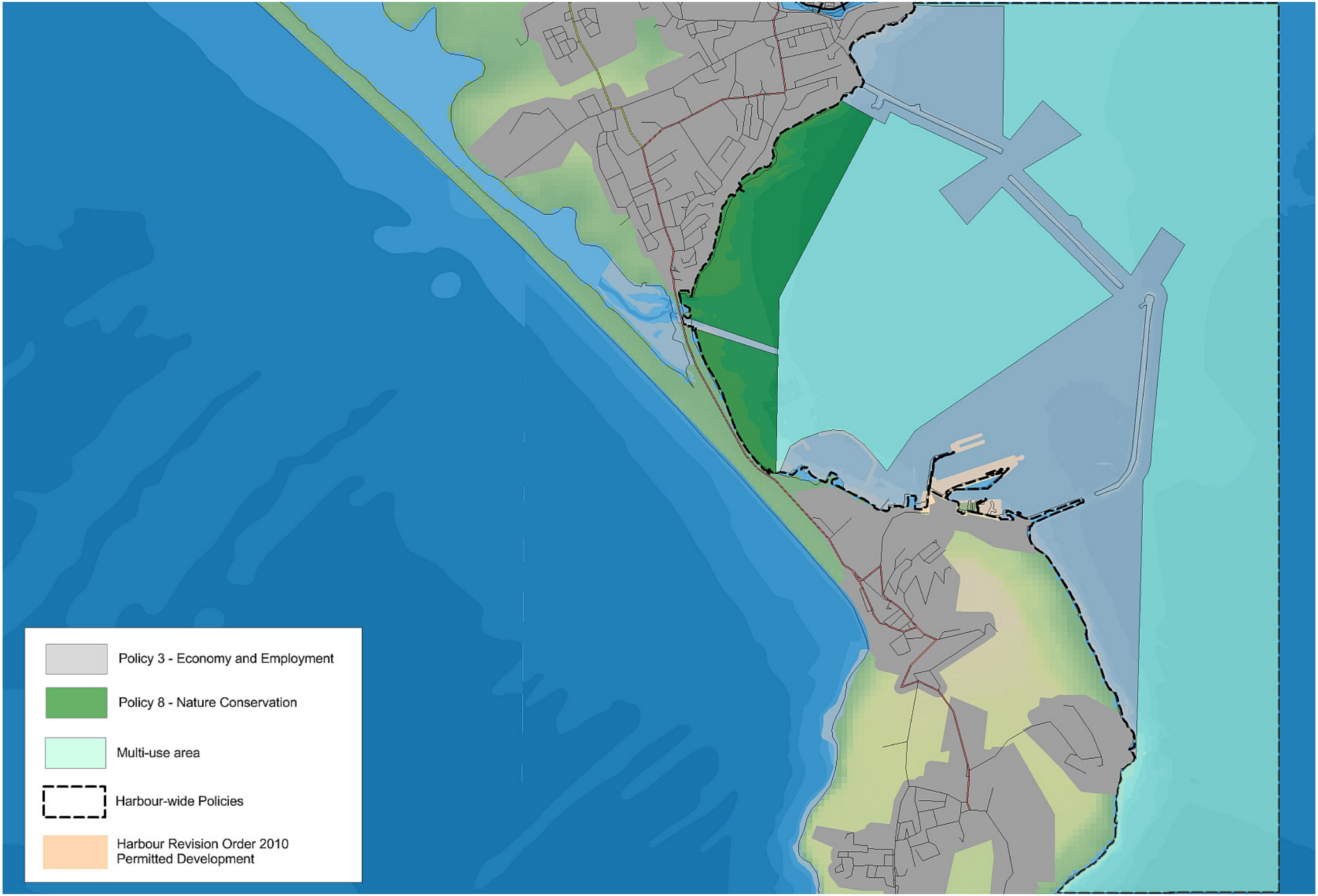
SME 9: The operational, management and development plans and other management tools employed by Portland Harbour Authority Ltd and Weymouth Harbour will be supported where consistent with other policies in this plan unless or until this plan is superseded by any statutory marine plan.

Refer to Figure 48.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Marine & Coastal Access Act 2009
- Department for Transport National Policy Statement for Ports (2011)
- Portland Harbour Management Plan
- Bournemouth, Poole and Dorset Local Transport Plan 2011-2026
- Dorset Coast Strategy 2011-2021

Figure 48: Portland Harbour plans



Supporting shipping, short-sea shipping and associated infrastructure

Justification

With rising fuel costs and worsening road congestion, cross-country container transport is becoming increasingly expensive. Equally important, there is a growing need to cut greenhouse gas emissions at a local and national level. Shipping, and in particular short-sea shipping, is at the forefront of the EU's transportation policy and is becoming an increasingly viable option within the UK. One 4000dwt[22] vessel can carry the equivalent of between 100-200 trucks. Typical cargoes include grain, fertilisers, minerals, stone, scrap, containers and passengers. It offers to alleviate road congestion, decrease air pollution and CO2 emissions, and provide overall cost savings for shippers and government. However, for short-sea shipping to grow there needs to be further development in ports across the UK to accommodate boats ranging between 1,000dwt and 15,000dwt and the handling services that they require.

By supporting the development of infrastructure to support short sea shipping within the Marine Plan area, this policy aims to contribute to national and local commitments to reduce carbon emissions, and will potentially help to provide employment opportunities in the area. It also supports policies SME 5 and SME 9.

SME 10: Development of infrastructure to support shipping and in particular short-sea shipping as an alternative to road transport will be encouraged and supported where consistent with the other policies in this plan.

This policy complies with:

- Sustainable Development Strategy (EU SDS 2006)
- Delivering Sustainable Development (PPS1, 2005)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Marine & Coastal Access Act 2009
- Department for Transport National Policy Statement for Ports (2011)
- Portland Harbour Management Plan
- Bournemouth, Poole and Dorset Local Transport Plan 2011-2026
- Dorset Coast Strategy 2011-2021

Opportunity areas for mariculture

Justification

Aquaculture is the fastest growing area of food production globally and is likely to play an increasingly important role in the future. In the UK, aquaculture increased by 132% between 2000 and 2006 and, despite some recent decreases, the long-term trend is for continued growth, particularly in England and Wales.

The UK population is forecast to grow to almost 71 million by 2035. This is forecast to lead to an increased demand of 1.5 seafood meals per week, which would see total seafood requirement grow from 1.1 million tonnes whole fish equivalent (2006) to approximately 1.9 million tonnes by 2035. To keep up with this demand, aquaculture production in the UK has been projected to increase by 116% compared to current levels in the next decade. Aquaculture in the UK is at a critical point as space on land and inshore sites become increasingly limited.

The waters within the Marine Plan area are generally of high quality and offer perfect conditions for growing shellfish; a mussel farm already exists within Portland Harbour and Oysters are grown in The Fleet. The Crown Estate has recently granted a lease for a pilot scale offshore mussel farm development in the north west area of Lyme Bay. If demand for mussels continues to grow and the Lyme Bay farm proves successful, Weymouth Bay could be targeted for future development. Further mariculture development, particularly on the larger scale of offshore sites, would not only provide full-time employment for local people, but also help food security within the Marine Plan area and beyond. Constraints mapping was used to identify the most suitable operational and environmental locations for shellfish production within the Marine Plan area; a full description of criteria and methods can be found in Appendix 9.

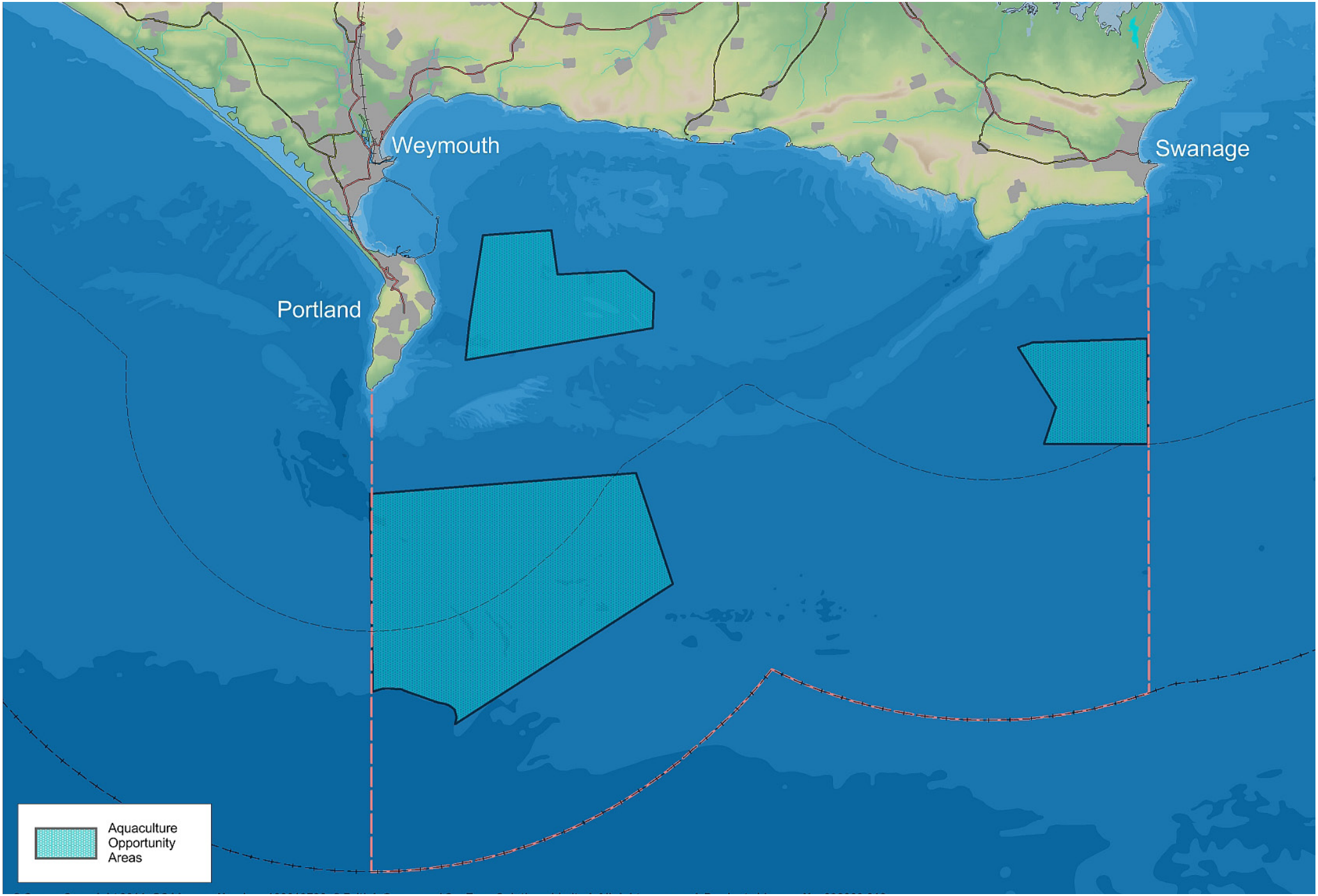
SME 11: Development of mussel and scallop cultivation will be encouraged in the areas shown in Figure 49. However, the opportunities identified are indicative, subject to obtaining the required consents, and do not preclude development applications and activities elsewhere.

This policy complies with:

- EC Marine Strategy Framework Directive (2008/56/EC)
- EU Common Fisheries Policy
- Marine and Coastal Access Act (2009)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Coast Strategy 2011-2021

22 dwt – Deadweight tonnes

Figure 49: Mariculture opportunity areas



Objective 4: responsible, equitable and safe access
Opportunities to experience the marine environment responsibly, enjoyably and safely are made available to all, managed at a level the environment can sustain and in a way which is compatible with commercial and other strategic uses.

Ensuring compliance with port and local authority recreational management plans

Justification

As highlighted by spatial analysis of the interactions matrix, most recreational activities take place close to the shore and in sheltered areas. Weymouth Bay and Portland Harbour are widely recognised as some of the best small-boat sailing waters in the UK. Heavily used RYA yacht cruising routes run parallel to the shore, and there are several less heavily used routes passing through the Marine Plan area. Portland Harbour also provides a safe environment for newer watersports with wind-surfing and kitesurfing being particularly popular.

However, this area is also one of the busiest for commercial boats and shipping, so it is essential that recreational activities are carefully managed to avoid accidents both between non-compatible recreational activities such as personal watercraft (PWCs) and swimming, and recreational and commercial activities.

Both Portland Harbour and Weymouth Harbour use a number of management tools to ensure recreational safety. Within Portland Harbour, certain byelaws apply, and permits are required for most watersports, including waterskiing, wakeboarding, windsurfing, kitesurfing and personal water craft. Within the inner harbour, PWCs must keep to a designated channel/fairway. These activities are also subject to the General Directions or the Local Notices to Mariners.

There is a similar permit scheme within the limits of Weymouth Harbour Authority. Weymouth and Portland Borough Council also operates a zoned watersport area within Weymouth Bay, which separates activities away from bathing areas; this includes a PWC channel at Bowleaze Cove.

This policy supports all existing management plans for recreational activities within the Marine Plan area and encourages developers to have regard to them when considering any future proposals.

REA 1: Recreational activities should conform to existing and future recreational management plans, as identified in Figures 50 and 51.

This policy complies with:

- Portland Harbour Management Plan
- PPG 17: Planning for Open Space Sport and Recreation
- Weymouth & Portland Borough Council Local Plan
- Dorset Coast Strategy 2011-2021

Refer to Figures 50 and 51.

Figure 50: REA 1 Weymouth Beach management plan

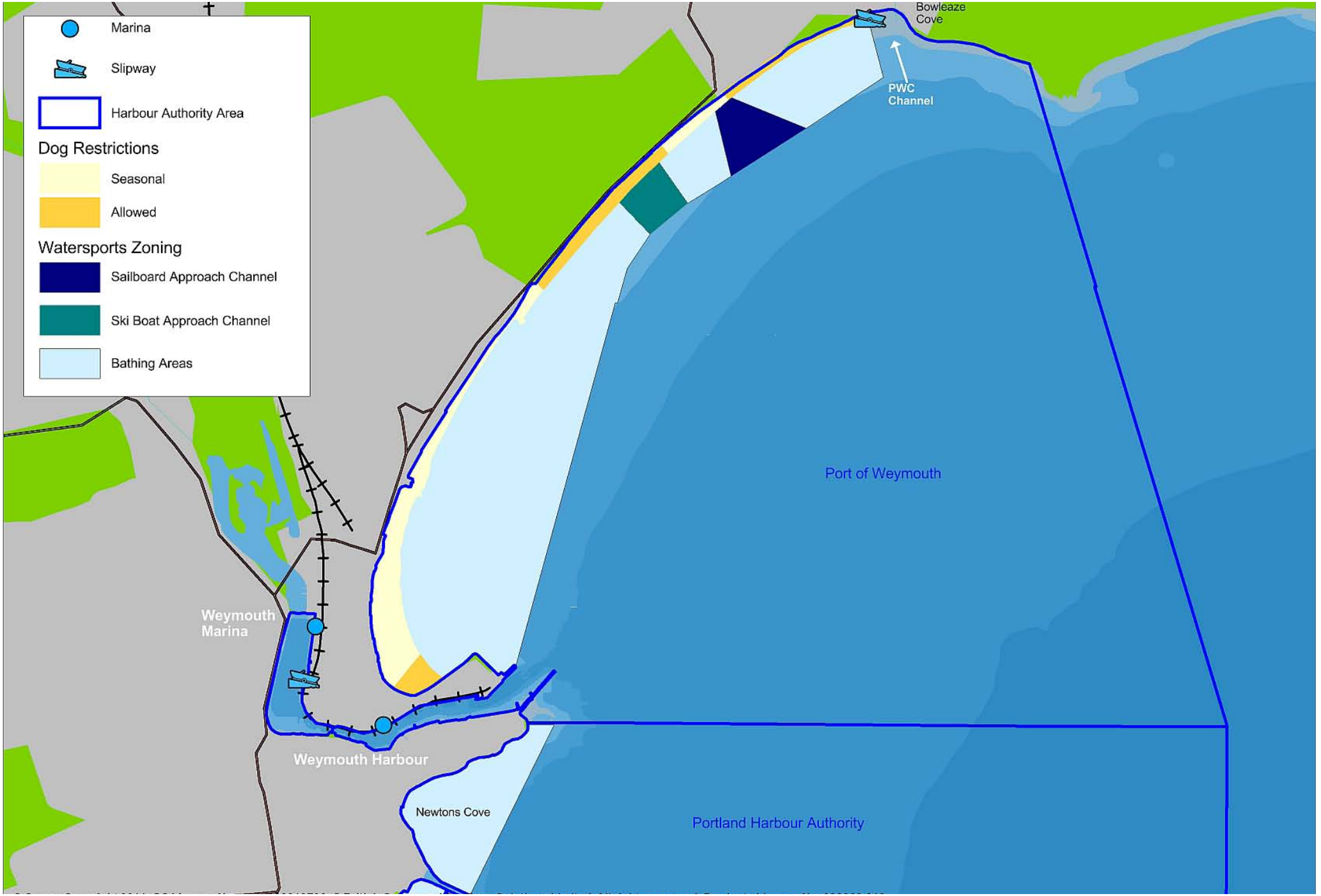
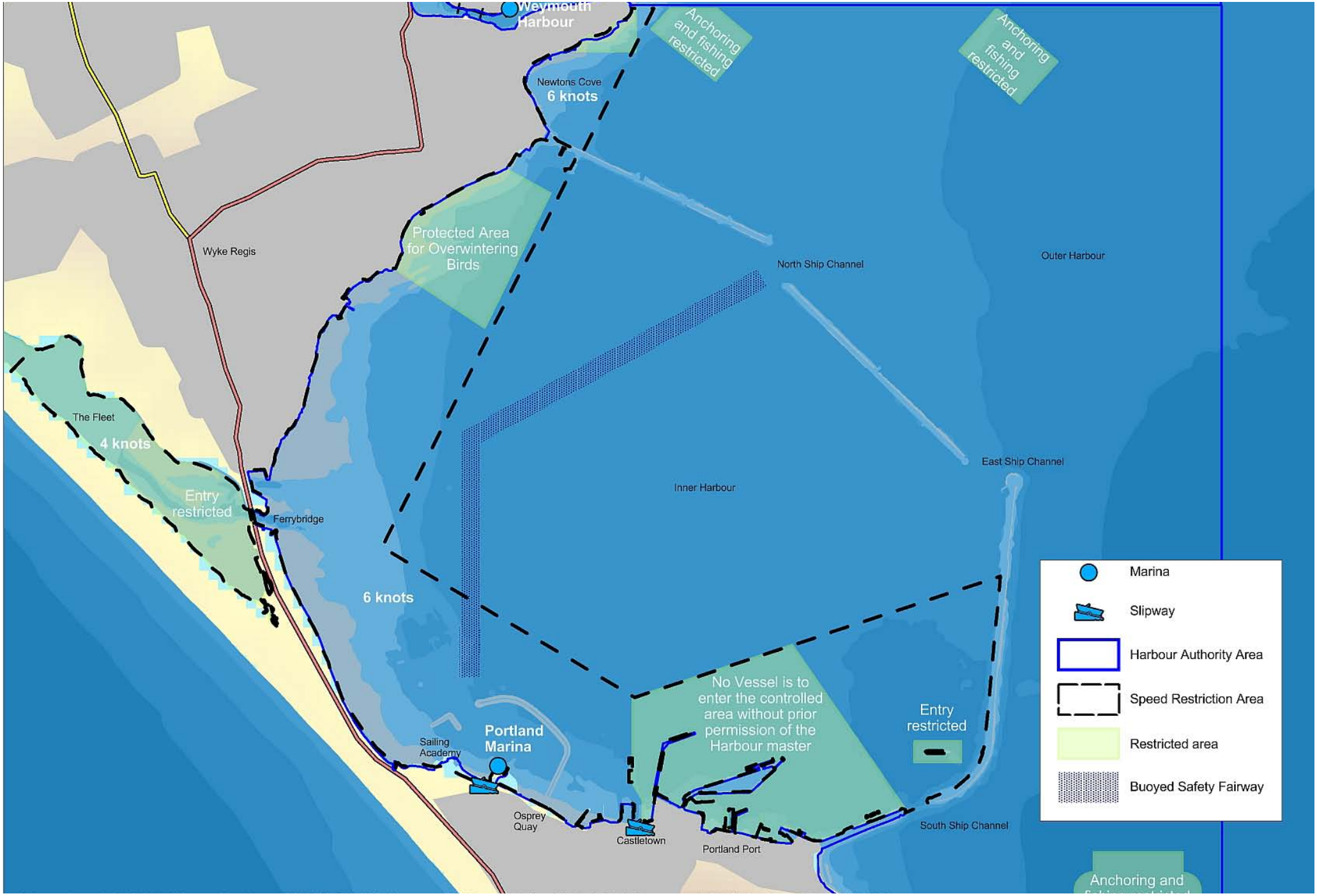


Figure 51: REA 1 Portland Harbour recreational management plan



Ensuring recreational management plans adapt to changing uses

Justification

Whilst growth and stability of the recreation and tourism industry is heavily dependent on the general health of the UK economy, and therefore forecasting is difficult, it is nevertheless anticipated that there will be steady growth in this sector. Watersports are becoming increasingly popular in Dorset; surfing, kayaking and open water swimming have all increased dramatically. Factors such as increasingly active lifestyles, leisure time and affluence, have led to these increases, while ongoing technological improvements have extended the season for many recreational activities. Marine wildlife tourism is also continuing to increase – for example, cetacean watching is estimated to be growing at 10% a year.

Tourism and recreation is expected to increase even more following the 2012 Olympic sailing events in Weymouth and Portland and, in the longer term, warmer and more reliable summers due to climate change are likely to attract more recreational watersport participants to the area. Newer watersports such as coasteering, kitesurfing and the rise of PWCs have brought new management challenges, and it is likely that there will be more innovations in the next five to ten years. It is essential that the relevant authorities, most notably Portland Harbour Authority and Weymouth and Portland Borough Council, continue to monitor these changes and adapt their management strategies accordingly. Regular liaison with the MCA and RNLI is encouraged to ensure activities are managed and coordinated at both the coastal zone and further out to sea.

REA 2: New recreational activities and changes in patterns of use should be monitored and plans adapted accordingly, or new management strategies introduced where necessary, in line with the principles of responsible and safe use.

This policy complies with:

- Portland Harbour Management Plan
- Weymouth & Portland Borough Council Local Plan
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

Supporting suitably designed and maintained public moorings in sensitive areas

Justification

Dorset has a very high number of sailing boats and motor-cruisers, thanks to its exceptional sailing waters, good climate and pockets of high affluence. Less experienced boat owners, or those who do not know the waters particularly well, can unintentionally ground their boats in shallow coastal areas. In the summer months popular locations such as Studland Bay, Poole Harbour, Lulworth Cove and Weymouth Bay become very busy; competition for prime anchoring and mooring locations leads to boats anchoring in areas which contain sensitive seabed features such as seagrass beds or heritage sites. Analysis of three years' worth of aerial photography has confirmed this problem[23].

Seagrass beds help trap sediments, act as a nursery area for young fish and shellfish, provides a habitat for many other plants and animals, as well as acting as a carbon trap. There is growing evidence that anchoring and the scouring actions of chains used in traditional moorings can impact seagrass health and The Crown Estate and Natural England are currently funding an independent study at Studland Bay to assess these impacts. Anchoring can also potentially damage sensitive heritage features such as wrecks.

'Eco-moorings', with a screw-in anchor and spring-loaded riser system or mid-line float, can reduce scouring effects and have been developed in the USA to withstand hurricane force conditions. Although these are relatively untested for reliability in the UK, they are well demonstrated and commonly used in other countries, and could provide a solution to seagrass damage in popular mooring sites within the Marine Plan area.

This policy actively encourages the installation of such moorings in the areas identified as having the highest density of boats anchoring in seagrass areas, or where more traditional anchors appear to be causing damage to the seabed.

REA 3: Sensitive seabed features should be protected from the impact of grounding or anchoring by the provision of moorings which minimise detrimental impacts on the seabed.

23 C-SCOPE project team analysis, using Dorset County Council aerial photography from 2002, 2005, 2009 and DERC seagrass data.

REA 4: Installation of new moorings and anchorages which minimise detrimental impacts on the seabed will be encouraged in the areas shown in Figure 52.

These policies comply with:

- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- EC Marine Strategy Framework Directive (2008/56/EC)
- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- The Conservation of Habitats and Species Regulations 2010
- Dorset Coast Strategy 2011-2021

Protecting over-wintering birds

Justification

The Marine Plan area is an important location for many water birds. Birds which breed on the cliffs include fulmar and shag, whilst breeding populations of puffin, guillemot and razorbill are located on the limestone cliffs west of Swanage. Wading birds are abundant in tidal mudflats, including those at Poole Harbour, Portland Harbour, and most significantly The Fleet. The Chesil and Fleet SPA, which is also a Ramsar site, supports large numbers of wintering waterbirds and has been designated for amongst other species its over-wintering populations of the dark-bellied brent goose, which constitutes 1.1% of the Western Siberia/Western Europe population.

Human recreational disturbance on over-wintering birds has been shown to cause behavioural changes and interruptions to foraging and roosting which, over time, can lead to them leaving a site permanently. This is particularly significant if there are few suitable alternative sites to roost or feed. There is also evidence that just one disturbance event an hour could cause a significant effect on bird condition and mortality. Human trampling of mud-flats and sand can also impact on the birds' invertebrate food sources. Although different species react to different pressures, the recreational activities which have been shown to cause the most disturbances include dog walking, kite surfing, canoeing, dinghy sailing, yachts/motorboats and other water borne visitors.

This policy tasks the competent and relevant authorities with ensuring that recreational users avoid known over-wintering bird areas, particularly those with European designation, to protect populations and ensure continued compliance with European management targets. It also encourages recreational users themselves to avoid disturbance. Evidence suggests that dog walkers cause fewer disturbances when they follow a predictable route, and the provision of suitable footpaths in the more popular areas close to over-wintering bird areas should perhaps be considered. Additionally, it encourages recreational organisations to educate their members to conduct their activities with respect to over-wintering birds and other resident wildlife.

Figure 52: Potential eco-sensitive mooring areas

REA 5: Recreational activities which cause disturbance should be avoided in areas important for over-wintering birds, particularly Special Protection Areas.

- Birds Directive (79/409/EEC)
- The Convention on Wetlands of International Importance 1971 (Ramsar Convention) as amended in 1982 and 1987
- EC Marine Strategy Framework Directive (2008/56/EC)
- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- The Conservation of Habitats and Species Regulations 2010
- Dorset Coast Strategy 2011-2021

Improving facilities for waterborne transport and other sea users

Justification

Dorset attracted over 3,700,000 visitors in 2008, approximately 1,700,000 of which visited Purbeck, West Dorset and Weymouth & Portland. The coastline is a big draw, and features such as Lulworth Cove, Stair Hole and Durdle Door attract up to 750,000 visitors a year; in 2008 Purbeck district attracted 744,000 day visits to the coast, equating to a total spend of £29 million[24].

Tourism is expected to increase even more following the 2012 Olympic sailing events in Weymouth and Portland and, in the future, longer, warmer summers due to climate change are likely to attract more visitors. Dorset's roads are already heavily congested during the busy summer months and although schemes to encourage more use of public transport are in place, the roads and related infrastructure cannot cope with the anticipated scale of growth in traffic. Impacts to the landscape and communities living there could be significant. However, capacity cannot be expanded to cope without significant degradation of the Coast itself and could even be reduced due to loss of facilities arising from coastal erosion.

In the future, therefore, alternatives to the car may become not just desirable but essential, not only as an added attraction for tourists but also for the thousands of local residents who commute to work between coastal towns. A feasibility report commissioned by the Dorset AONB and Jurassic Coast Transport Working Group has confirmed that there is great potential for waterborne transport within the area, identifying three pilot routes including one between Weymouth and Portland which could extend to Bowleaze Cove and Lulworth Cove. The report estimates that a service could carry 137,000 passengers making 223,000 trips a year between Weymouth and Portland alone[25].

Waterborne transport is not viable however without supporting infrastructure. New infrastructure would also benefit local communities and other sea-users. There are several suitable piers and jetties in existence in Weymouth and Portland, but these would need to be developed at Bowleaze and Lulworth coves. The report suggests seasonal, low-impact pontoons with floating walkways offer a potential solution in Studland Bay, and this approach would be supported by this policy.

REA 6: Development of infrastructure to support waterborne transport, particularly as an alternative to road transport, will be supported where consistent with the other policies in this plan.

This policy complies with:

- Sustainable Development in Rural Areas (PPS7, 2004)
- Bournemouth, Poole and Dorset Local Transport Plan 2011 - 2026
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

Improving coastal access infrastructure

Justification

Due to the absence of a coast road, and the presence of rugged cliffs throughout Purbeck, much of the coastline of the Marine Plan area is inaccessible except by foot or sea. There are a limited number of sites that give access to the sea for recreation, and this can cause congestion on sometimes narrow roads during the summer months. Over recent years many new watersports have emerged and more traditional ones have become increasingly popular which is leading to even more pressure on existing recreational access points.

24 Value of Tourism 2008, Dorset. South West Tourism.

25 Dorset and East Devon Waterborne Passenger Transport Feasibility Study (2011). Report by Fisher Associates for Dorset AONB and Jurassic Coast Transport Working Group.

Currently there are six public slipways within the Marine Plan area, and all but one of these charge a fee for their use. Other access facilities to be found within the Marine Plan area include boat storage yards, car parking, easements to the waterfront, wharves and piers. Some of these facilities are in poor repair, and this policy encourages developments which will seek to improve them. Further proposals to enhance access are encouraged provided that they take full account of policies REA 10 and REA 11. In enhancing coastal access, this policy could also encourage economic growth and increase wellbeing as tourists and communities are able to make more use of the marine environment.

REA 7: Improvements to existing marine and coastal access points and the development of appropriately located new ones will be encouraged.

This policy complies with:

- Sustainable Development in Rural Areas (PPS7, 2004)
- Weymouth & Portland Borough Council Local Plan
- Dorset Coast Strategy 2011-2021

Improving access to the coast and marine environment, including that for under-represented groups

Justification

People come to the Dorset coast for many reasons; to swim, sunbathe, walk, sail, eat, dive, fish, or simply to contemplate its beauty. Having access to the coast and marine environment improves people's quality of life and wellbeing and helps them to appreciate the rich heritage of the area, which in turn helps to engender a sense of ownership and a desire to safeguard their environment.

Policies TCC 6 and TCC 7 encourage more community participation, however it is harder for some people to access and enjoy the coast than others, either due to physical ability or psychological barriers. This is particularly compounded in parts of the Marine Plan area, due to its remote and rugged nature - many of the rocky beaches in Purbeck can only be accessed on foot via steep coastal paths. Whilst in many parts of the Marine Plan area, improving physical access is not practicable; there are ways in which these barriers can be removed.

The Weymouth and Portland National Sailing Academy was designed to provide some of the best disabled water sports facilities in the UK, and through the delivery of the 2012 sailing events it is hoped that there will be a better understanding of the diversity of local communities and improved disabled access and facilities for local people and visitors. This policy also encourages marine educators to engage with under represented groups to help break down some of the psychological barriers that may prevent them enjoying the coast.

REA 8: Developments which remove the physical and psychological barriers that prevent people, including under-represented groups, from accessing and enjoying the coast and marine environment will be supported where consistent with the other policies in this plan.

This policy complies with:

- Equality Act 2010
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan
- Dorset Coast Strategy 2011-2021

Maintaining perceived tranquillity and remoteness

Justification

The Marine Plan area coastline is a contrast between busy seaside towns and remote, rural landscapes. Within the 'Coastal Waters' seascape character area, there is a sense of tranquillity and remoteness with views to land being dominated by relatively unspoilt and undeveloped agricultural land. Whilst many people flock to Weymouth and Swanage to enjoy the high quality beaches, shops and arcades, there are as many who greatly value the sense of tranquillity provided by walking on the south west coast path or sitting quietly at a remote, rocky beach.

These tranquil areas bring economic prosperity to the Marine Plan area from tourism, and also contribute to the wellbeing of local communities. Upgrading of access and infrastructure, which has the potential to open up areas to tourism and recreation activities, should therefore be carefully evaluated to ensure that the intrinsic qualities of these coastal waters and associated coastal land areas are protected.

With reference to Figure 53, St Aldhelm's Head is identified by the Dorset AONB team as being particularly remote, due to a lack of roads, car parks and other access routes to the promontory. The stretch of coast from Osmington Mills to Chapmans Pool, with the exception of Lulworth Cove, is also identified for its lack of road access from the A352 at the western end (except by tracks or PROWs), limited parking and relatively low impact from visitors. At the eastern end, access to the coast is even more limited, and developments linked to access and recreation here would particularly impact on, and reduce, those rare qualities.

The area to the west of Osmington Mills has been selected because it is close to the urban fringe of Weymouth and provides a tranquil area for Weymouth people to enjoy; development here could impact on the health and wellbeing of communities in the area and the Urban Fringe Management Plans relating to The Fleet also state that inappropriate development and expansion into surrounding more rural landscapes should be controlled.

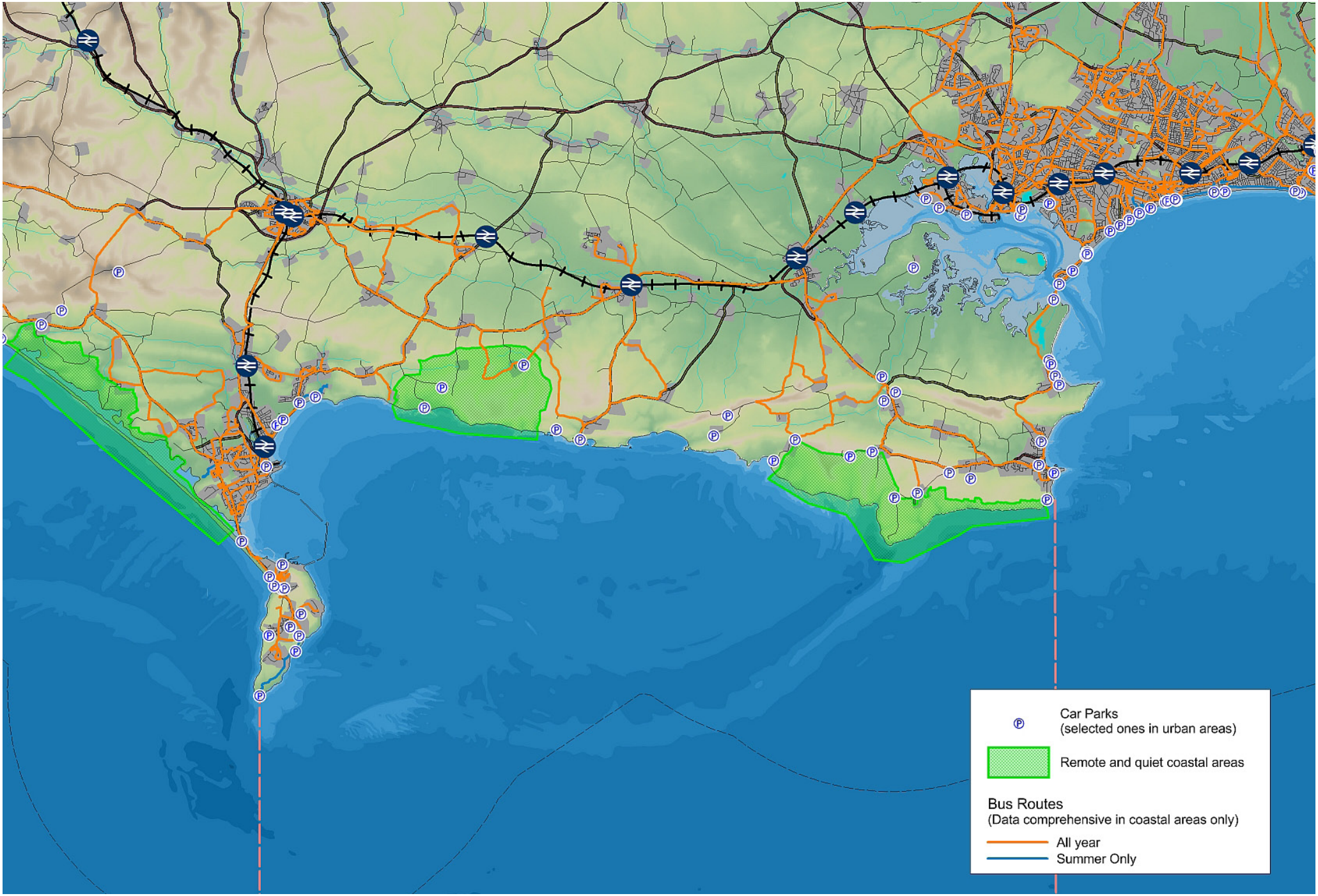
The Fleet is renowned for its sense of tranquillity and remoteness, and the AONB management plan has highlighted the need to conserve these perceptions.

REA 9: Developments which would threaten the tranquillity and remoteness of the areas highlighted in Figure 53 should be avoided.

This policy complies with:

- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Dorset AONB Management Plan 2009-2014
- Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset and East Devon Coastal Corridor Action Plan
- Purbeck Heritage Strategy 2010-2015
- Dorset Coast Strategy 2011-2021

Figure 53: Remote and quiet coastal areas



Ensuring visitor attractions are appropriately located

Justification

Policy REA 9 highlights remote and tranquil coastal areas within the Marine Plan area and why these areas are important to the economy, health and wellbeing of surrounding communities. In addition, these are often areas of high biodiversity and ecological sensitivity. Therefore, whilst it is important to promote access in some areas of the coast, it is important for other areas to remain inaccessible to protect, and remove pressure on, the environment.

Both the AONB and JCWHS management plans identify the challenges of providing and encouraging access to the coast, whilst minimising the impacts on the environment and local communities. Of particular concern is the increasing number of visitors to small coastal villages, causing traffic congestion, inflated house prices and a reduced quality of life for the residents[1]. Equally, the coastal margin can suffer from erosion and habitat damage caused by thousands of people trampling the same paths.

By directing developments and activities towards areas that already have the capacity and facilities to accommodate a large number of visitors in one place – this policy helps to protect the Marine Plan area's sensitive and tranquil coastal areas whilst ensuring the needs of visitors are met. Care must be taken to ensure such areas do not become overcrowded, which in itself can lead to increased strain on facilities and transport networks. This carrying capacity is addressed in policy REA 11.

REA 10: Developments or activities which may increase visitor numbers should consider their effect on remote, tranquil and ecologically sensitive coastal areas and preferably target locations in established 'honeypot' areas as outlined in the AONB and JCWHS management plans.

This policy complies with:

- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Dorset AONB Management Plan 2009-2014
- Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset and East Devon Coastal Corridor Action Plan
- Purbeck Heritage Strategy 2010-2015
- Dorset Coast Strategy 2011-2021

1 Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014.

Cumulative effects of promoting coastal and marine tourism on terrestrial infrastructure

Justification

Recreation and tourism is an essential part of the Marine Plan area's economy, with day visits bringing £32 million to Weymouth and Portland and £29 million to Purbeck in 2008 alone. However, the terrestrial infrastructure to support the high number of visitors to popular locations such as Lulworth Cove which receives up to 750,000 visitors a year, is already struggling to cope.

Despite innovative public transport schemes, the vast majority of visitors to the Marine Plan area still travel by car, and the road network is of primary concern. Research shows that people and businesses are dissatisfied with the severe congestion and delays experienced on major routes leading to the Marine Plan area. This has an impact on the local economy in addition to having social and environmental cost. For example, there are four Air Quality Management Areas in Dorset where pollution exceeds acceptable levels – vehicles being the main contributing factor in each one. Relating to this, car parks in many of the popular tourist locations are at full capacity on hot days at peak holiday season, and at such times illegally or inappropriately parked cars can block emergency vehicle access, cause inconvenience and damage the roadside environment.

Increased visitor numbers can also put a strain on the existing sewerage facilities, particularly when there is heavy rainfall. Policy HME 8 covers this issue in more detail. Litter is a major problem, particularly on popular beaches, and developments must consider the provision of adequate waste disposal sites as set out in policy HME 12.

Suitable mitigation measures to alleviate pressure on terrestrial infrastructure should therefore be identified at the early stages of development proposals.

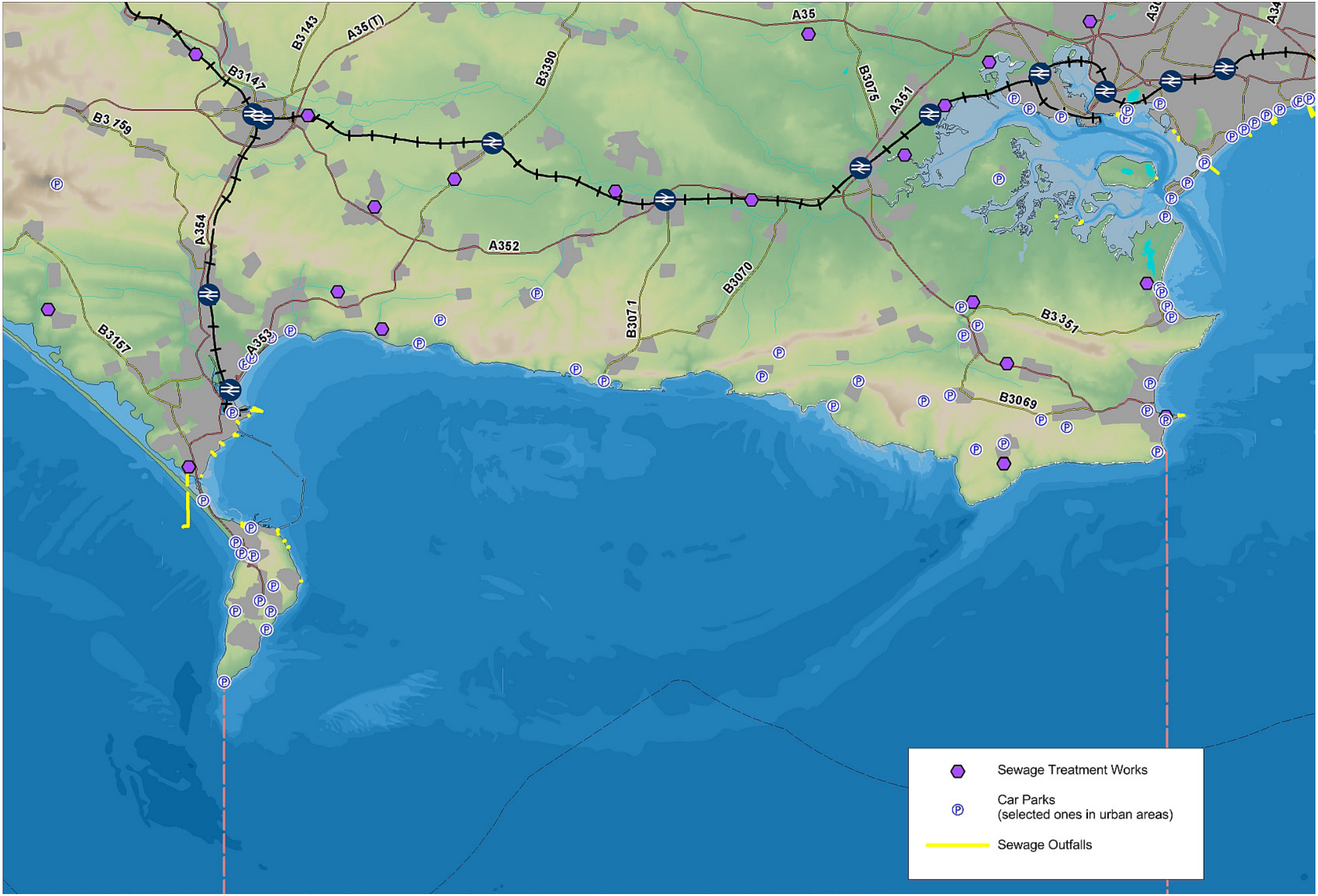
Measures could include improved public transport facilities, the provision of walking and cycling routes which connect developments to the bus or rail network, bike parking facilities, innovative park and ride schemes and sympathetically designed car parking.

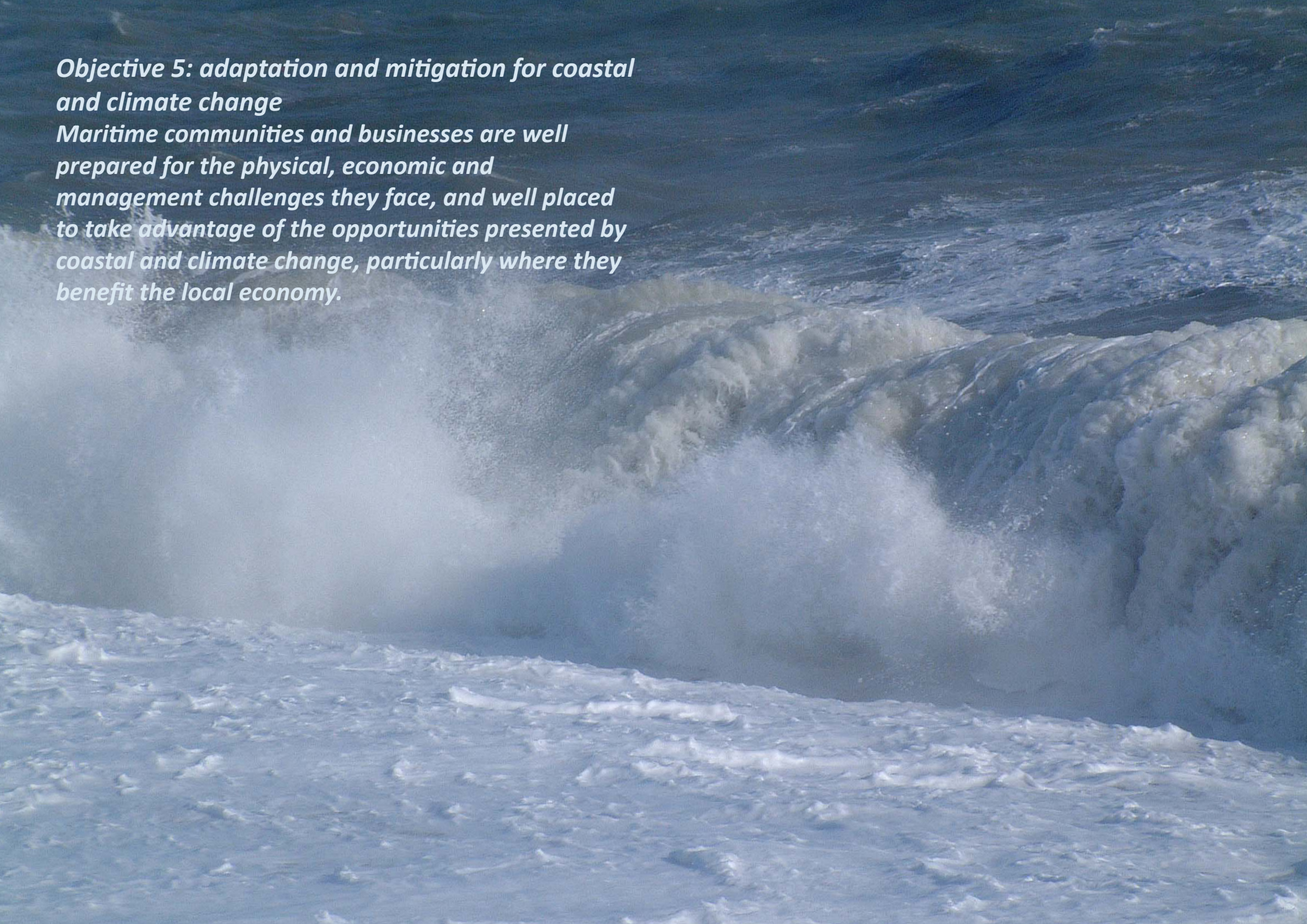
REA 11: Developments which are likely to increase visitation to the Marine Plan Area, or could potentially increase local recreational use of the area, should consider the capacity of existing terrestrial infrastructure; particularly that set out in Figure 54. Where satisfactory mitigation cannot be achieved, such developments should be avoided.

This policy complies with:

- Urban Waste Water Treatment Directive (91/271/EEC)
- Bathing Water Directive (2006/7/EC)
- Sustainable Development in Rural Areas (PPS7, 2004)
- Marine & Coastal Access Act 2009
- Dorset AONB Management Plan 2009-2014
- Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset and East Devon Coastal Corridor Action Plan
- Purbeck Heritage Strategy 2010-2015
- Dorset Coast Strategy 2011-2021

Figure 54: REA 11 Existing terrestrial infrastructure





Objective 5: adaptation and mitigation for coastal and climate change

Maritime communities and businesses are well prepared for the physical, economic and management challenges they face, and well placed to take advantage of the opportunities presented by coastal and climate change, particularly where they benefit the local economy.

Reducing greenhouse gas emissions

Justification

Over the 20th Century, the Earth's temperature has warmed by approximately 0.6oC. The scientific consensus is that this global warming is caused by increased atmospheric concentration of greenhouse gases, in particular, carbon dioxide (CO2) and methane, creating a "greenhouse effect". Without action to reduce emissions of these greenhouse gases, the Earth's temperature is likely to rise at an even faster rate. The implications are rising sea levels, more extreme weather events such as floods and droughts, ocean acidification and even the risk of large scale changes such as a shut down of the Gulf Stream. The costs to the environment, economy, human health and communities are potentially devastating.

At a national level, the Climate Change Act 2008 established a long-term framework to cut greenhouse gas emissions by at least 80% below 1990 levels by 2050. The burning of fossil fuels for energy to drive industry, transport and heating, is one of the major sources of greenhouse gas emissions, and the UK has a legally binding EU target for 15% of energy consumption to come from renewable sources by 2020. Other sources include poor use of land such as intensive animal production or deforestation, landfill disposal sites and cooling units containing HFCs.

In Dorset, the renewable electricity installed capacity has only increased by 500kW since 2007, and it would need approximately 40 times the total existing renewable energy capacity to be installed by 2020 in order to play an equal part in delivering the UK's legally binding share of the European renewable energy targets. Developments should aim to install renewable energy solutions wherever possible, and there are numerous grants available including the Low Carbon Buildings Programme which offers grants towards small scale biomass heating systems. Using locally sourced raw materials and reducing the distance employees must travel to work will also help to reduce overall emissions from development. The Carbon Trust provides specialist advice to businesses to help them cut emissions, and developers are encouraged to consult with them at an early stage.

CAM 1: Development proposals should aim to minimise greenhouse gas emissions over the lifetime of the development, with a view to achieving net reductions in emissions overall and in relation to specific developments wherever possible.

This policy complies with:

- United Nations Framework Convention on Climate Change, Kyoto Protocol
- Energy Act (2011)
- Climate Change Act (2008)
- Climate Change and Sustainable Energy Act (2006)
- Draft Bournemouth, Dorset and Poole Renewable Energy Strategy (2011)
- Dorset Coast Strategy 2011-2021

Supporting renewable energy

Justification

The UK has among the highest levels of exploitable renewable energy resources in the world, including wind, wave, tidal stream and tidal range. Through new legislation, including the Climate Change Act (2008) and Energy Act (2008), the UK Government is aiming to tackle climate change by achieving 15% renewable energy use by 2020, and it is looking to offshore renewables to help fulfil a major part of this target. In addition to the potential for significant broad-scale environmental benefits through mitigating greenhouse gas emissions, there are a number of potentially significant socio-economic benefits from the offshore renewable sector, including employment opportunities, export business and energy security.

The waters of the Marine Plan area offer significant offshore wind resources, and this is reflected in the recent lease to Eneco of Zone 7 (West of Wight) of the Round 3 offshore wind sites. The total zone area equates to 723.7km2, and it is proposed that 197km2 of this just outside the Marine Plan area will be developed. This development offers significant opportunities for economic growth, with Portland Port offering facilities as both a construction and service port. Policy SME 9 supports this ambition. There could be many more jobs created through the supply chain. Businesses which could benefit include project developers and services such as environmental consultants, construction and engineering firms, and those offering operation and maintenance skills.

The area south of Portland Bill provides a tidal stream resource, although it is not considered one of the UK's best tidal resource locations due to relatively shallow water depths and inconsistent tidal flows. It also lies within the Studland to Portland proposed SAC, and potential developments must have particular regard to policies HME 1 and HME 2. Further areas around St Albans ledge may be suitable in the future should technology progress to enable commercialisation in slightly lower resource areas.

Wave resources within the Marine Plan area are insufficient for full scale technologies. However, there is potential for ¼ scale wave demonstration devices and, in line with Portland Port's ambition to become a centre for excellence in renewable energy, proposals for pilot schemes to utilise this resource will be supported.

Another potential small-scale renewable energy development which would be supported is the deployment of shoreline wave devices. These are fixed or embedded into structures such as breakwaters and operate at low tidal ranges of less than 2m. A SWRDA Technical Report identifies a 58km section of coastline, including parts of the Marine Plan area, as having suitable conditions for such devices[26].

CAM 2: Renewable energy developments, including small-scale and pilot schemes, in the marine and coastal environment will be supported wherever consistent with the other policies in this plan.

This policy complies with:

- United Nations Framework Convention on Climate Change, Kyoto Protocol
- Climate Change Act (2008)
- Climate Change and Sustainable Energy Act (2006)
- Draft Bournemouth, Dorset and Poole Renewable Energy Strategy (2011)
- Dorset Coast Strategy 2011-2021
- Marine and Coastal Access Act (2009)
- Dorset Coast Strategy 2011-2021

Working with natural marine and geomorphologic processes

Justification

The natural marine and geomorphologic processes which take place across the inter-tidal zone are both complex and delicate. Small changes or disruptions to processes such as tidal patterns, wave height, wave direction and the movement of beach and seabed materials can have significant and wide-spread impacts. Developments likely to cause such disruption include coastal defence and protection works, dredging, piers and jetties, artificial reefs and landing points of offshore cables and pipelines.

26 South West Regional Development Agency (SWRDA) Offshore Renewables Resource Assessment and Development Technical Report (2010).

Structures placed in moving water can disrupt the water's flow. Piling for piers, jetties and coastal defence and protection works may increase flow rates immediately around the structure which may produce scour and erosion, or increased deposition of sediments depending on the conditions and structure. Coastal defences such as rock armour deliberately set out to prevent natural erosion of dynamic coastal areas, and indirect changes to the coastline and seabed might also occur in response, such as localised or more widespread coastal erosion or accretion and changes to offshore features such as submerged banks and ridges.

Interruption or changes to water flow and the supply of sediment due to infrastructure has the potential to affect physical habitats along the coastline of the Marine Plan area. Plant and animal communities competing for space are adapted to survive in niche environments where even small changes can have a significant impact. Changes to natural processes caused by developments and activities can also affect the level of risk of coastal flooding and erosion to which coastal communities are exposed. This in turn has serious economic and health implications.

By aiming to work with natural processes and consulting relevant plans such as local authority strategic flood risk plans and SMPs, developers can reduce impacts on the environment and coastal communities. Where it is not possible, they should aim to minimise and mitigate any geomorphological changes that their development or activity will have on coastal processes. Policy CAM 4 addresses relevant plans in more detail. Liaison with local authority planners and the Environment Agency and Natural England is essential to ensure inter-tidal developments cause minimum impact.

CAM 3: Developments which span the inter-tidal zone, or have a terrestrial landing-point, should aim to work with natural marine and geomorphologic processes. Coastal flooding and erosion risk should be considered and relevant plans consulted.

This policy complies with:

- Circular on the Protection of World Heritage Sites 07/2009
- EC Marine Strategy Framework Directive (2008/56/EC)
- Development and Coastal Change (PPS 25 Supplement: March, 2010)
- Development and Flood Risk (PPS25, 2010)
- PPS 9: Biodiversity and Geological Conservation
- Marine & Coastal Access Act 2009
- The Dorset & East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Coast Strategy 2011 - 2021

Ensuring inter-tidal developments consider terrestrial plans

Justification

The inter-tidal and coastal zones within the Marine Plan area are not only subject to complex natural processes but they also have a complex set of, sometimes conflicting, management plans in place. It is essential that developments which occur within the inter-tidal or coastal zones should consult all relevant plans to ensure that they do not have any serious conflicts with existing policy.

Key amongst these is the Durlston Head to Rame Head SMP2 which assesses the large-scale risks associated with coastal processes and helps reduce these risks to people and the environment. The Plan is the basis for deciding and putting in place specific flood and erosion risk management schemes, coastal erosion monitoring and further research on how communities can best adapt to change.

Local Plans also address the issues of coastal change, flood and erosion risk and contain policies pertinent to development within the coastal zone. National guidance tasks local planning bodies to identify coastal change management areas and to direct development away from areas which are vulnerable to coastal change unless it is temporary development that has wider economic benefits, an acceptable coastal use and could be relocated when required. These have not so far been identified in Dorset. The Environment Agency has also developed a number of local beach management plans within the Marine Plan Area, which could have implications for inter-tidal developments.

Any development which spans the inter-tidal or coastal zones within the Marine Plan area must have particular regard for the Outstanding Universal Value (OUV) of the JCWHS. Erosion is the key feature that maintains both geological and biological interests along the coast and forms part of its OUV description for World Heritage Status. The greatest threat to the Site therefore is through the development of coastal defences, either through the prevention of natural erosion or the use of inappropriate resources in beach replenishment works, and other inter-tidal developments which alter its setting. Policy CAM 3 emphasises the need to work with natural processes, which is in keeping with the JCWHS Management Plan; however there may be some instances where this conflicts with risk management strategies within the SMP 2, and developers must engage with all relevant authorities and management teams to address and resolve such conflicts[27].

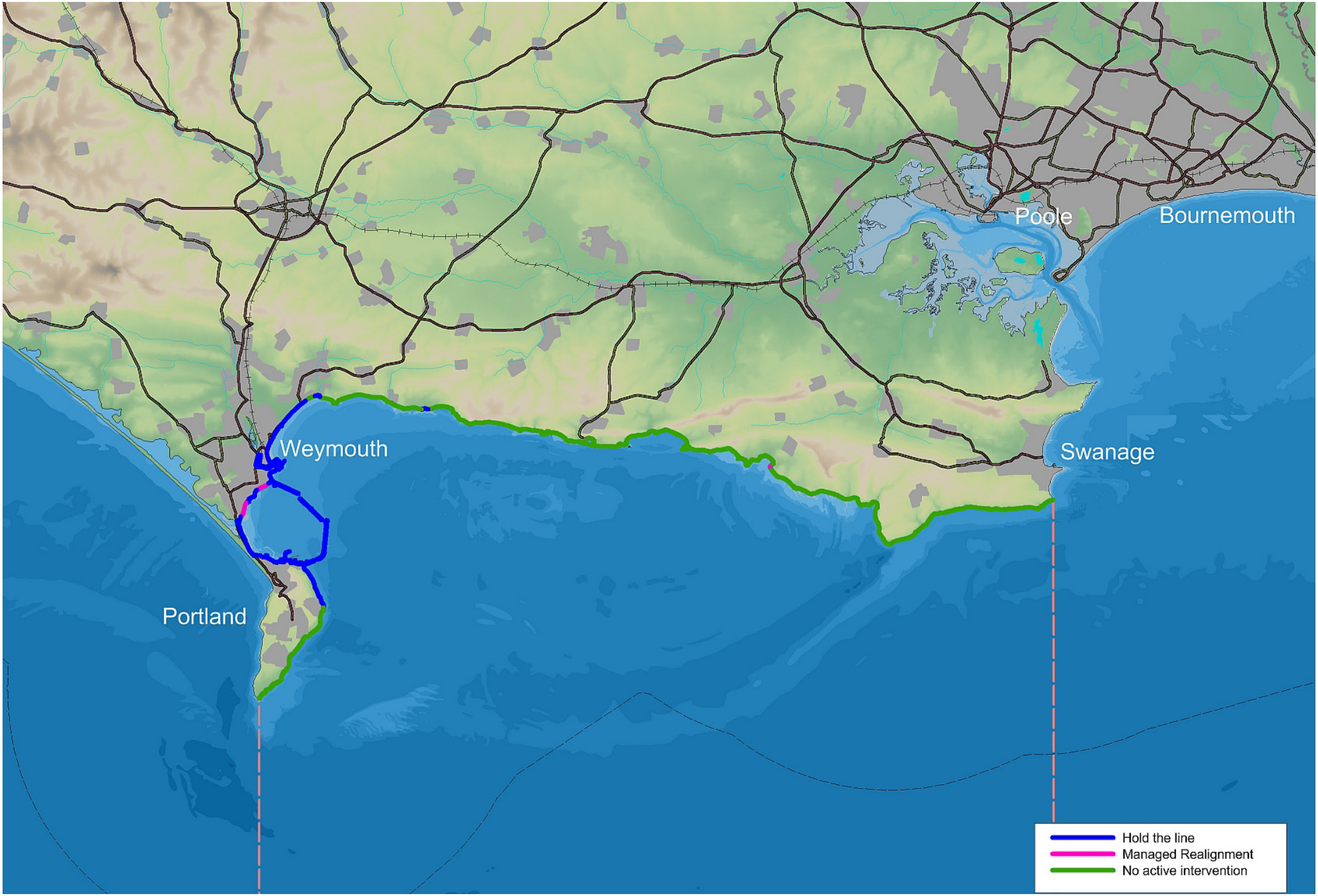
27 The Defra funded Jurassic Coast Pathfinder project highlighted the benefits of early engagement with communities when planning to adapt to coastal change and commissioned a study on coastal change and spatial planning – reports of both can be found on the Jurassic Coast website.

CAM 4: Developments which span the inter-tidal zone should take account of relevant coastal change policies as set out in Local Plans, Shoreline Management Plans and beach management plans. In addition, particular regard should be paid to the need to protect the Outstanding Universal Value of the Jurassic Coast World Heritage Site as set out in its Management Plan. Refer to Figure 55.

This policy complies with:

- Circular on the Protection of World Heritage Sites 07/2009
- EC Marine Strategy Framework Directive (2008/56/EC)
- Development and Coastal Change (PPS 25 Supplement: March, 2010)
- Development and Flood Risk (PPS25, 2010)
- PPS 9: Biodiversity and Geological Conservation
- Marine & Coastal Access Act 2009
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

Figure 55: CAM 4 Durlston Head to Rame Head SMP2 management policy 0-20 years



Encouraging communities and coastal businesses to adapt to natural and climate-induced coastal change

Justification

Climate change is happening, and its effects are already impacting on the marine environment and coastal communities[28]. One of the more immediate and obvious changes is sea level rise, which in the western counties of Britain has been increasing at approximately 2.5mm per year during the 20th century but this rate is now accelerating rapidly. Predictions for the next 100 years suggest a rate of up to 1cm per annum (averaged over the whole period). It is also predicted that the frequency of extreme storm events will also increase, leading to, in the long-term, an increasing amount of property becoming subject to flood and erosion risk[29].

More frequent storm events could also lead to untreated sewage being discharged into the marine environment through combined sewer overflows during times of peak rainfall, and diffuse runoff from agricultural and urban areas could also increase. Once these outfalls reach the sea by longfall pipelines, there could be ineffective and unexpected directional disposal of sewage due to possible disruptions in current flow. Disposal grounds for dredged material further offshore could also be disrupted by current changes, rendering them unsuitable.

Offshore developments could be affected by smaller weather windows for construction if there is an increase in the frequency and severity of storms, and they may also face operational and maintenance problems. However, opportunities may arise from predicted changes to waves, wind and tides which could provide an increased source of energy for the renewables industry. Changes in current regime could also lead to increased scour around legs and supports of installations or expose cabling and pipelines – making them more prone to damage by anchors and trawling.

For the fishing industry, climate change may cause some species to disappear from local waters, whilst opportunities may open up as new, warmer-water species arrive. Increased storminess could lead to fewer days at sea for fishermen, and greater risk of getting into difficulties. In the short term, climate change is unlikely to have a significant effect on aquaculture. However, rising sea temperatures could increase growth rates for some important species, yet cause cultivation difficulties for others.

It may also be possible to cultivate new species within the Marine Plan area. As temperatures increase, farmed species may become more susceptible to new diseases resulting in higher mortality rates, while toxic algal blooms associated with warm water could potentially decrease shellfish growth rates, and more significantly could build up to harmful levels within the food chain.

Ocean acidification is expected to have severe impacts on several economically important marine resources including fish stocks and aquaculture. The inhibition of shell growth is one major concern, and CO2 increases may also cause shifts in tolerance ranges in growing and reproductive capabilities.

To survive and prosper in the long-term, developments should take these implications into account, and build adaptation strategies into their plans. For example, businesses in flood risk areas could make simple adaptations such as raising electrical points, removing plaster from walls in basement storage areas and installing impervious floor and wall surfaces. Water companies might be considering how they could increase capacity in sewerage systems, and offshore developments could ensure they use low-maintenance materials to ensure minimum hours at sea. Developers can find information and support on climate change adaptation from the Environment Agency, Defra and DECC.

CAM 5: Coastal and offshore developments should consider the potential impacts of climate change and incorporate adaptation strategies into their plans.

This policy complies with:

- Development and Coastal Change (PPS 25 Supplement: March, 2010)
- Development and Flood Risk (PPS25, 2010)
- Marine & Coastal Access Act 2009
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Coast Strategy 2011 - 2021

28 Marine Climate Change Impacts Partnership 2010-2011 Annual Report Card.
29 http://www.oursouthwest.com/climate/scopingstudy.htm

Encouraging local communities to take advantage of coastal and climate change opportunities

Justification

Whilst climate change will undoubtedly have mostly negative impacts, there will also be opportunities that communities and businesses within the Marine Plan area will be able to take advantage of. Warmer, longer summers could provide economic benefits as holiday makers stay at home rather than travel abroad. Additionally, the Mediterranean climate is predicted to become even warmer and drier, which could drive more European holiday makers to the UK. There is potential for innovative joint solutions to climate change; for example beach nourishment at Boscombe which was part of a major regeneration scheme, acts as a soft sea defence and has also provided more space for beach recreation, including a thriving beach volleyball business. Longer, warmer summers will also enable local communities to be more active in the marine environment for longer, increasing health and wellbeing. Developments which seek to increase recreation and tourism within the Marine Plan area should ensure they also have particular regard for policies REA 9 and REA 10

Warming seas within the Marine Plan area could provide opportunities for the production of acceptable and commercially desirable fish and shellfish species. European sea bass are beginning to move northwards, and warmer waters could increase growth rates for some important species such as Atlantic salmon, mussels and oysters. Offshore windfarms, which are a government response to climate change, could also provide opportunities for co-location of mariculture; co-location is addressed in policy SME 6.

Offshore renewable energy is a major opportunity for local communities and businesses, particularly for ports and smaller businesses in the supply chain such as marine engineers, boat repairers, service boats, and accommodation providers. Policy CAM 2 expands on these opportunities.

Communities can find it difficult to consider the implications of coastal and climate change, and how they might turn it to their advantage. The Jurassic Coast Pathfinder project worked with six communities, three of them within the Marine Plan area, to consider how they might adapt to predicted change. More information can be found on the Jurassic Coast website.

CAM 6: Developments or activities which enable communities and businesses to take advantage of opportunities that may arise from climate or coastal change will be supported where consistent with the other policies in this plan.

This policy complies with:

- Development and Coastal Change (PPS 25 Supplement: March, 2010)
- Development and Flood Risk (PPS25, 2010)
- Marine & Coastal Access Act 2009
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan
- Dorset Coast Strategy 2011-2021

Objective 6: strategic significance of the marine environment

Decisions about and uses of the marine environment recognise its strategic significance to the UK's national security and it's social, economic and environmental well-being.

Accommodating strategic defence interests in Dorset's marine environment

Justification

UK defence policy demands the maintenance of capable armed forces, under the responsibility of the Ministry of Defence (MoD). In meeting this requirement, the military require residential bases, and access to adequate facilities for exercise and training. Dorset continues to play its part in fulfilling the MoD's requirements by hosting three significant military establishments, which represent long-term commitments.

The most significant of these is the RAC Gunnery School at Lulworth, which lies entirely within the Marine Plan area. The Lulworth ranges have been a feature of the coast since the First World War and safety requirements mean that public access to the coast within the ranges is not permitted for much of the year. The sea danger areas extends out to six nautical miles, and restricts recreational boating and fishing during weekdays outside the main holiday periods, and during six weekends each year. Range safety boats patrol the area during firing, and times are sent monthly to local yacht clubs and fishermen, as well as broadcast on Radio Solent during the shipping and weather news. Fishing boats and recreational users which stray into the firing range can cause expensive delays to the MoD.

There is an additional small-arms range on the northern side of the Fleet with a safety area that extends across Chesil Beach and out to sea. The range is typically used for 150 days per year and sentries are posted when it is live to police the footpaths and offshore area. This causes little impact on other sectors.

Substantial offshore areas are marked on charts as Navy exercise areas. Dorset's coast has been used for naval training for many years but the closure of the Naval Base and relocation of the Navy's sea training unit has led to a substantial decrease in use. The Navy advises that surface use by warships is much reduced, and the main focus for exercise is now off South Devon and Cornwall extending out to the Atlantic. Ships will be found on passage and continue to conduct independent exercises off the Dorset coast. The Navy advise that submarine exercises are now extremely rare off the Dorset Coast and consider that this aspect can be discounted.

Portland Harbour is still used by the military. The Royal Fleet Auxiliary Service (RFA), a civilian manned fleet owned by the Ministry of Defence, supply warships of the Royal Navy at sea with fuel, food, stores and ammunition. The RFA Wave Ruler, RFA Bayleaf and other ships are regularly berthed for maintenance and to collect supplies.

RFA Sir Tristram, an ex-navy warship support vessel, is now permanently moored in Portland Harbour and is used by the military for helicopter, diving and ordinance operations. Royal Naval Reserve (RNR) Divers Branch have used RFA Tristram for part of a course specialising in Underwater Force Protection (UWFP) & Search techniques, where they learnt how to lay and carry out underwater searches. The Noise and Magnetic/ Degaussing Ranges are within the Harbour limits.

SS 1: Development and activities within the Marine Plan area will recognise and respect the strategic importance of the MoD firing ranges and training facilities.

This policy complies with:

- Defence Act 1842
- Land Powers (Defence) Act 1958
- Lulworth Ranges Byelaws (1978)
- Portland Harbour Management Plan (2006)
- Dorset Coast Strategy 2011-2021

Seeking to find mutually beneficially use of space between the MoD and other sectors

Justification

Whilst the Lulworth ranges and sea danger area are clearly of strategic national importance, the area does cause spatial conflict with other sea users. Fishermen can only access fishing grounds within the area before and after firing during the week, when it may be dark in the winter, and during the weekends. Avoiding the area also places increased fuel costs to fishermen and other boat users, and this is particularly significant in the current climate.

Broad Bench is considered the best surfing break on the south coast, and lies just within the restricted area. Surfers are concerned that a change in firing position led to a ban on surfing this wave during firing times. In 2009 the local Access Broad Bench Association and Surfers Against Sewage called upon the Secretary of State for Defence to implement a change back to the original firing position which would allow surfers access all year round, to no success.

On land, military activity can restrict access to important geological sites, such as the Fossil Forest at Lulworth as well as recreational access to Tyneham village and the coast path. This policy encourages dialogue between the MoD and other sectors to seek resolve and identify mutually beneficial solutions to these spatial conflicts, whilst respecting the overall strategic significance of military operations.

SS 2: Efforts to minimise potential spatial conflicts between military and other uses of the Marine Plan area, and finding mutually beneficial use of space, will be encouraged.

This policy complies with:

- Defence Act 1842
- Land Powers (Defence) Act 1958
- Lulworth Ranges Byelaws (1978)
- Dorset Coast Strategy 2011-2021

Maintaining access and navigational routes.

Justification

Both Weymouth and Portland Harbours are significant employers within the area and facilitate economic activity throughout the region. In addition they are essential to support off-shore renewable energy development and to mitigate the effects of climate change by facilitating increased freight movement by sea rather than road. Portland also remains of strategic importance to the Royal Navy, most notably through the Royal Fleet Auxiliary.

The major Channel shipping lanes lie just to the south of the Marine Plan area, and this includes a traffic separation scheme. Commercial vessels and ships from the Royal Fleet Auxiliary often anchor within Weymouth Bay, waiting to enter Portland Harbour. Within Weymouth Bay there is also a rough weather anchorage which is sheltered from the prevailing Westerlies; this fulfils a valuable safety role for ships passing through the Channel.

Portland and Weymouth Ports have a joint-pilotage area, which extends out beyond their jurisdictions. Pilotage is mandatory for large commercial vessels entering Portland Harbour, and is available 24 hours a day, seven days a week from its pilotage station to all anchorages and berths within the Harbour. There are seventeen designated anchorages within the Harbour, as well as numerous berths, piers and jetties serving diverse traffic including cruise ships, cable ships and general cargo vessels. The Port also has four attested special constables to police the estate as well as full security measures under the UK Maritime and Aviation Security Act.

Weymouth Harbour has fewer commercial vessels, but Condor Ferries operates a year-round cross-channel ferry service to Jersey, Guernsey and St. Malo out of the Harbour. The ferry transports both visitors and freight and is a valuable economic asset to the town. Weymouth is also the largest fish-landing port within the Marine Plan area, with a fleet of approximately 60 fishing vessels registered to the harbour, as well as one of the largest diving and angling charter fleets in the country.

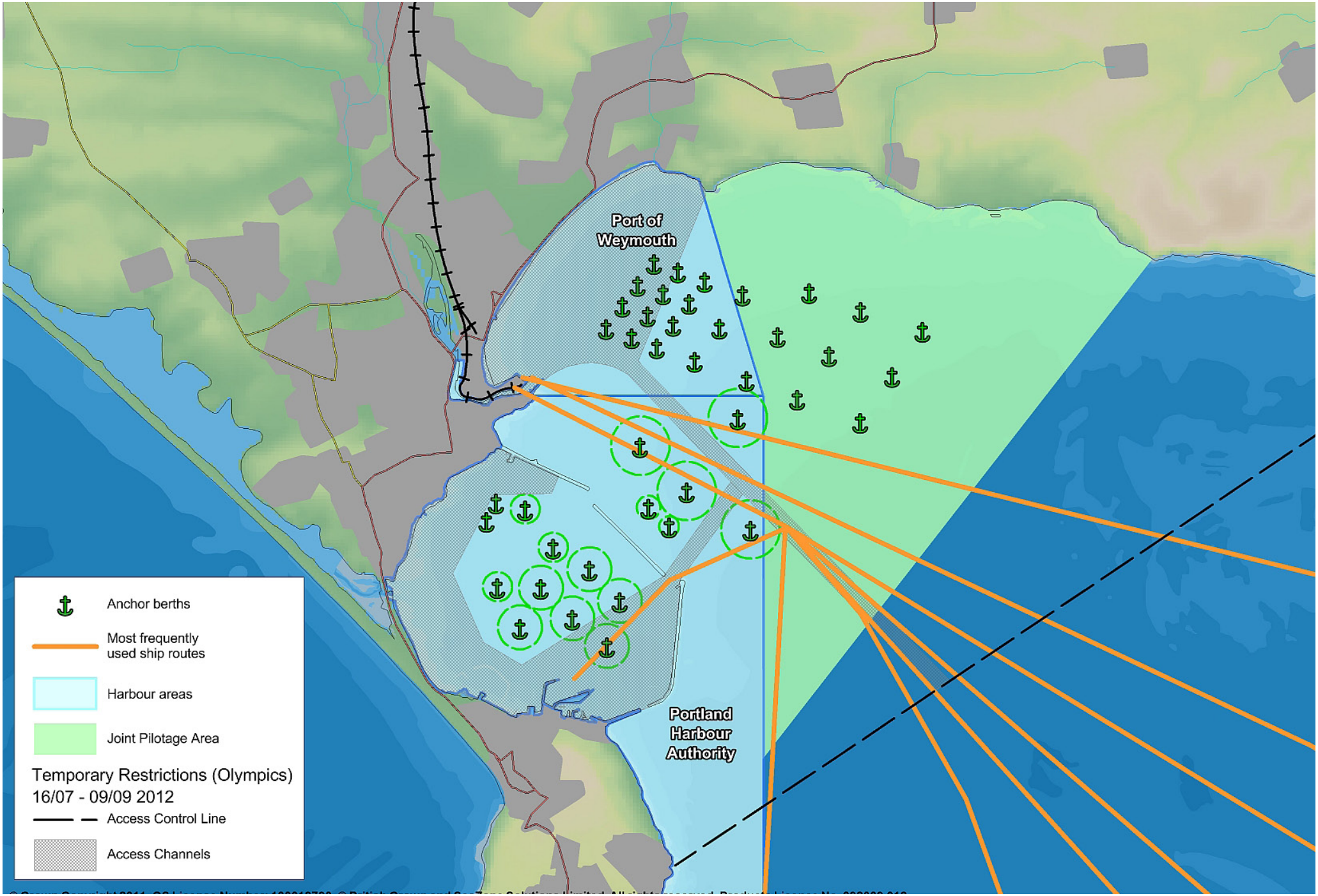
Whilst only temporary, the area in which the competition events for the London 2012 Olympic Games sailing events are taking place extends over both Weymouth and Portland Harbours. To provide a unified management plan for these areas during the Games, The Weymouth and Portland (The London 2012 Olympics and Paralympic Games) Harbour Revision Order 2011 was granted in which, between 16th July 2012 to 9th September 2012, PHAL will become the Harbour Authority for Weymouth outer harbour and an additional area of open water. There will be navigational and access restrictions during this time.

This policy seeks to minimise any negative impacts that developments or activities might have on shipping activity, freedom of navigation and navigational safety within Portland and Weymouth Harbours and in doing so ensure that they are in compliance with international maritime law. It also ensures that the 2012 Olympic Sailing events are able to run both effectively and safely.

SS 3: Developments or activities which impede major navigational routes to and from Weymouth and Portland Harbours, impact on port security or restrict access to, and use of, safe anchorage zones should be avoided.

Refer to Figure 56.

Figure 56: SS 3Portland Harbour operating areas



This policy complies with:

- United Nations Convention on the Law of the Sea (UNCLOS)
- SOLAS
- Marine & Coastal Access Act 2009
- Department for Transport National Policy Statement for Ports (2011)
- Portland Harbour Management Plan
- Bournemouth, Poole and Dorset Local Transport Plan 2011 - 2026
- Dorset Coast Strategy 2011-2021

Securing energy supplies

Justification

The majority of oil and gas fields on the UKCS are located in the Northern and Southern regions of the North Sea. In 2009, the UK was the 16th largest oil and gas producer in the world satisfying almost all of domestic oil consumption and approximately 66% of UK gas demand. However, reserves of both oil and gas are declining; production peaked in 1999 and has been declining ever since. Over the next three decades, approximately 500 individual structures will be decommissioned.
In 2020 it is forecast that the proportion of UK energy supplied by oil and gas, whether produced by the UK or not, will have declined to around 70%. If current investment plans continue, overall oil and gas production is expected to decline at an average rate of 5% over the next five years as several larger fields reach the end of their life span. In the long term, production of both oil and gas will fall heavily by 2025, and the recovery of remaining reserves will require significant additional investment.

As a result of increasing dependence on imported fuels the UK will have a growing need for gas storage. The use of geological structures in the sub-sea marine environment for the storage of gas is therefore receiving increasing focus. The Portland Gas Storage development is a 1000 million cubic metres salt cavern natural gas storage facility to be built at Upper Osprey, which could satisfy 1% of the UK annual demand for gas. Sub-sea conditions within the Marine Plan area may also be considered suitable for such storage, and other such developments would be supported provided they comply with other policies in this Plan.

Broadening the mix of energy sources is essential to secure the UK's energy supply, and offshore renewable energy is seen as one way to achieve this. Policy CAM 2 supports renewable energy developments within the Marine Plan area, which will help to fulfil the Government's target of achieving 15% renewable energy use by 2020 to mitigate climate change.

SS 4: Development that provides or enhances UK energy security will be supported where consistent with the other policies in this plan.

This policy complies with:

- United Nations Framework Convention on Climate Change, Kyoto Protocol
- Energy Act 2010
- Climate Change Act (2008)
- Climate Change and Sustainable Energy Act (2006)
- Draft Bournemouth, Dorset and Poole Renewable Energy Strategy (2011)
- Dorset Coast Strategy 2011-2021
- Marine and Coastal Access Act (2009)
- Dorset Coast Strategy 2011-2021

Objective 7: valuing, enjoying and understanding the marine and historic environments, and wider cultural heritage

Organisations and individuals value, understand and conserve the character and diversity of the marine environment, including its significant natural and cultural heritage.

Safeguarding seascape, landscape and townscape assets and ensuring developments are in keeping with their environs and setting

Justification

Landscape and seascape are not just about how an area looks; they are about the interrelationship between people, place and the environment. Landscapes and seascapes are the result of natural and human elements, including geology, soils or sediments, habitats, settlements, heritage, culture and development. However, not all elements of a landscape or seascape are tangible; they are how people perceive them, about a sense of place. They provide many goods and services and are essential to social wellbeing as well as an economically healthy society – helping to deliver health improvement, education, social inclusion and regeneration.

To make informed and responsible decisions on the management and planning of sustainable future landscapes and seascapes, it is important to have regard to their existing character. Landscape and Seascape Character Assessment is a factual and objective process to determine what makes one area unique from another. By understanding how places differ, either on land or at sea, it is possible to ensure that future development is well situated and sensitive to its location.

Inappropriate developments, or the cumulative effect of developments, can have significant impacts on the character of a landscape or seascape; for example views from the sea can be greatly impacted by coastal developments, spoiling the enjoyment of recreational users and affecting wellbeing and future economic success. Conversely developments which are in keeping with their setting, i.e. ones using sympathetic materials, at an appropriate scale, design and layout, can greatly enhance both character and visual amenity. It is therefore vital that developments do not detract from the character of the Marine Plan area, and that where possible they enhance it.

The Dorset Landscape and Seascape Character Assessment 2010 (DLSCA) identifies six terrestrial character types, five coastal character types and four marine character types within the Marine Plan area. It identifies forces for change and provides management guidance for each character area. This document can be found as a supporting document to the Plan, and a summary of management guidance for each character area can be found in Appendix 10. Additionally, the Local Authorities within the Marine Plan area and the Dorset AONB have Landscape Character Assessments (LCAs) to describe their own distinctive local landscapes; the DLSCA provides a seamless link with the Dorset County LCA, but these should nevertheless be consulted to ensure compatibility.

VEU 1: The design and scale of marine and coastal development should be appropriate to its setting and should not detract from the character of the area as defined within the Dorset Landscape and Seascape Character Assessment 2010.

This policy complies with:

- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- EC Marine Strategy Framework Directive (2008/56/EC)
- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- The Conservation of Habitats and Species Regulations 2010
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

Maintaining character of the Coastal Waters Seascape Character Type

Justification

The 'Coastal Waters' Seascape Character Type (SCT), as defined in the DLSCA, comprises two stretches of coastline associated with the rural, often inaccessible areas of the Dorset coast, within Lyme Bay to the west of Portland, and between White Nothe and Durlston Head, along the Purbeck coast, to the east of the Isle of Portland. These areas are strongly associated with the coastline which is noted for its scenic beauty and scientific value, recognised through its World Heritage Site status and designation as an Area of Outstanding Natural Beauty (AONB).

Most of the Coastal Waters SCT to the west of Portland, with the exception of The Fleet, is beyond the scope of this plan. However within the Marine Plan area the Coastal Waters SCT contains many distinctive and iconic landmarks which provide compelling images of the Dorset Coast. These include the sweeping lines of Chesil Beach and the circular bay at Lulworth Cove, the rock formations of Durdle Door and headlands of Portland Bill and its peninsula, St Alban's Head and Durlston Head. The

white chalk cliffs are highly visible from long distances and the vertical limestone cliffs of Purbeck and Portland are also prominent. Due to the largely rural nature of the adjacent coastline here, there is also a sense of tranquillity and remoteness.

Management guidance for future strategies for this SCT, and the views to the closely associated coastal land areas, advises that the significant coastal features should be protected and that coastal infrastructure should be managed to ensure any further development is appropriate to the design and scale of existing settlement patterns. It also advises to ensure that development does not detract from the numerous and iconic landmarks and panoramic views. Given the high economic and social values that are placed on the Coastal Waters SCT, this policy builds on the DLSCA guidance to ensure that infrastructure development is avoided here unless there is a lack of other sites, or it is of overriding national importance[30].

VEU 2: Offshore development within 'Coastal Waters' seascape character areas should be avoided unless there are reasons of overriding national importance for its location, and a lack of alternative sites.

Refer to Figures 57 and 58.

This policy complies with:

- European legislation Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- EC Marine Strategy Framework Directive (2008/56/EC)
- Council of Europe European Landscape Convention (2000)
- Marine & Coastal Access Act 2009
- Wildlife and Countryside Act (1981)
- The Conservation of Habitats and Species Regulations 2010
- The Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014
- Dorset Area of Outstanding Natural Beauty Management Plan 2009-2014
- Dorset Coast Strategy 2011-2021

30 As defined by the Major Infrastructure Planning Unit

Figure 57: VEU 2 Seascape Character Areas

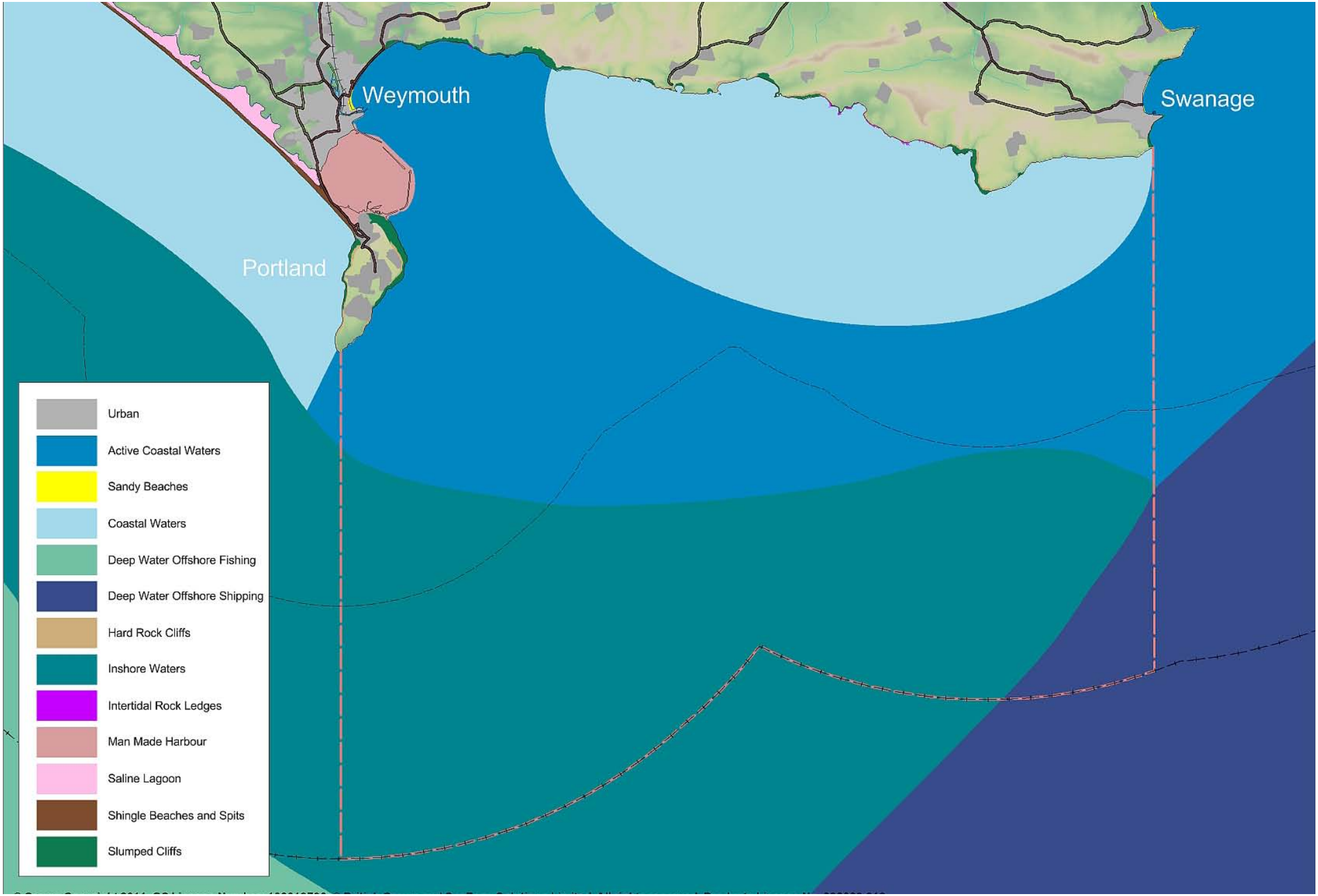


Figure 58: VEU 2 Seascape Character Areas

Protecting designated cultural heritage sites and areas of archaeological potential

Justification

Dorset as a whole is rich in historic areas, sites and structures of national, County and local importance which contribute to the distinctive character of the area. These include settlements and individual buildings as well as significant archaeological remains, monuments and historic landscapes. Within or close to the Marine Plan area there are many Scheduled Monuments (SMs), the only legal protection specifically for archaeological sites; these include earthworks, barrows, hillforts and Roman roads. In addition there are many registered Parks and Gardens Conservation Areas and Listed Buildings, with a significant number having Grade 1 listing. It is expected that the number of these will increase as further surveys are completed.

Dorset waters contain a prolific number of wrecks, including ships, aircraft, submarines and other vehicles. Data from the Rapid Coastal Zone Assessment shows that there are over 1,700 recorded wrecks between Lyme Regis and the mouth of Poole Harbour. Within the Marine Plan area there are no protected wrecks, although just outside it the Studland Bay and Swash Channel wrecks are designated under the Protection of Wrecks Act, 1973 for their archaeological value. Also outside the Marine Plan area, but within Dorset waters, there are six wrecks designated 'protected places' under the Protection of Military Remains Act, 1986. These are HMS Blackwood, HMS Boadicea, HMS Delight, HMS Fisgard II, HMS L24 and HMS M2. Any works, which include demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or tipping material onto a Scheduled Monument, either above or below ground level, require Scheduled Monument Consent from the Secretary of State for Culture, Media and Sport. Developments which will make any changes to a Listed Building which might affect its special interest require Listed Building Consent. In the marine environment, it is a criminal offence to tamper with, damage or remove any part of a protected wreck, carry out diving or salvage or deposit anything on it without a license granted by the Secretary of State. Similarly, it is illegal to interfere with, disturb or remove anything from a site protected by the Military Remains Act, 1986.

The World Heritage Convention was ratified by the UK in 1984, and the Department for Culture, Media and Sport (DCMS) is responsible for general compliance with the Convention. Under the convention, The Dorset and East Devon World Heritage Site Was inscribed on the UNESCO World Heritage List as a Natural Site category for its *"outstanding (earth science) examples representing major stages of Earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features"*. The site has a comprehensive management plan which sets out proposals for the conservation of the site, and any development or activity which significantly endangers its Outstanding Universal Value, as set out in its inscription, could lead to the withdrawal of World Heritage Status. Policies HME 2, SME 2 and CAM 4 also cover aspects of the WHS.

Designated heritage assets provide not just cultural value; they are also of great social, economic and environmental value. They can be a driver for economic growth, attracting investment and tourism and sustaining enjoyable and successful places in which to live and work. However, they are a finite and often irreplaceable resource and can be vulnerable to a wide range of human activities and natural processes. Substantial loss or harm will not be permitted unless it can be demonstrated that it is necessary in order to deliver social, economic or environmental benefits, both now and in the future, that outweigh the harm. Policy VEU 5 explains the need for early engagement with relevant authorities if a development may disturb cultural heritage assets.

VEU 3: Development or activities must respect the purpose of international and national cultural heritage designations within the marine and coastal environment and contribute to their enhancement where possible.

This policy complies with:

- UNESCO Convention on Protection of Underwater Cultural Heritage (2001)
- European Convention on the Protection of the Archaeological Heritage (revised) Valetta 19/92/33 Protection of Wrecks Act (1973)
- Protection of Military Remains Act 1986
- Ancient Monuments and Archaeological Areas Act 1979
- National Heritage Act 2002
- PPS5 - Planning for the historic environment
- Dorset Coast Strategy 2011-2021

Protecting all other cultural heritage sites and areas of archaeological potential

Justification

Whilst the Marine Plan area contains many designated heritage assets, as outlined in VEU 3, there are many heritage assets that are not currently designated as scheduled monuments or protected wreck sites; these can be of at least equivalent importance to this and future generations, and should still be taken account of before any development or activity takes place. The setting of a heritage asset is of equal importance to its physical presence and historic fabric, and developments must also have consideration for their wider impacts. Enhancing heritage assets can create economic growth from tourism, improve wellbeing and have great educational value; therefore opportunities to do so should be taken wherever possible. Policy VEU 5 explains the need for early engagement with relevant authorities if a development may disturb cultural heritage assets.

VEU 4: Development in the marine and coastal environment should take account of cultural heritage sites and areas of archaeological interest as well as their settings. Opportunities should be taken to enhance these assets where possible.

This policy complies with:

- UNESCO Convention on Protection of Underwater Cultural Heritage (2001)
- European Convention on the Protection of the Archaeological Heritage (revised) Valetta 19/92/33 Protection of Wrecks Act (1973)
- Protection of Military Remains Act 1986
- Ancient Monuments and Archaeological Areas Act 1979
- National Heritage Act 2002
- PPS5 - Planning for the historic environment
- Dorset Coast Strategy 2011-2021

Ensuring early engagement with relevant and competent authorities for heritage assets

Justification

Policies VEU 3 and VEU 4 outline the need to protect heritage assets within the Marine Plan area. Heritage assets include evidence for past environments, archaeological sites, historic buildings and the historic aspects of the wider landscape. These assets are unique, and once damaged or destroyed cannot recover or be re-created. For many coastal and offshore developments, there are likely to be known heritage assets as well as previously undiscovered ones which should, where possible and appropriate, be examined and recorded or excavated prior to development.

The 2004 Phase I Dorset Rapid Coastal Zone Assessment (RCZA) conducted a qualitative assessment to produce Areas of Archaeological Potential. Within the Marine Plan area, the study identified The Fleet as having high potential for archaeological components in the intertidal zone, whilst at Osmington, Lulworth and Kimmeridge, the presence of known monuments indicated high potential for buried components on land and high potential for derived material eroding from cliffs into the intertidal zone. Below MLWS, shifting sediments and dredging works will continue to reveal previously undiscovered wrecks and other artefacts, whilst multi-beam data from the DORIS project clearly show underwater paleo-landcapes which have the potential to contain prehistoric artefacts.

Developers must therefore ensure early engagement with the relevant authorities in pre-application discussions, so that all aspects of the historic environment and heritage assets are taken into account. This will enable a better understanding of the significance of a heritage asset and enable developers to take advantage of the assets significance, whilst also conserving it.

VEU 5: Early engagement with English Heritage the Dorset Historic Environment Record keepers, and JCWHS team is required for any development which may disturb heritage assets. Refer to Figures 59, 60 and 61.

This policy complies with:

- UNESCO Convention on Protection of Underwater Cultural Heritage (2001)
- European Convention on the Protection of the Archaeological Heritage (revised) Valetta 19/92/33 Protection of Wrecks Act (1973)
- Protection of Military Remains Act 1986
- Ancient Monuments and Archaeological Areas Act 1979
- National Heritage Act 2002
- PPS5 - Planning for the Historic Environment
- Sustainable Development in Rural Areas (PPS7, 2004)
- Dorset Coast Strategy 2011-2021

Figures 59: VEU 5 Designated Heritage Assets

Figures 60: VEU 5 Designated Heritage Assets

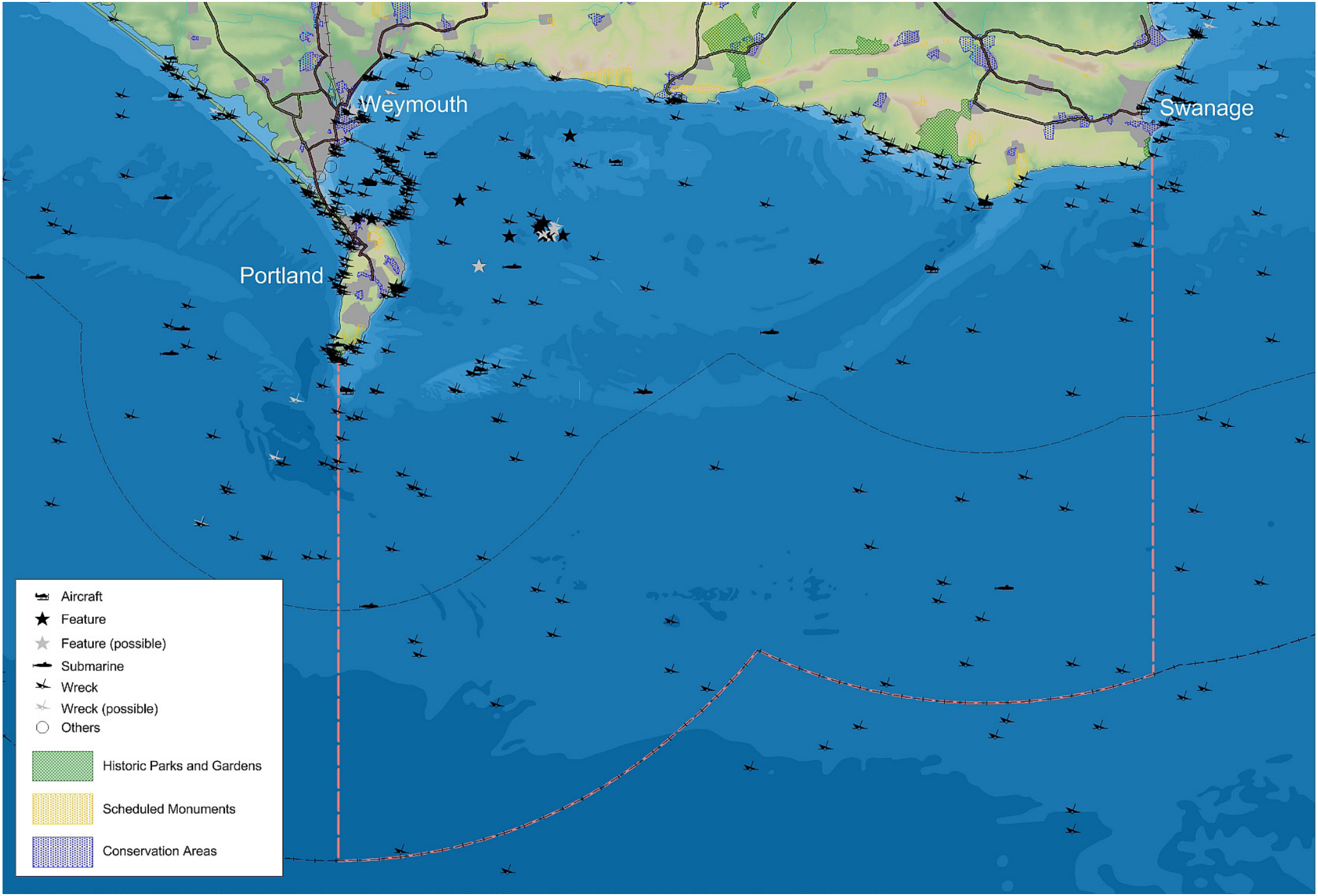
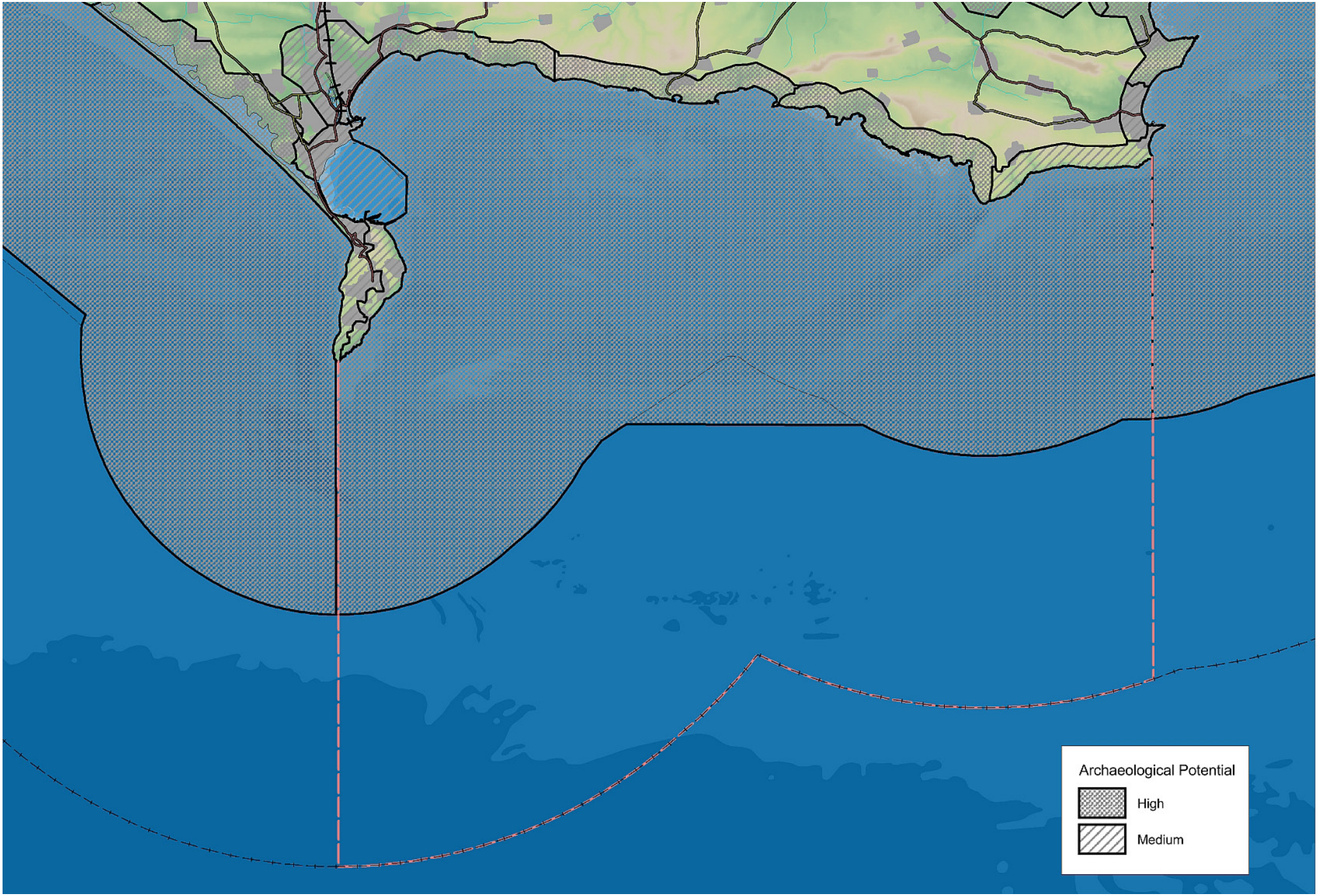


Figure 61: VEU 5 Areas of Archaeological Potential



Encouraging public understanding of heritage assets

Justification

The Marine Plan area is rich in heritage assets, both on the coast and offshore, which tell the evolution of the landscape and the story of more than five thousand years of human activity. These assets are part of the area's identity and distinctiveness, and many of them already benefit from excellent public engagement initiatives which help visitors and local communities to better use, enjoy and understand them. When people engage with their local heritage, it strengthens their sense of community, improves their quality of life and wellbeing and helps to engender a sense of ownership and a desire to safeguard their environment.

Opportunities for public engagement can start during the development phase, by providing viewing platforms and interpretation panels, holding open days, public talks and using the media for local coverage. At a later stage displays, exhibitions and articles can help to inform site design and even of public works of art. This is particularly important if a heritage asset is to be lost. Public interpretation is especially challenging for underwater heritage assets that are left in situ, where access is most likely restricted to scuba divers. However, innovative solutions through presentation and interpretation are possible; for example by using underwater web-cams.

Many heritage assets are still capable of continuing beneficial use; sensitive restoration of redundant and neglected buildings with maritime connections, particularly on historic waterfronts, can help to regenerate coastal communities, providing commercial and residential properties, communal space and educational or recreational opportunities. For example, the restoration of the historic terraces of the Esplanade at Weymouth has acted as a catalyst for further revitalisation of the town.

VEU 6: Developments and activities which encourage public engagement in, and understanding of, the heritage assets of the Dorset coast and marine environment will be supported.

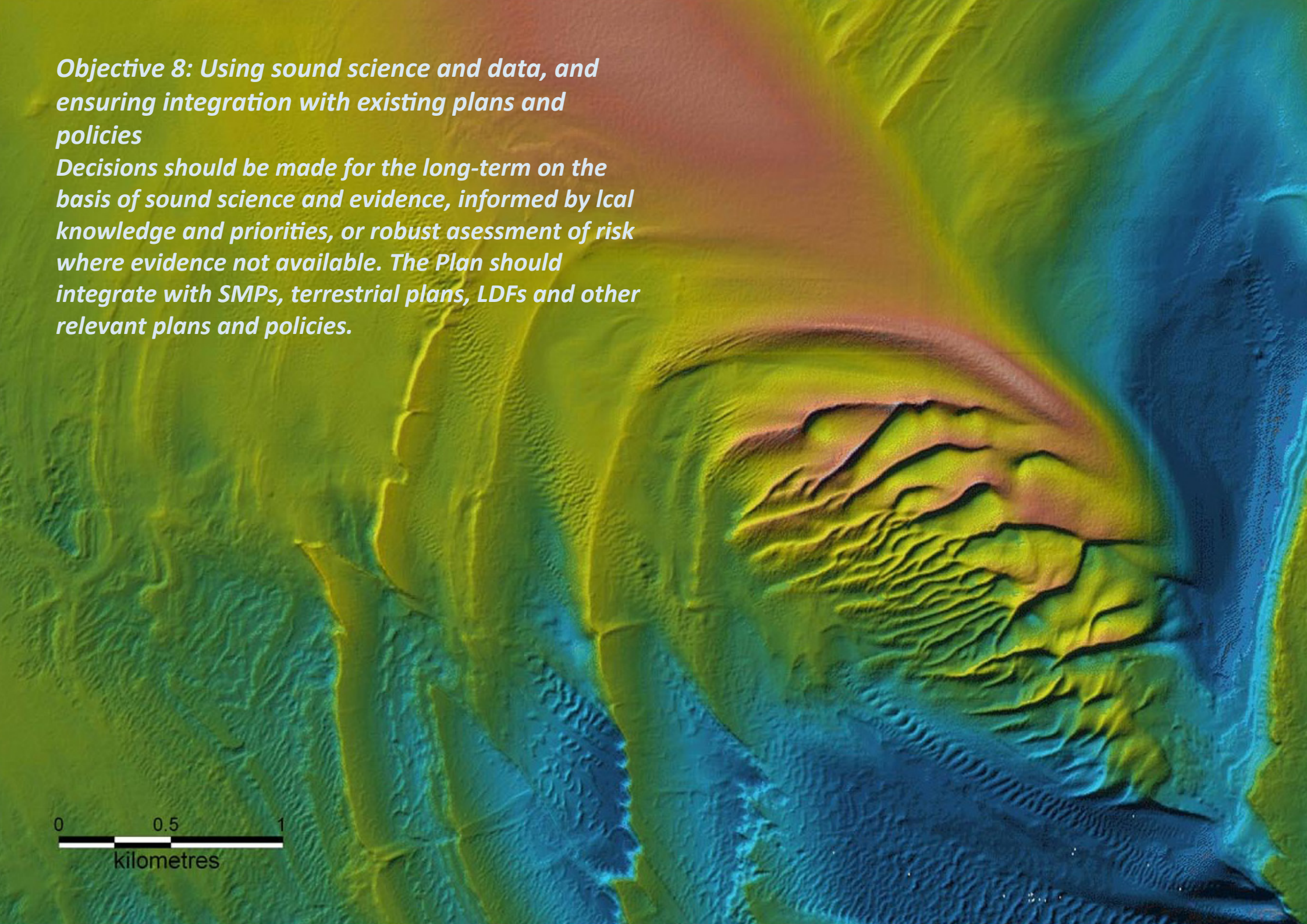
VEU 7: Developments which enhance the fabric, and public interpretation, of cultural assets with maritime connections will be supported.

These polices conform to:

- UNESCO Convention on Protection of Underwater Cultural Heritage (2001)
- European Convention on the Protection of the Archaeological Heritage (revised) Valetta 19/92/33 Protection of Wrecks Act (1973)
- Protection of Military Remains Act 1986
- Ancient Monuments and Archaeological Areas Act 1979
- National Heritage Act 2002
- PPS5 - Planning for the Historic Environment
- DCC Sustainable Community Strategy (2010-2020)
- Dorset Coast Strategy 2011-2021

Objective 8: Using sound science and data, and ensuring integration with existing plans and policies

Decisions should be made for the long-term on the basis of sound science and evidence, informed by lcal knowledge and priorities, or robust asessment of risk where evidence not available. The Plan should integrate with SMPs, terrestrial plans, LDFs and other relevant plans and policies.



Integrating terrestrial and marine planning

Justification

The Marine Management Organisation was vested under the Marine and Coastal Access Act 2009, bringing together key marine decision-making powers and delivery mechanisms. One of their key strategic outcomes is that marine resources are managed effectively and regulated proportionately; one of the mechanisms they will use to deliver this outcome is the production of marine plans for the whole of England's territorial waters, including the Southern Inshore marine plan area.

There are many other competent and relevant authorities who play an equal or supporting role in helping to deliver the protection, enhancement and sustainable use of the marine environment within the Marine Plan area. These include statutory bodies such as Natural England, the Environment Agency and English Heritage, the Maritime and Coastguard Agency, Southern Inshore Fisheries and Conservation Authority, as well as Local Authorities. Collaboration between these bodies is strongly encouraged to ensure an integrated approach which will deliver economies of scale, enable the dissemination of research activities, as well as highlight any gaps in management.

Many policies within the Plan have implications that extend above Mean High Water Springs. Conversely many terrestrial policies have implications that impact on the marine environment. It is therefore essential that both marine planners and Local Authority planners maintain regular and on-going liaison to ensure developments which take place in the coastal zone are successfully implemented in line with both sets of policies. If the Plan is to succeed in delivering the benefits of sustainable development of the marine environment to communities living within the Marine Plan area, it is important that future iterations of both marine and terrestrial plans are closely aligned.

SD 1: Competent and relevant authorities will be encouraged to collaborate to provide an integrated approach to the protection, enhancement and sustainable use of the marine environment.

SD 2: Regular and on-going liaison will be encouraged between marine and terrestrial planners to ensure policy implementation is aligned for developments which take place in the coastal zone, particularly in the context of formal reviews of terrestrial and marine spatial plans.

These policies comply with:

- Marine & Coastal Access Act 2009
- Dorset Sustainable Community Strategy (2010-2020)
- Weymouth & Portland Borough Council Local Plan
- West Dorset District Council Local Plan
- Purbeck District Council Local Plan
- Dorset Coast Strategy 2011-2021

Improving the evidence base for sustainable management of the marine environment

Justification

Marine planning requires the use of data and information from a wide range of sources. However, gathering this data in the marine environment is both complex and expensive; particular gaps and challenges include the production of accurate biotope maps for the entire Marine Plan area, determining routes of migratory species and the valuation of marine goods and services. Marine-related socio-economic data is equally challenging to obtain, and government socio-economic statistics do not currently differentiate marine industries from terrestrial ones.

Whilst this marine plan has used best available data, there is clearly a need for ongoing data gathering to fill the gaps identified above, both for future iterations of the Plan and for monitoring its effects. Additionally, marine science and environmental economics are advancing rapidly; new techniques are evolving which will accelerate data gathering, reduce costs and establish new best practice. Opportunities to obtain data based on these new techniques will make the evidence base more robust and enhance future marine plans.

SD 3: The collection of appropriate data necessary to provide a robust evidence base for future decisions affecting the marine environment, and further iterations of this marine plan, will be encouraged.

This policy complies with:

- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011–2021

Sharing knowledge and information

Justification

There is a great wealth of marine data already in existence, both nationally and locally. Sources include scientific research institutions, government nature bodies, NGOs and the private sector; but a lack of communication between these organisations has led to data which is disparate, and often incompatible due to the use of different techniques and/or resolution.

Nationally, progress has been made to improve access to marine data through the MEDIN partnership. Over 30 partners so far have committed to the partnership, including the MCA, Defra, MMO, Crown Estate, JNCC, EA and UKHO. At a local level, the Dorset Environmental Records Centre Marine Biodiversity database holds over 40,000 individual species records and surveys dating from 1802 to the present. Data exchange agreements are established with Durlston Marine maMarine Plan areal project, Purbeck Marine Wildlife Reserve, Dorset Seasearch, Poole Harbour Study Group, Fleet Study Group, Dorset Wildlife Trust, Southampton Oceanography Centre, Natural England and the Dorset Coast Forum.

However, there is still a need for better collaboration between both national and local organisations. Early communication on future survey and research work will enable organisations to identify mutually beneficial opportunities and to make best use of limited resources; the collaboration between Dorset Wildlife Trust, Channel Coastal Observatory and the MCA, with external funding from the private sector (Viridor Credits Environmental Company), to create the Doris seabed map is a good example of how working together can give better quality results. Equally, there is a need to engage with private sector companies such as Eneco, Portland Gas Ltd and BP which all hold and commission the gathering of large amounts of marine data within the Marine Plan area. Collaboration on future survey work would ensure better integration, and wider dissemination, of data sets.

SD 4: Organisations working in the marine and coastal environment will be encouraged to work in partnership to ensure data are compatible and to maximise information-sharing between the private and public sector, with local expertise and knowledge being used wherever possible to contribute to quality data gathering and scientific studies.

This policy complies with:

- Marine & Coastal Access Act 2009
- Dorset Coast Strategy 2011-2021

Chapter 6: Indicators, monitoring and review

Monitoring

Monitoring a set of key indicators is important to establish if the C-SCOPE Marine Plan is achieving its objectives and delivering the policies set out. Monitoring will also ensure that the Plan continues to be relevant and responsive to changing circumstances, identifying what amendments to the Plan may be necessary. Table 4 sets out suggested indicators and identifies current monitoring regimes and the organisations responsible for them. These indicators will be reviewed following consultation and further discussion with the C-SCOPE lead partner in Belgium. It is likely that the number will be reduced to approximately 40 key indicators. A relevant body will be required to review the outputs of these multiple monitoring programmes and assess how effective the C-SCOPE Marine Plan has been; it is suggested that DCF fulfil this role.

Table 4 (refer to Appendix 14)
Suggested indicators and monitoring regimes within the C-SCOPE Marine Plan Area.

Review

The Plan is not static. To ensure that it is kept up to date and remains relevant, the C-SCOPE Marine Plan requires regular amendments to the policies and proposals contained in it, which reflect changes that have occurred both nationally and locally. It is proposed that it be reviewed on no more than a five year cycle and that opportunity be taken to synchronise reviews with Local Plans and national statutory Marine Plans where possible.

Glossary

Activity: Existing or future use that is covered by a public right of use (e.g. navigation) and/or does not require a statutory consent to use a defined area from a competent authority to proceed (e.g. Crown Estate Lease, Planning Permission, Marine Licence).

Beach replenishment: The management practice of adding to the natural amount of sediment (such as sand) on a beach by using material from elsewhere.

Benthic: The ecological region at the lowest level of the ocean, including the sediment surface and some sub-surface layers. Organisms that live associated with the sea bottom are known as the Benthos.

Best Available Technique: most effective and advance stage in the development of an activity and its methods of operation, which indicate the practical suitability of particular techniques for providing, in principle, the basis for emission limit values designed to prevent or eliminate or, where that is not practicable, generally to reduce an emission and its impact on the environment as a whole.

Best Practicable Environmental Option: the outcome of a systematic consultative and decision making procedure which emphasises the protection and conservation of the environment across land, air and water. The BPEO procedure establishes for a given set of objectives, the option that provides the most benefits or the least damage to the environment, as a whole, at acceptable cost, in the long term as well as in the short term.

Bioaccumulation: An increase in concentration of a pollutant from the environment to the first organism in a food chain.

Biodiversity: The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.

Biomagnification: An increase in concentration of a pollutant from one link in a food chain to another.

Coastal Zone: There is no one accepted definition of the coastal zone, particularly in terms of how far inland coastal zones reach The coastal zone cannot be isolated as a defined 'coastal strip' and treated as entirely separate from the land mass or distinct from the management of territorial and international waters. For some issues, notably pollution, the whole of Dorset could be treated as the coastal zone. The boundary of the coastal zone is thus in practice a moveable one.

Cumulative effects: Effects that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project.

Development: A use that requires a statutory consent to utilise a defined area from a competent authority to proceed. This can include new developments or alterations, extensions or changes in material use to existing developments that require a statutory consent.

Economic Efficiency: A project, policy, or activity where the social benefit exceed its social costs, where benefits are defined as increases in human well-being and costs are defined as reductions in human well-being.

Ecosystem Goods and Services: A service people obtain from the environment. Ecosystem services are the transformation of natural assets (soil, plants and animals, air and water) into things that we value. They can be viewed as provisioning such as food and water; regulating, for example, flood and disease control; cultural such as spiritual, recreational, and cultural benefits; or supporting like nutrient cycling that maintain the conditions for life on Earth. Ecosystem 'goods' include food, medicinal plants, construction materials, tourism and recreation, and wild genes for domestic plants and animals.

Elasmobranch: Cartilaginous fish including sharks, rays and skates.

Eutrophication: An accelerated growth of algae on higher forms of plant life caused by the enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus and inducing an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned.

Green Knowledge Economy: a model of sustainable economic development, devised by the Dorset Local Enterprise Partnership. It provides an integrated approach to the economy and the environment. A global transition to a low-carbon and sustainable economy will create large numbers of green jobs across many sectors of the economy, and can become an engine of development.

Geological feature: Rock and landscape formations, such as stacks, arches, fossils and landslides, which have been shaped by geological processes.

Geomorphology: The science of Earth's landforms, their description, classification, distribution, origin and significance

Heritage Assets: Those elements of the historic environment – buildings, monuments, sites or landscapes – that have been positively identified as holding a degree of significance meriting consideration are called 'heritage assets'.

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

Hydrology: The occurrence and character of water in rivers, streams, lakes, and on or below the land surface, and the cycle of water from precipitation to re-evaporation or return to the seas.

Invasive alien species (IAS): are a subset of established Non-native Invasive Species which have spread, are spreading or have demonstrated their potential to spread elsewhere, and have an adverse effect on biological diversity, ecosystem functioning, socio-economic values and/or human health in invaded regions. Species of unknown origin which can not be ascribed as being native or alien are termed cryptogenic species. They also may demonstrate invasive characteristics and should be included in IAS assessments.

Lower Super Output Areas: Census based geographies with an average population of 1,500 people.

Marine litter: Items that have been made or used by people and deliberately discarded into the sea or rivers or on beaches; brought indirectly into the sea by rivers, sewage, storm water or wind; accidentally lost, including material lost at sea in bad weather (fishing gear, cargo), or deliberately left by people on shores.

Nautical mile: A unit of length used at sea that is about one minute of arc of latitude along any meridian, but is approximately one minute of arc of longitude only at the equator. By international agreement it is exactly 1,852 metres.

Non-indigenous species (NIS): Species, subspecies or lower taxa introduced outside of their natural range (past or present) and outside of their natural dispersal potential. This includes any part, gamete or propagule of such species that might survive and subsequently reproduce. Their presence in the given region is due to intentional or unintentional introduction resulting from human activities. Natural shifts in distribution ranges (e.g. due to climate change or dispersal by ocean currents) do not qualify a species as a NIS.

Precautionary principle: An approach to environmental protection which maintains that where there are threats of serious or irreversible damage, lack of full scientific certainty will not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Safe biological limits: 'Safe biological limits' are defined by a minimum safe stock size and a maximum exploitation rate. These are known as reference points. The stock size is measured in terms of 'spawning stock biomass (SSB)' which represents the total weight of spawning fish each year. The exploitation rate is called the 'fishing mortality (F)' which measures the rate at which fish are removed from the stock by fishing. If the stock is either below the minimum safe SSB or above the maximum safe F, the stock is said to be outside safe biological limits.

Seascape (and Landscape): An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.

Sustainable development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Tranquillity: A composite feature related to low levels of built development, traffic, noise and artificial lighting. The full range of criteria may be used to identify valued landscapes that merit some form of designation or recognition.

Water Quality: The physical, chemical and biological characteristics of water. It is a measure of the condition of water relative to the requirements of one or more biotic species and or to any human need or purpose. It is most frequently used by reference to a set of standards against which compliance can be assessed. The most common standards used to assess water quality relate to health of ecosystems, safety of human contact and drinking water.

Appendices

Appendix 1: Organisations involved in the C-SCOPE Marine Planning process
Appendix 2: Community Workshop Report
Appendix 3: Data Confidence Assessment Methods
Appendix 4: Spatial Analysis Methods
Appendix 5: Sensitivity Maps
Appendix 6: Areas of Seabed Geological Interest
Appendix 7: Sectoral Interactions Matrix
Appendix 8: Potential Consultees
Appendix 9: Constraints Mapping Methods
Appendix 10: Seascape Character Types Management Guidance Summary
Appendix 11: Data used to inform the C-SCOPE Marine Plan
Appendix 12 Bibliography
Appendix 13: Seabed Mapping Methods and Data

Supporting Documents
Dorset Land and Seascape Character Assessment
Dorset Offshore Renewables Capacity Report
C-SCOPE Socio-economic Report
Dorset Coast Topic Papers
C-SCOPE Forecasting Document

Abbreviations & Acronyms

BAP	Biodiversity Action Plan
COWRIE	Collaborative Offshore Wind Energy Research into the Environment
C-SCOPE	Combining Sea and Coastal Planning in Europe
DCF	Dorset Coast Forum
DCMS	Department for culture, media and sport
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food and Rural affairs
DORIS	Dorset Integrated Seabed Study
EH	English Heritage
GES	Good Environmental Status (as required by the MSFD)
HFC	Hydroflurocarbon
HLMO	High Level Marine Objectives
HRO	Harbour Revision Order
IFCA	Inshore Fisheries and Conservation Authority
JTS	Joint Technical Secretariat
LA	Local Authority
MARPOL	Convention for the Prevention of Pollution from Ships
MCA	Maritime and Coastguard Agency
MCS	Marine Conservation Society
MCZ	Marine Conservation Zone
MHWS	Mean High Water Spring
MLW	Mean Low Water
MMO	Marine Management Organisation
MOD	Ministry of Defence
MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
MSP	Marine Spatial Plan
NE	Natural England
NNSS	Non-native Species Secretariat
OSPAR	Convention for the Protection of the Marine Environment of the NorthEast Atlantic
PPP	Plans, Policies and Programmes
PROW	Public Right of Way
PWC	Personal Watercraft (Jet-ski)
RCZA	Rapid Coastal Zone Assessment
RNLI	Royal National Lifeboat Institute
RYA	Royal Yachting Association
SAC	Special Areas of Conservation
SCT	Seascape Character Type
SM	Scheduled Monument
SMP	Shoreline Management Plan
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SOLAS	Convention on Safety of Life at Sea
UNCLOS	United Nations Convention on the Law of the Sea
WFD	Water Framework Directive