

Pembrokeshire Coast National Park Seascape Character Assessment



Final Report
for
Pembrokeshire Coast National Park Authority
Natural Resources Wales

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SUMMARY

The seascape character assessment of Pembrokeshire Coast National Park includes territorial waters upto 12 nautical miles offshore and extends from Cardigan Island in the north to the Taf estuary in Carmarthen Bay in the south. The study area reaches inland to include the areas of Milford Haven outside the Park, and upto the tidal limits of the Daugleddau. The client is the Pembrokeshire Coast National Park Authority (PCNPA) supported by the Countryside Council for Wales (CCW), now Natural Resources Wales (NRW). The study has involved a multi-disciplinary team led by White Consultants.

The study is at a local level and is set within the framework of the regional Welsh Seascapes study completed by CCW in 2009. The method for this study builds on current guidance but is tailored for the particular scale of assessment, for Pembrokeshire National Park and the study's location in Wales. It is the first local seascape study of its kind in Wales. There is an emphasis on an assessment of the coastal landscape's seascape character in its marine setting although wholly marine areas away from the coast are covered. As it is one of the pilot studies for all-Wales work there may be some further refinement, such as to boundaries, in order to marry up with adjacent seascape character assessments in future.

The study should be read in conjunction with the National Park Management Plan and LDP and with other guidance and baseline information including the PCNPA Landscape Character Assessment (2011). The study is intended to form, in due course and after public consultation, the basis of supplementary planning guidance for the PCNP Local Development Plan. At a national level, the Marine and Coastal Access Act 2009 requires the Welsh Government to develop a spatial planning approach to the management of its marine areas and the study may help to inform this.

The report explains the method, gives an overview of the seascape, sets out the cultural benefits and services, the forces for change and the key sensitivities. Each seascape character area is described in turn.

The inland boundary of the study area is defined by identifying those areas of coast which have the highest intervisibility with the sea or water body in the case of Milford Haven and the Daugleddau.

A large number of datasets have been analysed to inform the study. Key factors are used to define types and areas while the rest are used to describe the seascape. The process followed is to define seascape character types as 'building blocks' and then define and describe seascape character areas based on these types. Site visits have helped to verify desk-based work and describe perceptual and experiential qualities.

The seascape types are divided into marine, intertidal and terrestrial. 21 marine types are defined based on physical characteristics of bathymetry, sea bed sediments and bedrock, and wave climate. Five intertidal types are based on rock, sand/shingle, mud, saltmarsh and biogenic reefs habitats. Twenty one terrestrial types are defined based on coastal habitats such as sand dunes, 'inland' habitats close to the coast such as mixed woodland and scrub and land uses such as different types of built up areas.

44 Seascape character areas are defined by bringing together related marine, intertidal and terrestrial types on the coast, and broadly similar marine types offshore. Each area is described in terms of its key characteristics, physical influences, cultural influences and aesthetic, perceptual and experiential qualities. Its cultural benefits and services and key sensitivities are defined and the main forces for change affecting the area discussed.

Overview

The study area is on Great Britain's remote western seaboard facing and including parts of the Atlantic Ocean/Celtic Sea, St George's Channel, Cardigan Bay and the Bristol

Channel. The sea and coast are exposed to, and often governed by, the prevailing south westerlies. The maritime weather conditions combined with the depth of the sea and nature of the sea bed essentially define the character of the marine areas. The remote and exposed islands and islets with associated reefs and isolated lighthouses are key features of the Pembrokeshire seascape. The coast's distinctive and varied rock formations interact with the force of the sea and weather to create a wide range of dramatic coastal seascapes. Inland, Milford Haven and the Daugleddau provide contrasting sheltered seascapes, penetrating deep into Pembrokeshire's countryside.

Seascape character is enhanced by diverse marine and coastal habitats and wildlife of international and national importance including cetaceans eg dolphins and coastal birds eg puffins and choughs. Prehistoric promontory forts, more recent military installations, religious buildings, harbours and other historic features and wrecks indicate the area's strong connection to ancient seaways and reinforce its strong sense of place.

The area's qualities attract tourism and leisure pursuits, which make an important contribution to the local economy and character, but can also lead to pressures on the coast and sea. The energy and related industry, both carbon based eg liquid natural gas, and developing renewables, are further forces for change with potentially strong influences on character. Traditional uses such as fishing, particularly potting, still contribute to the local economy and character.

This assessment is a snapshot of the current situation and a tool to help guide the future management and conservation of the Park's seascapes' essential qualities.

CRYNODEB

Mae asesiad o gymeriad morwedd Parc Cenedlaethol Arfordir Penfro yn cynnwys dyfroedd tirol hyd at 12 milltir fôr ar y môr ac mae'n ymestyn o Ynys Aberteifi yn y gogledd i aber Taf ym Mae Caerfyrddin yn y de. Mae ardal yr astudiaeth yn cyrraedd y tir i gynnwys ardaloedd Aberdaugleddau y tu allan i'r Parc, a hyd at derfynau llanwol y Daugleddau. Y cleient yw Awdurdod Parc Cenedlaethol Arfordir Penfro (APCAP) wedi'i gefnogi gan Gyngor Cefn Gwlad Cymru (CCGC), sef Cyfoeth Naturiol Cymru bellach. Mae'r astudiaeth wedi cynnwys tîm amlddisgyblaethol dan arweiniad White Consultants.

Cynhelir yr astudiaeth yn lleol ac fe'i gosodir o fewn fframwaith yr astudiaeth ranbarthol o Forweddau Cymru a gwblhawyd gan CCGC yn 2009. Mae'r dull ar gyfer yr astudiaeth hon yn adeiladu ar ganllawiau cyfredol ond caiff ei deilwra i'r raddfa asesu benodol, i Barc Cenedlaethol Penfro ac i leoliad yr astudiaeth yng Nghymru. Hon yw'r astudiaeth morweddau leol gyntaf o'i bath yng Nghymru. Ceir pwyslais ar yr asesiad o gymeriad morwedd y dirwedd arfordirol yn ei leoliad morol er yr ymddrinnir ag ardaloedd hollol forol i ffwrdd o'r arfordir. Gan ei bod yn un o'r astudiaethau peilot ar gyfer gwaith Cymru gyfan efallai y gwneir rhywfaint o waith mireinio pellach, e.e. i ffiniau, er mwyn cysoni ag asesiadau o gymeriad morweddau cyfagos yn y dyfodol.

Dylid darllen yr astudiaeth ar y cyd â'r Cynllun Rheoli Parc Cenedlaethol a'r Cynllun Datblygu Lleol a chyda chanllawiau a gwybodaeth sylfaenol arall gan gynnwys yr Asesiad o Gymeriad Morwedd APCAP (2011). Bwriedir i'r astudiaeth lunio, maes o law ac ar ôl ymgynghoriad cyhoeddus, sail y canllawiau cynllunio atodol ar gyfer Cynllun Datblygu Lleol Parc Cenedlaethol Arfordir Penfro. Ar lefel genedlaethol, mae Deddf y Môr a Mynediad i'r Arfordir 2009 yn ei gwneud yn ofynnol i Lywodraeth Cymru ddatblygu dull cynllunio gofodol o reoli ei hardaloedd morol a gall yr astudiaeth helpu i lywio hyn.

Mae'r adroddiad yn esbonio'r dull, yn rhoi trosolwg o'r morwedd, yn nodi'r buddiannau a'r gwasanaethau diwylliannol, y grymoedd ar gyfer newid a'r prif feysydd sensitifrwydd. Disgrifir ardal cymeriad pob morwedd yn ei thro.

Diffinnir ffin fewndirol ardal yr astudiaeth drwy nodi'r ardaloedd hynny o arfordir sydd â'r rhyngweledd uchaf â'r môr neu gorff o ddŵr yn achos Aberdaugleddau a'r Daugleddau.

Dadansodwyd nifer fawr o setiau data i lywio'r astudiaeth. Defnyddir ffactorau allweddol i ddiffinio mathau ac ardaloedd tra bod y gweddill yn cael eu defnyddio i ddisgrifio'r morwedd. Y broses a ddilynir yw un lle y diffinnir mathau o gymeriad morwedd fel 'blociau adeiladu' gan ddiffinio a disgrifio ardaloedd cymeriad morweddau yn seiliedig ar y mathau hyn. Mae ymweliadau safle wedi helpu i ddilysu gwaith swyddfa a disgrifio rhinweddau canfyddiadol a phrofiadol.

Rhennir y mathau o forweddau yn dri math sef morol, rhynglanwol a thirrol. Diffinnir 21 o fathau morol yn seiliedig ar nodweddion ffisegol bathymetreg, gwaddodion gwely môr a chreigwelyau, a hinsawdd tonnau. Mae pum math rhynglanwol yn seiliedig ar graig, tywod/graeuan bras, llaid, morfa heli a chynefinoedd creigresi biogenig. Diffinnir 21 o fathau tirol yn seiliedig ar gynefinoedd arfordirol megis twyni tywod, cynefinoedd 'mewndirol' yn agos i'r arfordir megis coetir cymysg a phrysgwydd a defnyddiau tir megis mathau gwahanol o ardaloedd adeiledig.

Diffinnir 44 o ardaloedd cymeriad morwedd drwy ddwyn ynghyd fathau morol, rhynglanwol a thirrol ar yr arfordir, a mathau morol tebyg i raddau helaeth ar y môr. Disgrifir pob ardal o ran ei phrif nodweddion, dylanwadau ffisegol, dylanwadau diwylliannol a rhinweddau esthetig, canfyddiadol a phrofiadol. Diffinnir ei buddiannau a'i gwasanaethau diwylliannol a'i phrif feysydd sensitifrwydd a thrafodir y prif rymoedd ar gyfer newid sy'n effeithio ar yr ardal.

Trosolwg

Mae ardal yr astudiaeth ar arfordir gorllewinol pellennig Prydain ac mae'n wynebu ac yn cynnwys rhannau o Fôr Iwerydd/y Môr Celtaidd, Môr Iwerddon, Bae Aberteifi a Môr Hafren. Mae'r môr a'r arfordir yn agored i brifwyntoedd y gorllewin ac yn aml yn cael eu rheoli ganddynt. Mae'r amodau tywydd arfordir ynghyd â dyfnder y môr a natur y gwely môr yn eu hanfod yn diffinio cymeriad yr ardaloedd morol. Mae'r ynsoedd a'r ynysigau pellennig a digysgod gyda chreigresi cysylltiedig a goleudai anghysbell yn nodweddion allweddol ar forwedd Sir Benfro. Mae ffurfiannau creigiog unigryw ac amrywiol yr arfordir yn rhyngweithio â grym y môr a'r tywydd i greu ystod eang o forweddau arfordirol dramatig. Ar y tir, mae Aberdaugleddau a'r Daugleddau yn darparu morweddau cysgodol cyferbyniol, gan dreiddio yn ddwfn i gefn gwlad Sir Benfro.

Caiff cymeriad y morwedd ei wella gan gynefinoedd morol ac arfordirol amrywiol a bywyd gwylt o bwysigrwydd rhyngwladol a chenedlaethol gan gynnwys morfilod e.e. dolffiniaid ac adar arfordirol e.e. pâl a brân goesgoch. Mae ceirydd pentir cynhanesyddol, gosodiadau milwrol mwy diweddar, adeiladau crefyddol, harbyrau a nodweddion hanesyddol a llongddrylliadau eraill yn cyfeirio at gysylltiad cryf yr ardal â morffyrdd hynafol ac yn atgyfnerthu ei hymdeimlad cryf o le.

Mae rhinweddau'r ardal yn denu twristiaeth a gweithgareddau hamdden, sy'n gwneud cyfraniad pwysig i economi a chymeriad lleol yr ardal, ond a all hefyd roi pwysau ar yr arfordir a'r môr. Mae'r diwydiant ynni a'r diwydiant cysylltiedig, ill dau yn seiliedig ar garbon e.e. nwy hylifedig naturiol a mathau o ynni adnewyddadwy sy'n datblygu, yn rymoedd pellach ar gyfer newid gydag effeithiau arbennig o gryf ar gymeriad. Mae defnyddiau traddodiadol megis pysgota, yn enwedig potio, yn dal i gyfrannu at economi a chymeriad lleol yr ardal. Mae'r asesiad hwn yn giplun o'r sefyllfa gyfredol ac yn adnodd er mwyn helpu i reoli a gwarchod rhinweddau hanfodol morweddau'r Parc yn y dyfodol.

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Cover photo: Ramsey Island and Whitesands Bay from Carn Llidi

1. Introduction

- 1.1. White Consultants were appointed in December 2012 to undertake a seascape character assessment of Pembrokeshire Coast National Park including the territorial waters upto 12 nautical miles (nm) offshore. The National Park Authority (PCNPA) has acted as the client on behalf of a steering group of PCNPA and Countryside Council for Wales (CCW) officers. CCW is now Natural Resources Wales (NRW).
- 1.2. The brief defines the purpose of the project as 'to produce a study of local seascape character, to identify what is distinctive and special about different areas of Pembrokeshire Coast National Park, and sea areas visible from it; to outline their sensitivities; to describe possible risks to their character (including, but not limited to, those arising from development ...'. The work should build on and add value to the Regional Seascape Assessment of Wales commissioned by CCW¹.
- 1.3. The study should be read in conjunction with the National Park Management Plan and LDP and with other guidance and baseline information including, importantly, the PCNPA Landscape Character Assessment SPG [2011]. The study seeks to provide further information on the special qualities listed at para 4.56 of the Pembrokeshire Coast Local Development Plan (to 2021) and the character of the seascape in general. LDP Strategy Policy 8 Special Qualities and Policy 15 Conservation of the Pembrokeshire Coast National Park in particular should be noted when using this report.
- 1.4. At a national level, the Marine and Coastal Access Act 2009 requires the Welsh Government to develop a spatial planning approach to the management of its marine areas. This is at an early stage but NRW is understood to be considering the use of seascape character assessment to play a part in the spatial integration of coastal and marine issues.
- 1.5. The report is structured to first to explain the method used [2.0], to go on to give an overview of the seascape of Pembrokeshire [3.0], to set out the cultural benefits and services of the seascape [4.0], the forces for change [5.0] and the sensitivities [6.0]. Then, each seascape character area is described in turn [7.0]. The appendices deal with the information and approach underpinning the study- the data available and used, seascape character typology, and background information relating to cultural benefits and services, forces for change and factors influencing the sensitivity of seascape, aesthetic and perceptual factors and a glossary.
- 1.6. The study area is indicated on **Figure 1**. The method for deriving the landward boundary is explained in the method.



St Justinians from Ramsey Sound

¹ Welsh seascapes and their sensitivity to offshore developments, Briggs, J.H.W. & White, S, CCW Policy Research Report No. 08/5, January 2009

2. Method

Development of seascape character assessment methodology

- 2.1. The method for this study seeks to build on current guidance but is tailored for the particular scale of assessment, for Pembrokeshire National Park and the study's location in Wales. It is the first local seascape study of its kind in Wales and may help set the pattern for future local studies. The brief is clear in its emphasis on an assessment of the coastal landscape's seascape character in its marine setting although wholly marine areas away from the coast require coverage, and many are intervisible with the coast in any case.
- 2.2. The terms used in the study are to be found in the Glossary in **Appendix G**. This uses terms primarily defined by the latest SCA and LCA guidance. Other sources include the European Landscape Convention, and LANDMAP to ensure that there is compatibility with existing assessments in the Welsh context.
- 2.3. The study lies within the context and framework of the regional seascape character assessment 'Welsh seascapes and their sensitivity to offshore developments' which was carried out broadly in line with CCW led 2001 seascape guidance. Further seascape character guidance has since been developed, led by Natural England, based on a study off Dorset, and this provides useful guidance on the marine element of seascape. A concise form of the document has been issued which is supplemented by pilot study testing of the method and recommendations on the south and east coast of England. In Wales, a pilot study for CCW in NW Anglesey in 2012 has tested the use of different information to define types and character areas at a regional and local level.
- 2.4. The relevant seascape guidance mentioned above and taken into account by this study is as follows, in date order:
 - Guide to best practice in seascape assessment, Hill et al, Countryside Council for Wales and University College, Dublin, Brady Shipman Martin, 2001.
 - Guidance on the assessment of the impact of offshore windfarms: seascape and visual impact report, Enviros, DTI, 2005.
 - An assessment of the sensitivity and capacity of the Scottish seascape in relation to windfarms, University of Newcastle, Commissioned Report no. 103, Scottish Natural Heritage, 2005.
 - Welsh seascapes and their sensitivity to offshore developments, Briggs, J.H.W. & White, S, CCW Policy Research Report No. 08/5, January 2009.
 - Dorset Coast Landscape and Seascape Character Assessment, LDA, C-SCOPE, 2010.
 - An approach to Seascape Character Assessment, (NECR105), Natural England, Scottish Natural Heritage and Countryside Council for Wales, 2012.
 - Seascape Characterisation around the English Coast (Marine Plan Areas 3 and 4 and Part of Area 6 Pilot Study) (NECR106), Natural England, 2012.
- 2.5. In terms of status the 2001 CCW guidance still applies and is reinforced by the 2005 seascape guidance. The 2012 approach is advisory and focuses primarily on England. However, it builds on developing good practice and gives flexibility of approach and so all guidance will be taken into account.

- 2.6. The scale of the assessment is at local authority level. In Wales, there are three levels or scales of assessment- National, Regional and Local scale. The Regional study has been undertaken, as discussed, and this study provides the Local level. In England, there are four levels with the most detailed/lowest level also named 'local scale'. However, this addresses individual bays, coves or rocky coastlines. This is considered to be at a greater level of detail than required for this study and equates more with detailed Shoreline Management Plan areas on the coast.
- 2.7. Other guidance prepared primarily for landscape and visual assessment is also relevant to this study. It is important to ensure that terms and approaches to seascape are the same as for landscape insofar as the substantially different qualities of the two environments allow. Relevant publications include:
- Skye and Lochalsh landscape assessment, Stanton, C. Scottish Natural Heritage Review No.71, 1996.
 - Guidelines for Landscape and Visual Impact Assessment, second edition, Landscape Institute and Institute of Environmental Assessment, 2002.
 - Landscape Character Assessment, Guidance for England and Scotland, Swanwick, Carys and LUC, Scottish Natural Heritage with the Countryside Agency, 2002.
 - Topic Paper 6 Techniques and criteria for judging Capacity and Sensitivity, Countryside Agency, Carys Swanwick and LUC, 2003.
 - The LANDMAP Information System, Countryside Council for Wales, March 2012.
 - Landscape Character Assessment, Guidance for England, Scotland and Wales (consultation draft), LUC, Natural England, Scottish Natural Heritage and Countryside Council for Wales, 2011.
- 2.8. Many of these publications are to be updated shortly but it is understood that the principles relevant to this study are likely to remain unchanged. They are referred to in the text and appendices as appropriate below.

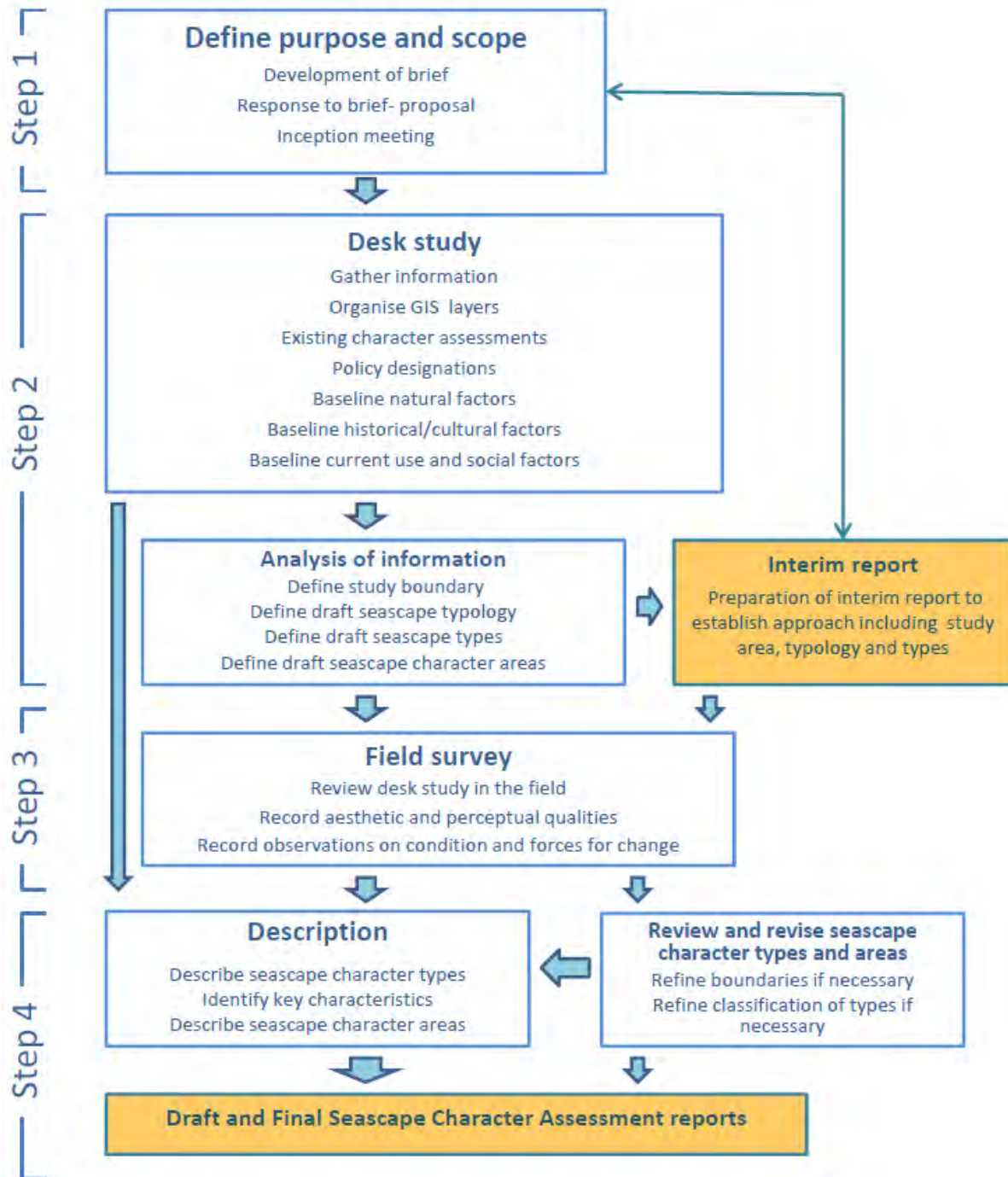
Approach to collection of data and mapping

- 2.9. Data for the study has been provided by CCW, PCNPA and Pembrokeshire Coastal Forum as defined in **Appendix A**. The data provided and suggested from other sources covers a very large range of information. Some of the data has been found to be essential for defining SCTs whilst other data has been useful in defining SCAs and assisting in their description. Not all marine data necessary has been available and some time has been needed to explore sources and availability. It is hoped that this study defines more clearly what is required for an SCA. The Appendix notes the key datasets.
- 2.10. Some GIS information from parties other than CCW include:
- Conservation areas- Pembrokeshire Coast National Park
 - Wales Activity Mapping- recreational activity available from Pembrokeshire Coastal Forum (PCF) acquired at an additional cost.
- 2.11. Non-GIS information from the UK Coastal Atlas for Recreational Boating prepared by the Royal Yacht Association (RYA) has been used in descriptions of marine use of each SCA. Seazone GIS and web data (including www.wrecksite.eu) on marine wrecks has provided information in sufficient detail to make unnecessary the use of chargeable data from Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW).

Study process

- 2.12. A flow diagram of the process is shown in Figure A. This shows the series of tasks and reporting undertaken.

Figure A: Flow Chart of Study Process



- 2.13. The interim report was important to set out the framework for the assessment and to define a typology. Feedback from the client steering group then informed the refinement of the SCTs and definition of SCAs. In practice there has been an ongoing dialogue between the consultant team and client to guide study

- boundaries, SCAs, draft SCA descriptions and presentation. This has proved invaluable.
- 2.14. A multi-disciplinary team has addressed the various aspects of the assessment coordinated by a landscape architect/seascape specialist. The aspects have included geology/marine and coastal processes, cultural and historical factors, marine and coastal uses including tourism and recreation, seascape, landscape and visual factors and GIS. GIS has been used to help define the SCTs as mentioned above and expanded on below. Existing studies and GIS datasets have been used to provide the basis for the draft boundaries, context and description for each SCA. In practice, the study has been iterative with refinement of boundaries and descriptions dependent on information feeding into the process.
- 2.15. Site survey work has been undertaken by two seascape specialists. The purpose has been to refine SCA boundaries if necessary, to explore aesthetic and perceptual qualities and to note forces for change and potential sensitivities. Representative viewpoint locations have been chosen, coinciding with SCAs and their boundaries where possible to optimise efficiency. Structured fieldwork sheets have allowed the characteristics and use of the area to be noted as well as the aesthetic and perceptual experience. A sample is shown in Appendix H. Representative photographs have been taken from each viewpoint except on a few occasions when rain prevented this. The site visits in the winter season has meant that the area has been observed when not being used as fully as in the summer and weather and poor sea conditions have led to survey work being primarily onshore. This is mitigated by the team's local knowledge through living and working in the area and by datasets such as the Welsh Activity Mapping [WAM] dataset. The coastal visits have covered the majority of the coast and Dugleddau/Milford Haven, omitting only a small number of areas for which the study team had prior detailed knowledge through previous site work for other landscape or seascape related projects or through leisure use over a long period. The site visits were generally carried out in acceptable visibility for LCA/SCA work although there were intermittent periods of rain as already noted. One sea trip was undertaken which ran from Milford marina out to the middle of St Brides Bay covering intermediate areas including SCAs 24, 25, 26, 28, 31 and 32. This has given an indication of sea conditions, marine seascape character and the visibility and perception of the coast and its influence at different distances. Team members have previously travelled across Ramsey Sound as part of an SVIA and around Ramsey Island [SCAs 17 and 18]. Overall, the combination of site visits, knowledge of the area and desk study is considered to have been sufficient to inform the study to the appropriate level of detail.

Defining boundaries

- 2.16. The parameters governing the study area boundaries are defined in Appendix 2 of the brief. In terms of the marine extent, we include regional seascape units 28-41 to include the National Park and its setting. The study area is 12 nautical miles (nm) out from the coast and islands such as the Smalls, defined by a line 90 degrees from the coast from Cardigan Island to the north and Pendine Sands to the south east [see **Figure1**].
- 2.17. Discussion of the inland extent with the client steering group at the inception meeting indicated a desire that the inland boundary should include land which has a strong visual relationship with the sea/tidal waters, not just coastal landscape character types such as dunes or cliffs. Areas with some intervisibility with the coast could be excluded. The inland extent has therefore been defined by overlaying 1:25,000 OS mapping, the LANDMAP visual and sensory layer, the CCW dataset of land with intervisibility with the sea and Phase 1 intertidal

habitats which define the tidal limits. Google Earth with Street View has further informed boundaries.

- 2.18. Initially areas with a high intervisibility with the sea were mapped (red or orange graded squares in the mapping). This line sometimes went inland, eg at Mynydd Carningli, and sometimes ran close to the coast where there was a coastal plateau. For the areas bounding the Milford Haven, areas of lower visibility (blue squares) were marked as they only had views of the inland waters rather than the open sea and therefore would have a lower rating. Nevertheless they would contribute to seascape. Areas with visibility of the sea but not connected to the coast or with weaker intervisibility were not included. These coarse boundaries were then refined by studying and responding to the landform including high points and ridgelines. The extents of the tidal areas were then checked so that they were included in the study area. The boundaries were then rechecked against the visibility mapping and using Google Earth street view in areas of uncertainty. In some areas such as peninsulas [ie Marloes and the western end of the St David's peninsula] all land has been included due to the highly maritime, exposed character of the landscape. The terrestrial types have been defined up to this inland boundary.

Deriving seascape character types (SCTs)

- 2.19. A draft typology of marine, intertidal and seascape character types with a proposed nomenclature was prepared and submitted as part of the interim report. This built on the CCW pilot study in Anglesey/North Wales, knowledge of Wales seascapes and coastline overall, LANDMAP and of the Pembrokeshire marine and coastal environment. It also reflected the requirements of the brief. A different approach was taken for each of the three categories which is explained below.

Deriving Marine SCTs

- 2.20. The marine SCTs differ from the NECR105² approach as they form 'building blocks' from which the proposed SCAs will amalgamate. (In NECR105, types are generic classifications which may cover a number of large areas which themselves are individual SCAs.) The types are also proposed to be at one level, the local authority level, reaching out to sea the full 12nm offshore. This is because the Regional seascape study has used a different approach to the marine element of the study area and it is considered that confusion may result if these areas/units were also called 'regional'. This also differs from the 2001 CCW guidance which suggested that seascape assessment should only reach 1nm offshore.
- 2.21. The SCTs extend from the 12 nm limit to the edge of the intertidal types which were defined first. It was decided that the prime drivers of difference in marine character were the physical characteristics of bathymetry, sea bed sediments and bedrock, and wave climate. From this, other secondary characteristics would flow such as sea use which has been used as a contributor to the definition of types elsewhere. For instance, sandbanks would tend to have shallow water and higher waves and would be avoided by boats/shipping. Deep water high wave coasts would tend to be avoided or used in a limited way eg Strumble Head coastal waters. Coarse sediment or bare rock on the sea bed such as in Ramsey Sound indicates higher water energy whilst fine sediments such as

² An approach to Seascape Character Assessment, (NECR105), Natural England, Scottish Natural Heritage and Countryside Council for Wales, 2012.

mud indicate low energy, such as the middle of St Bride's Bay, where tankers anchor. The three main drivers were subdivided as follows:

- Shallow depths 0-30m, moderate depths 30-60m, and deeper waters >60m.
- Sea bed sediments ranging in grain size from gravel to sand to mud and bedrock exposed on the sea floor towards islands/islets. Sea floor sediment is contributed to by erosion, lost through depositional processes, and may be transported by currents along the coastline.
- Wave climate - relating to exposure (wind), tidal and current conditions

2.22. The following data has been used to inform the classification:

- BGS Bath250- for Bathymetry/depths of water- available via CCW
- BGS DigMap250- for sediment seabed geology- available from BGS eventually via CCW.
- Wave climate from data obtained for CCW by LUC in a pilot study.

2.23. Types were defined and then further qualities were added to each type to further inform potential seascape character area boundaries. These were:

- Sea floor topography - slopes, channels/troughs, islets.
- Turbulence
- Bedrock type

2.24. The typology was tested on two pilot study areas: Ramsey Sound and the mouth of Milford Haven. The technique picked up a mix of fine grain areas such as the three types in the tidal strait of Ramsey Sound, which slopes into a central trough and is more steeply shelved and sheltered on the west side than the east. Similarly, the area across the islets W of Ramsey has NE-SW lines of islets flanked by shallow slopes, controlled by igneous bedrock geology, and separated by a deeper channel presumably used by shipping. In the Milford test area, the seaward limit of the estuary mouth was placed at the 30m depth contour which also subsequently was found to coincide with the extent of the Milford Haven Harbour Authority Area. The types therefore appeared to usefully differentiate areas as a suitable building block for SCAs.

2.25. There are 26 marine types spread across 81 defined SCTs. The relationship between the drivers/factors can be discerned in **Figures 2, 3 and 4** and the numbered SCTs are summarised in **Figure 14**.

Deriving Intertidal SCTs

2.26. The brief stated that Intertidal types should be defined by the Phase 1 habitat intertidal dataset. This is an extremely detailed, fine grain and apparently accurate dataset and was therefore used to define the limits of the marine and terrestrial types on either side. As the dataset was quite complex such as differentiating between different types of rocks in narrow bands along rocky shores (eg high, medium and low energy littoral rocks) it was decided to amalgamate these into simpler categories which make sense at a seascape scale. The types were defined as:

- Mud
- Sand and shingle
- Rock

- Saltmarsh or saline reedbed
- Biogenic reef.

Deriving Terrestrial SCTs

2.27. Terrestrial types are based on LANDMAP Landscape Habitat aspect Level 3 layer which complements the intertidal layer in terms of its Phase 1 derived source material but is at a larger, landscape scale. The aspect areas have been rationalised and amended to obtain a reasonable grain of landcover definition without new digitising. This has meant that small scale settlements have not been defined but these are considered within the SCA description. The types are defined as:

- Sand Dune
- Beach/rough ground above High Water Mark
- Coastal heath and grassland mosaic
- Maritime cliff and slope
- Grassland and semi-natural mosaic
- Grassland mosaic (MOD range)
- Tall Herb and Fern (Bracken)
- Heathland
- Broadleaved woodland and scrub
- Mixed woodland and scrub
- Coniferous forest
- Woodland mosaic
- Mixed farmland
- Mixed farmland and woodland
- Improved grassland with woodland
- Pastoral farmland
- Grazing marsh
- Wet mosaic
- Mire and Swamp
- Open water
- Built up area
- Built up (industrial)
- Built up (port)
- Built up (resort)
- Amenity

Overall comments on types

2.28. The full typology is as set out in **Appendix B**. The types reflect the scale and character of the underlying seascape/landscape. Marine types are generally larger scale further from the coast with smaller areas along more complex

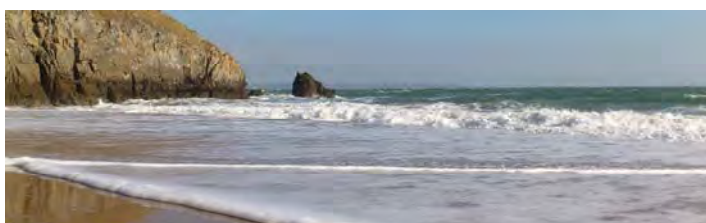
stretches of coast such as around islands. Intertidal types are generally very narrow, especially along rocky coasts and are not apparent on larger scale maps. Terrestrial types vary in scale with farmland and pastoral types covering large areas of hinterland extending to the coast in places. There are smaller areas of the important coastal and dry mosaic areas dominated by semi-natural habitats.

Deriving Seascape Character Areas

- 2.29. The boundaries of the seascape character areas [SCAs] have been primarily driven by the marine SCTs as these define the character of both the marine areas and the coast with different geological formations. These in turn dictate coastal and sea use to a large extent. The brief required coastal SCAs to include coast and marine components along with the relevant hinterland. Purely marine SCAs were also expected. The boundaries of each coastal SCA running inland is primarily defined by landform and geology or the viewshed separating adjacent SCAs. The intertidal and terrestrial types have generally not been definitive in determining boundaries and SCA boundaries therefore divide up these types which have been split in GIS layers as requested by the brief. The types have informed the descriptions for each SCA.
- 2.30. The SCA boundaries overlap regional seascape area boundaries as the latter relate to visual divisions based mainly on major headlands rather than on the detailed character of the coast itself. For instance, the strong distinctive headland of Dinas Head, with its shallow conglomerate seabed, is proposed as a local SCA in itself but is divided into two by the Regional Study as it is a dividing line between Fishguard and Newport Bays. This is an acceptable approach on both counts as the two assessments have different purposes. The regional study is mainly focussed on the visual relationship between sea and land and the potential effects of offshore development with units nominally extending out to sea 24km and inland 10km. The local study is primarily concerned with the inherent qualities and characteristics of smaller coastal and marine areas. The headland and associated sea is different in character from the more sheltered bays either side.

Aesthetic and perceptual factors

- 2.31. Aesthetic and perceptual factors are important in undertaking a character assessment. This information cannot be fully researched as part of the desk study and so has been collected as part of the site survey. Whilst aesthetic terms can be collected in a reasonably objective way, perceptual terms are more subjective. Both rely on the professional judgement of the surveyor. The assessment is structure in a systematic way to produce as consistent a survey as possible. In order to achieve this, each term has been defined and a sample illustration prepared for aesthetic terms. The latter cannot hope to capture all instances but relates to certain scenarios which may occur in the study area. The terms have been used as a checklist for the site survey forms/SCA descriptions. They derive from seascape guidance in England and Wales, landscape character guidance and the Skye and Lochalsh landscape character assessment (LCA). The definitions are derived and adapted from LANDMAP guidance (2003) where possible to try to achieve consistency between the assessments. The proposed terms and definitions are shown in Appendix F.



Barafundle Bay

3. Overview of the Pembrokeshire Seascape

- 3.1. The LDP provides a suitable introduction to the Pembrokeshire Coast National Park seascape stating that it:

'is widely recognised as Britain's only predominantly coastal National Park. The splendour of its coastline, the influence of the seascape, its spectacular scenery, and rugged, unspoilt beauty, provide a scenic quality which was recognised in its designation as a National Park along with the spectacle of the islands off the Pembrokeshire coast.' [4.58]

- 3.2. The study area coastal boundary runs from the Cardigan Island on Cardigan Bay to the north to the Taf estuary area on Carmarthen Bay to the south. It is on Great Britain's remote western seaboard facing the Atlantic Ocean/Celtic Sea due west, St George's Channel to the north east, Cardigan Bay to the north, and Bristol Channel to the south east and east. The sea and coast are exposed to, and often governed by, the prevailing south westerlies. The area's resulting distinctive maritime climate means the weather is almost always different from that occurring further east in the UK. The area's distinctive and varied rock formations interact with the force of the sea and weather to create a wide range of dramatic seascapes.

Physical influences

GEOLOGY AND COASTAL FORM

- 3.3. Pembrokeshire has virtually continuous exposure of rocks in cliffs, headlands and bays around its long coastline. It is an area rich in rock types and formations, with varied character and used extensively for the study of geology.
- 3.4. The rock succession spans from late Precambrian (<650 Ma (million years ago)) to late Palaeozoic (285 Ma). The offshore bedrock, beneath the sea floor sediments, is overlain by younger rocks. The rocks in Pembrokeshire show the effects of ancient mountain building episodes that uplifted, deformed and eroded rocks, leaving characteristic structural trends that control the direction of the landform. More recently, repeated glaciations have further shaped the landscape leaving sediment deposits. In the last glaciation (18,500 years ago) north Pembrokeshire to St Bride's Bay was covered by ice, but southern Pembrokeshire remained ice-free.
- 3.5. Precambrian rocks are exposed only in small areas along the southern St David's peninsula. They comprise metamorphosed sedimentary rocks and intrusions. Cambrian marine sandstones and shales are also well exposed on the St David's peninsula e.g. Solva. In the Ordovician era, thick successions of deeper water shales with graptolites (e.g. Aberiddi), and turbidites (e.g. Poppit Sands) were deposited with high cliffs on the north coast reaching 150mAOD around Pen yr Afr. Spectacular Ordovician sandstone cliffs reach 140mAOD around Penbwchdy. There was also widespread volcanic eruption and intrusion of magmas. The resistant igneous rocks include the spectacular pillow lavas of Strumble Head with cliffs 50mAOD high, the rhyolitic rocks on Ramsey Island, and form prominent tors (e.g. Carn Llidi at 181mAOD high -St David's Head gabbro, Garn Fawr at 213mAOD high and Penbiri). The islets of the Bishops and Clerks are mostly igneous, representing continuation of this pattern into offshore areas. Local volcanic activity centred on Skomer Island. The Marloes peninsula has extensive coastal exposure of these rocks, while their offshore continuation is shown by the islands/islets of Skomer, Grassholm and the Smalls. The siltstones, limestones and sandstones of the period were formed in warm shallow, fossiliferous seas (brachiopods, corals). Towards the end of the Silurian a transition from marine to non-marine conditions is shown by the change to red-

bed deposition of the Old Red Sandstone (e.g. St Anne's Head at 46mAOD high, Freshwater West with its wave cut platform, Freshwater East and Pendine). This continues into the Devonian, represented by red sandstones and mudstones laid down on coastal plains, mudflats, salt marshes and in braided rivers. These terrestrial environments were inhabited by early plants, armoured fish and amphibians. The collision of continents created folds and faults which is widely evident in the cliffs of north Pembrokeshire (e.g. Abereididi Bay).



High cliffs at Penbwchdy

- 3.6. Upper Devonian sedimentation continued in red beds, representing sediment deposited in rivers and on floodplains as the mountains eroded. The Carboniferous saw a return to marine conditions, with the Carboniferous Limestone laid down with shoals and lagoons (rich in corals, brachiopods). The Limestone forms prominent headlands and is exposed in steep coastal cliffs in south Pembrokeshire (e.g. Linney Head at 40mAOD high, Trevellen, Stackpole at 35mAOD high). This limestone coast displays distinctive erosion features such as stacks, caves, arches and blowholes. In mid to late Carboniferous times sedimentation changed to sandstones and mudstones of rivers and delta plains vegetated by giant ferns and horsetails. The peat swamps form the source for coals of the Coal Measures (Pembrokeshire Coalfield). Further continental collision led to the uplift resulting in east-west folds and faults, well seen in south Pembrokeshire (e.g. Ladies anticline at Saundersfoot, Stackpole, West Angle Bay).



Carboniferous limestone cliffs: Whitesheet Rock

- 3.7. Younger rocks (Permian, Mesozoic and Cenozoic) are preserved in the offshore bedrock. Triassic terrestrial sandstones, and Jurassic marine mudstones and limestones, are comparable to the rocks seen along the Vale of Glamorgan coast. Triassic rocks form the offshore bedrock in the Bristol Channel SCAs. They are cut by many east-west stretching faults formed during subsidence of the Bristol Channel basin. Cretaceous sea levels were exceptionally high, and the coastal plateaus of headlands in west Pembrokeshire (e.g. seen from tors like Carn Llidi) may represent wave cut platforms from that time. Cenozoic rocks - sandstones, mudstones and lignites - form offshore bedrock in the west of the study area. Uplift led to sea levels higher than today over Pembrokeshire, leading to marine erosion that shaped the present landscape. Offshore bedrock is faulted north east-south west, and north west-south east. The Milford Haven Cleddau estuary drainage system formed at this time.
- 3.8. Quaternary glaciations over the past <450,000 years led to Irish Sea ice crossing into western Britain to various extents. Sea levels in glacial and interglacial periods ranged <50 m lower to <5 m higher than today across Pembrokeshire. A glacial meltwater channel is preserved at Cwm Deri by Dinas Head, while the raised shingle beach behind Newgale represents interglacial sea level rise.

MARINE AND COASTAL PROCESSES

- 3.9. Coastal processes today continue the modification of coastal form and seascape character. Processes include wave action, sediment movement on-offshore or along the shore [longshore drift] and fluvial sediment supply from rivers into estuaries. Wind and wave action cause erosion through abrasion, attrition and hydraulic action and transport and deposit sediment through traction, saltation and suspension. The prevailing south westerlies and movements of tides and currents cause wave and wind erosion particularly on the exposed west facing coasts. The protruding St David's Peninsula and Ramsey and the Marloes Peninsula and Skomer with associated islets are an indication of the harder rocks, still battered by high energy waves. The softer rocks comprising the deep St Brides's Bay coast between continue to erode faster as do the dunes in exposed locations such as Freshwater West. Shores where sedimentation occurs include Carmarthen Bay also accumulating from sediment from the Taf/Twyi estuary. Longshore drift occurs along the southern coast generally from west to east with groynes installed to attempt to control this around Amroth. Currents between islands keep these scoured with the central channel in Ramsey Sound eroded to a great depth.
- 3.10. The sea has a very wide tidal range typically between 4.1m to the north at the Teifi estuary, 5.5m at Ramsey Sound and 6.6m east of Milford Haven. At high water (HW) the tidal flow is from east to west along the Bristol Channel and from the north east along St George's Channel. Tidal flows reach their maximum three hours before HW where flows run east west along the Bristol Channel and sweep north round into St George's Channel and Cardigan Bay. The flow is reversed three hours after HW where flows are strongly in the opposite direction. This causes turbulence in some areas such as around St Annes Head and at the mouth of Milford Haven with a confusing sea and swell. To the west of Skokholm there are fast tidal streams up to 4 knots and tidal races (Wildgoose Race), and eddies off Gateholm. The tide flows through constricted areas such as Jack Sound, between Skomer and the Marloes peninsula, and through Ramsey Sound with upto a 6 knot tidal race with gyres.
- 3.11. Higher waves occur where there is shallower water. This occurs on the coast, around the islands and islets including the Smalls and Gateholm and the Bishops and Clerks and where there are shallow sand bars. Waves tend to be higher on

the west facing coasts and lower along Carmarthen Bay and the adjacent sheltered south east facing coast such as at Lydstep and Saundersfoot.



Waves at Broadhaven

MARINE AND COASTAL BIODIVERSITY

- 3.12. There are numerous Special Areas of Conservation (SACs) including Pembrokeshire Marine, Cardigan Bay, Carmarthen Bay and estuaries, Cleddau rivers and the Limestone coast of South West Wales. Special Protection Areas (SPAs) include Ramsey and St David's peninsula coast, Skokholm and Skomer, Grassholm, Castlemartin coast and Carmarthen Bay. There is a Marine Nature Reserve around Skomer which is likely to become a Marine Conservation Zone (MCZ) under the Marine and Coastal Access Act 2009. National Nature Reserves lie on Ramsey, Skomer, Skokholm, Grassholm and Stackpole. Together these designations cover 75% of the coastline and around 60% of the inshore area (see Figure 7).
- 3.13. The maritime habitats include the water column itself and seabed areas of gravel and sand interspersed with submarine cliffs, rocky reefs, stacks and islets.
- 3.14. The water is home to local species of harbour porpoises, bottlenose dolphins, and Atlantic grey seals along with numerous fish species. The seals can be observed resting on isolated beaches or shelving rocks on the more westerly parts of the coast and use the caves and beaches for rearing pups. The harbour porpoises can be seen in places such as Ramsey Sound. Other species visit including sharks, orcas, blue whales and turtles although these are much rarer sightings. All these animals significantly enrich the experience of the seascape and attract many visitors.
- 3.15. The islands and parts of the mainland support a variety of seabirds including gannets on Grassholm, manx shearwater and peregrine falcon, chough, skylarks and stonechat on coastal habitats. The coastal waters provide overwintering areas for grebe, scoter duck and other diving species. These birds often animate the view from the coast path and boats and again attract many visitors.
- 3.16. The sand and gravel seabed is inhabited by surface and burrowing animals such as crabs. The underwater cliffs and reefs accommodate brown kelp, red seaweed, sponges, sea squirts and anemones amongst other species.
- 3.17. The coastal habitats are littoral rocks and beaches with varying degrees exposure and immersion leading to distinctly different communities of plants and animals such as seaweeds, anemones and molluscs.
- 3.18. The estuarine muds support worms and molluscs on which waders and wildfowl feed. Milford Haven and the Daugleddau estuary have high biodiversity and the former hosts eel-grass beds and saltmarsh and a coastal lagoon lies at Gann, Dale. The area is an important feeding ground for wildfowl and waders such as

wintering teal, wigeon, curlew and shelduck. Otters are found on the Cleddau. Migratory fish including sea trout and salmon are found in many watercourses, most famously on the Teifi.



Lagoon at Dale

- 3.19. Exposed coastal habitats of cliff top grasslands and heath support a rich weave of plants including thrift, sea campion, sea plantain, spring squill and red fescue. These bring colour and texture to the rocky cliffs and slopes adding extra pleasure to coastal walks. On more sheltered slopes bracken is apparent, sometimes providing shade to carpets of bluebells, primroses and red campion.
- 3.20. Woodland and scrub reaches the coast in places with associated species, often in incised valleys with watercourses which have wound inland through the plateau to the coast. These add to the diversity of the coastal habitats.

Cultural influences

HISTORICAL

- 3.21. Pembrokeshire's coastline is long and its harbours are good. It juts out into ancient seaways - not only the busy mouth of the Bristol Channel and the sweep of Cardigan Bay but also into a north-south route that encompasses Ireland and western Britain, one that was known to classical antiquity and to the Norseman.
- 3.22. The seascapes of Pembrokeshire have evolved over millennia. The intervisibility of shore, hillslope and sea was clearly significant to the people who erected the Prehistoric monuments in which Pembrokeshire is particularly rich. An example is Mynydd Carningli with its commanding views over Newport Bay. The area also has 54 enigmatic Prehistoric promontory forts, the densest concentration in Wales, though many of these have nearly been lost to wind and water- Flimston Bay, one of the most spectacular, Great Castle Head at Dale and Porth y Rhaw have all been badly eroded. Conversely, sands may have covered important archaeological sites - a Roman port and an early Christian centre, the predecessor of St David's, may lie under the dunes of Whitesands Bay.
- 3.23. The cathedral and the coastal chapels are eloquent reminders that the sea was the great route of the early Christian church in Wales and Ireland - St David's was only 'remote' from the perspective of London or Canterbury. The monastery on Caldey island perpetuates this tradition.
- 3.24. The sea has also had a powerful impact on strategy and historical events. Milford Haven was the landing-place of Henry Tudor, Henry VII, the *mab darogan* who marched from here to defeat Richard III at Bosworth Field. The landing is obliquely referred to in the court-drama *Cymbeline*, when Imogen, on hearing that her exiled husband may await her at Milford Haven, says:

' . . . how far it is

*to this same blessed Milford; and, by the way,
Tell me how Wales was made so happy as
To inherit such a haven ...'*

- 3.25. Milford and later Pembroke Dock were the sites of royal navy dockyards from the eighteenth/nineteenth centuries until the late twentieth. There is a particular cluster of defensive sites all around the coast of Pembrokeshire, more marked than in any other area of Wales. From the time of Thomas Cromwell, its overall strategic importance has been recognised - though the French landing at Strumble Head was easily repulsed. Naval ship-building was established at Neyland c. 1760 and at Milford Haven in 1796. It was relocated to Pembroke Dock in 1812, which became one of the most important naval ship-building centres in Britain. Facilities were substantially extended in 1830-32 and again in 1844. Such was the area's importance in strategic terms that forts were built to guard the Haven from possible attack by the aggressive government of Napoleon III. Decline set in after the introduction of the Dreadnoughts and the dockyards finally closed in 1926. Civilian dockyards were also established here. During World War II Pembrokeshire played an important role in the Western Seaboard Defences strategy, when there were twelve airfields in active operation. Remains are still apparent such as the look out on Carn Llidi.



The mouth of Milford Haven

- 3.26. Above all, the coastline has shaped the trade and commerce of the area. Haverfordwest was established at the navigable head of the western Cleddau. Ship yards and creeks were established along the coastline, and the area preserves many fine examples of the small ports that are a feature of the Welsh coast. Lime was quarried from its coastal cliffs, and burnt in sea-shore. Pembrokeshire also had a long-lived coal industry. Some of its collieries such as Trevane, were situated on the coast. Others lay further inland; those around Saundersfoot only developed when a railway was built to connect them with the harbour, in 1829. The ironworks at Stepside also added to coastal trade. Coastal slate quarries were opened along the north coast, of which the largest was Aberiddi, where the pit has been breached by the sea. Slate was exported from Porthgain harbour which later turned to brickmaking using slate waste and then dolerite export. Fishing has been an important regional industry - Milford even boasted a whaling industry at one time. With the introduction of a rail link to wider markets and refrigeration, it expanded to become a major fishing port.
- 3.27. The refineries and oil terminals which began to appear in Milford Haven from 1957 locked the area into a global economy. Other energy-distribution projects have taken their place since, and the sea remains as important to Pembrokeshire as ever.

PRESENT DAY MARINE AND COASTAL ACTIVITIES

- 3.28. Pembrokeshire is established as a popular tourism destination especially around its coast. These tourists are increasingly looking for coastal recreational activities whilst on holiday or coming to the area specifically to participate in such activities. The intensity of use relates to the ease of access with places allowing vehicle access close or on the beach being popular honeypots such as Tenby, Saundersfoot and Amroth to the south east and Newport Bay and Whitesands Bay to the north and west. Other coastal locations are very remote allowing access only by small boat. Activities can vary from general beach activities which are popular at the many good, clean beaches to the more strenuous activities of kite surfing, climbing, diving and coasteering which was invented in the area. The intensity of use is also determined by school holidays as well as the weather.



Caravans at Wiseman's Bridge

- 3.29. Coast walking along the Pembrokeshire Coast Path National Trail (part of the Wales Coast Path) and linked paths is very popular. Over 67,000 visitors used the coast path in 2012. The coast path is 300km long due to the highly indented and complex nature of the coast. Certain stretches are used more intensely than others- mainly those close to the honeypots such as Tenby and Whitesands Bay etc. Another popular recreational activity is kayaking due to the relative ease of access to the water. Other launchable craft that are popular are day motor boats and sailing dinghies out of most beaches with slipways. Sea angling is also popular from both the shore and boats which can go some way offshore.



Coast Path at St Justinians- a popular stretch

- 3.30. Wildlife related recreation trips are popular such as to Skomer Marine Nature Reserve and around Ramsey Island and out to Grassholm for its gannetry. Diving sites are also found in these areas due their biodiversity.

- 3.31. Motor and yacht cruising is found around most of the coast with a higher intensity near marinas and yacht clubs such as the Teifi Estuary to the north and Milford Haven Waterway and Tenby on the south coast.
- 3.32. The fishing industry in Pembrokeshire has moved away from historical deep sea trawling with many fishermen now looking to inshore fishing for crustaceans such as crab and lobster. This results in pots being found around practically any rocky shore.



Potting fishing vessel off Strumble Head

- 3.33. Commercial shipping on the Milford Haven Waterway, primarily of gas [LNG] and oil, along with the ferry terminal at Pembroke Dock, makes this area one of intense activity. This is further intensified with the leisure use.



Milford Haven- refinery

ART AND SEASCAPE

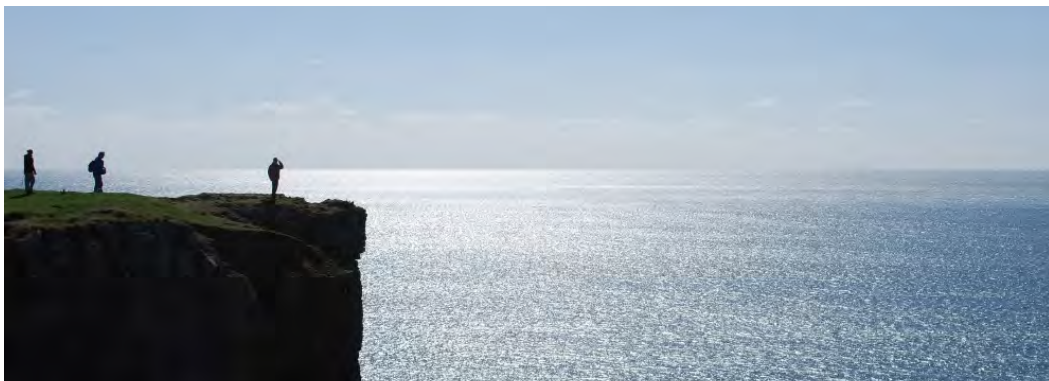
- 3.34. Pembrokeshire's spectacular seascapes have attracted artists in numbers from the 18th century. Peter Watson, of *Horizon* magazine, a patron of young artists, claimed that west Wales represented the closest approach in Britain to the strong light and elemental landscape of the Mediterranean.
- 3.35. Richard Wilson painted Pembroke town and walls c. 1765-6, and Julius Caesar Ibbetson's *The Guide to the Stackpole Scenery pointing to Stack Rock Pembrokeshire* (oil on canvas and water-colour and black ink, 1793) is one of the most explicitly topographical coastal views of the area from this period.
- 3.36. Augustus John is the artist best known for his Pembrokeshire associations, though he spent most of his life away from Wales. The area's seascapes have inspired many contemporary artists, though an increasing focus on abstraction has meant that fewer are works of recognisable places. John Piper, however, who painted *St Bride's Bay*, moved away from non-figurative art from when he first started to visit Wales in 1937, and came to be recognised as a landscape painter in the tradition of Turner. Rosemary ('Ray') Howard-Jones also worked

in a more representational style, reflecting her background in archaeological reconstruction drawing and as a war artist. *Sunset on Skomer* and *Thunderstorm over Skomer* reflect her visits to the island between 1949 and 1951. Graham Sutherland painted St David's Head and the surrounding area many times.

- 3.37. More recent artists include Brendan Burns who was the first Artist in Residence at Oriell y Parc, Landscape Gallery St Davids, 2009-10, a partnership between the National Park & National Museum Wales. His exhibition 'Influere' was held here. His paintings explore the qualities of the sea and coast with works with evocative names such as 'Seabelt shimmer', 'Squally squint', 'Shoreline ramble' and the 'Tidal' series. John Knapp-Fisher has established an art gallery in the area and has painted widely. Subjects include Tenby, Porthgain and Solva, as well as pictures such as 'Beach and Sky' which simply shows the juxtaposition of these two elements separated by the sea.

Aesthetic and Perceptual Influences

- 3.38. The overriding experience of the Pembrokeshire seascape is open and wild sea meeting diverse and sometimes remote indented coasts of rocky cliffs and shores interspersed with sweeping sandy bays and dunes and intimate little coves and harbours.
- 3.39. The scale of the coast varies significantly between the broad sweep of Carmarthen Bay to the narrow, enclosed harbours of Solva, Abercastle and Stackpole Quay. There are intermediate bays such as Newport Bay and Whitesands Bay with their sandy beaches, enclosed by the strong, distinctive headlands of Dinas Head and St David's Head respectively. These rocky landforms frame views out to open sea to the west. To the south, in good visibility, views are possible to Lundy Island.
- 3.40. The diversity of the seascape is apparent at all scales. At a broad scale adjacent areas can differ significantly. The straight open limestone cliff coast of the remote Castlemartin peninsula contrasts with the indented sandstone and igneous coast of the Dale and Marloes peninsulas with their beaches, and again with the natural industrialised harbour of Milford Haven to the north. At a smaller scale the intricate indented coast between Strumble Head and St David's Head changes quickly between rocky cliffs and shores of varying character with small inaccessible coves and a smattering of coastal settlements and harbours such as Abereiddy and Porthgain. At a detailed level, the variation of habitats from the littoral rocks, to cliffs and cliff top heathland mosaics contrasting with the hinterland of pasture with Pembrokeshire hedgebanks and steep wooded valleys give a variety of form and texture which delights all on the coast path.



Stackpole Head- panoramic views

- 3.41. The sea also varies in character, through variations in weather including wind direction, fetch, tides and depth of water and nature of the seabed. Strong

- currents meet around headlands such as St Ann's Head and flow through constricted areas such as Jack Sound, between Skomer and the Marloes peninsula, and Ramsey Sound. This disturbed water can be dramatic such as the standing wave at The Bitches and is apparent to those on the coast as well as those in boats. Larger waves and 'seahorses' are apparent around the islands and islets such as the Bishops and Clerks and the Smalls as well as on the exposed rocky coasts and west facing beaches such as the dramatic and dangerous Freshwater Bay West with its undertow and the rather safer Whitesands Bay and Newgale Sands, popular with surfers and body boarders. These contrast with the sheltered south and east facing beaches with their relatively calm waters such as at Tenby, Lydstep and Saundersfoot.
- 3.42. A key feature of the Pembrokeshire seascape is the feeling of remoteness, wildness and tranquillity in many parts of the coast. This is particularly apparent on the cliffs on the north coast between Cemmaes Head and Newport Bay, the coast around Strumble Head and St David's Head and the Castlemartin peninsula. These are mostly accessible via the coast path along the cliff tops although the rocky shores are often inaccessible. Castlemartin has restricted access due to MOD use which also disturbs tranquillity while in use. The islands can be more remote and some are inaccessible, such as Skokholm. Only small numbers access Skomer and Ramsey Island and these feel particularly wild with their low intensity management and semi-natural vegetation. Caldey Island has enforced tranquillity with the monastery and controlled visits. Of course the most remote areas are offshore where a few in boats, cruising, fishing or diving can feel like they are getting away from it all.
- 3.43. The busiest parts of the coast include Tenby, Saundersfoot and other coastal settlements to the south east and also honeypots such as Whitesands Bay and Broadhaven. These are the parts of the coast which children experience [and probably like] most. The beach is the focus of activity and visitors, young and old, can experience the sand between their toes, the coolness and movement of the water, the sound of waves crashing on the beach, the smell of the salt air and the wind in their hair. These are different experiences from our normal day to day lives and can give a feeling of refreshment and renewal. Evocative holiday experiences can stay with people for the rest of their lives and draw them back to the coast and the sea again and again to 'refresh their batteries'.
- 3.44. The Pembrokeshire coast and islands have a strong sense of place contributed to by both the natural splendour of the indented rocky coastline and islands and the mark of man such as peninsula forts eg Castell Coch, religious sites eg St Govan's Chapel and deserted workings eg Porthgain or Abereddy.



St Govans Chapel

4. Cultural benefits and services

- 4.1. Cultural benefits and services cover the non-material benefits that people obtain from ecosystems such as spiritual and religious enrichment, cultural heritage, recreation and tourism and aesthetic experience. The UK National Ecosystem Assessment, 2011, defines 'Ecosystem cultural services' as '*the environmental settings that give rise to the cultural goods and benefits that people obtain from ecosystems*'. These involve '*a range of complex cultural practices, such as the development of institutions, the application of capital, and human processes involving memories, motions, the senses, and aesthetic appreciation.*' The background to this is discussed further in **Appendix C**.
- 4.2. The Pembrokeshire seascape clearly offers these services in a number of ways. These are set out in **Table 1** as a framework for the brief descriptions for each seascape character area (SCA).

Table 1 Ecosystem cultural services provided by the Pembrokeshire seascape

<i>Generic service category</i>	<i>Typical components in Pembrokeshire seascape</i>
Leisure / recreation	<ul style="list-style-type: none"> • walking the Coast Path, rambling, hill walking • sailing, canoeing, rowing, windsurfing, surfing, kite surfing • swimming, diving, snorkelling, rock-pooling, beach activities • angling, shore-based and from boats • wildlife boat trips • climbing, coasteering • horse riding/beach riding • land yachting • power boating, waterskiing, jet-skiing • parks and play areas
Spiritual / religious	<ul style="list-style-type: none"> • connection with sense of remoteness, tranquillity and timelessness/time depth • connectedness with nature • places of worship, monastery and retreat centres • places with particular sense of identity for local communities
Artistic / cultural heritage	<ul style="list-style-type: none"> • archaeological features such as promontory forts • historic sites and buildings • environmental education activity • festivals and events • food and farming traditions • craft traditions • museums, galleries, and visitor facilities to interpret the environment and cultural heritage
Natural heritage	<ul style="list-style-type: none"> • interactions with or observation of wildlife (for example bird watching, seal watching, dolphin and whale watching) • interaction with the natural coastal and marine environment as a leisure activity • diversity of views, sense of spaciousness, and appreciation of aesthetic qualities

5. Forces for change

- 5.1. Forces for change have been considered in respect of how they affect the special qualities of the National Park. They can be divided into natural processes and climate change, marine/water based activity, coastal development and marine related activity and land management.
- 5.2. Natural processes include erosion of coasts, sedimentation and flooding. Though climate change is likely to have significant effects in the long term in relation to sea level rise and changing weather patterns the study focuses mainly on the existing evident and or likely effects over the next ten years. Sea defences can radically change the character of the coast from natural to one dominated by manmade structures.
- 5.3. The port of Milford is the third largest in the country and used by large tankers and other craft including ferries. The area is very popular for tourism and water based activity is increasing with sailing and motor leisure boating driven by new marinas being developed in Fishguard and Pembroke Dock, with other marinas and moorings also increasing capacity. There is also an increase in wildlife and boat trips, canoes and other craft. The emergence of potentially higher protection around proposed marine conservation areas such as Skomer may have implications as to recreational use and access. One of the major tensions in the National Park is the need to protect wildlife which flourish in the remote coastal waters, islands, cliffs and beaches whilst managing a variety of visitors who increasingly wish to enjoy and access these fragile areas potentially causing damage and disturbance. Offshore there are licensed areas for wind energy [Atlantic Array], for dredging, oil and gas and use by the MOD for firing ranges and military training. Ramsey Sound is being explored for tidal energy. These activities can have physical effects such as pollution or disturbance of sensitive areas but can also disturb tranquillity and a sense of remoteness.
- 5.4. The coast-based infrastructure related to marine commercial activity such as the refineries, storage facilities and power station along Milford Haven will continue to respond to more Liquid Natural Gas [LNG] and other changing requirements for energy. The area's chimneys and structures are already widely visible in the National Park. Onshore infrastructure for renewable energy may affect coastal character eg Ramsey Sound. The Coast Path, once a stand-alone attraction, has now been joined by an all Wales Coast Path which itself is gaining much promotion. This will potentially increase usage with attendant damage to the path structure through compaction and erosion. Coasteering and climbing plus beach based activities are putting pressure on the coastal resource with associated infrastructure, erosion, compaction and litter. Pressure is also increasing on the access points to the water for recreation.
- 5.5. Whilst the study concentrates on marine-related issues, the view along the coast, and its character, are partly defined by the management of landcover such as farmland. Changes to field boundaries with the removal of hedgebanks/replacement with fences and changes to intensity of management either with abandonment of fields or rough grazing or intensification from unimproved pasture to arable can have significant effects. The attractiveness of the area also leads to pressure for housing and tourist development and associated commercial enterprises. Onshore wind energy can also affect coastal character and may cause cumulative effects with port and oil/gas infrastructure.
- 5.6. The relevant forces for change are set out with further background explanation in the table in **Appendix D**.

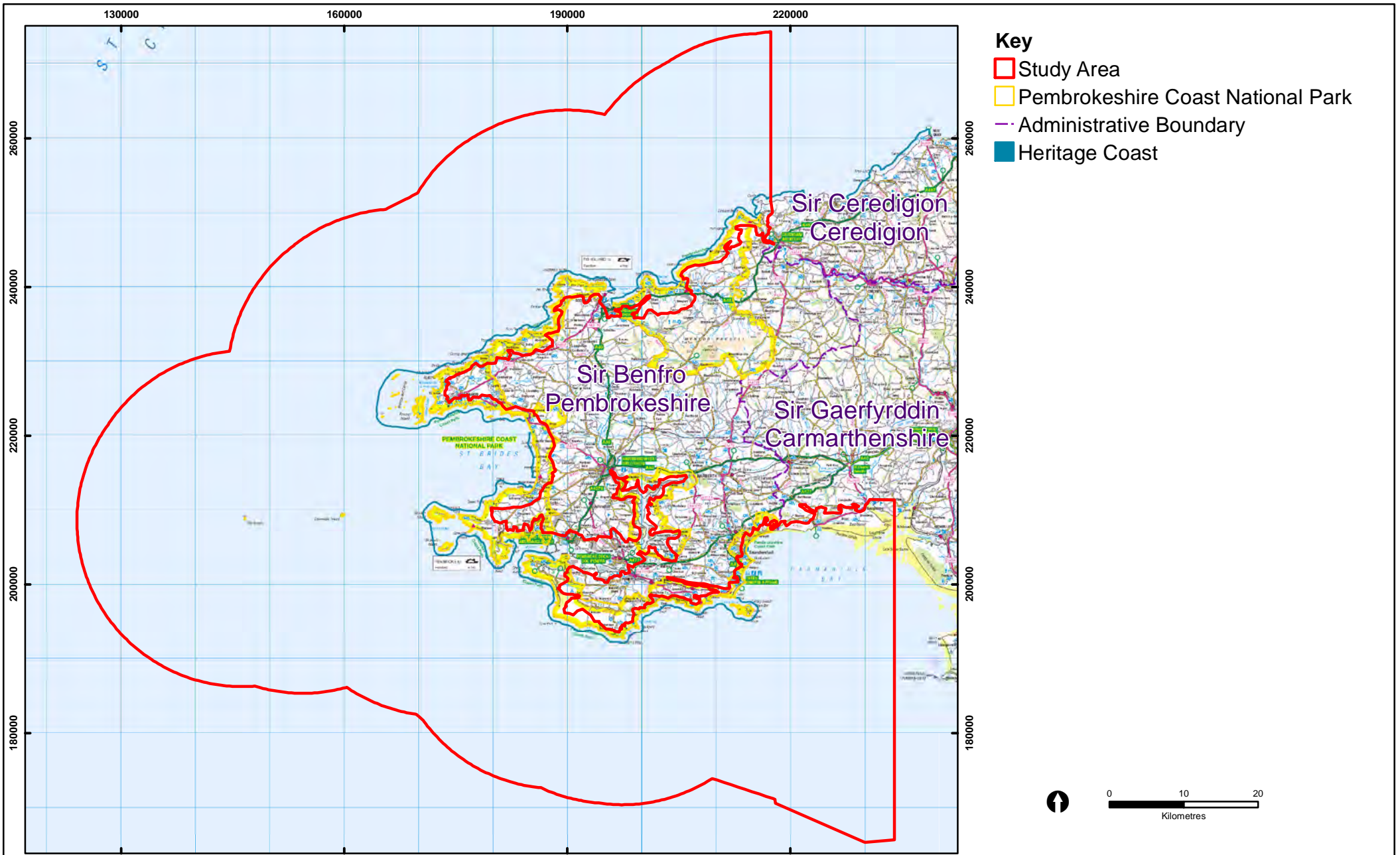
6. Sensitivity of seascape

6.1. The sensitivity of the Pembrokeshire seascape to change was explored for each SCA and was found to be generally high. The key sensitive characteristics and features include:

- Intricate, complex, rugged, indented natural coast with dramatic headlands and islands eg St David's Head, Skomer, Ramsey Island, Strumble Head, Stackpole Head.
- Important focal points along the coast and out to sea including islands, islets, headlands and distinctive sweeping beaches such as Whitesands Bay, Freshwater West and Newport Bay.
- Unspoilt hills and backdrops which contribute to seascape character eg Carn Llidi and Mynydd Carningli.
- Views from key places such as headlands, coastal hills and the Coast Path.
- Open views to an unspoilt sea horizon reinforcing a sense of escape and space to breathe.
- Open sea and offshore islands and islets with limited, if any, signs of man.
- Small scale, enclosed, views to horizon framed by landform in the many coves and beaches such as Barafundle Bay, Broadhaven, Abereiddi and Newport Bay and also at St Govan's Chapel. Any development out to sea within this enclosed view could be particularly disruptive.
- Tranquil seascapes where there is little disturbance and signs of development and dark skies.
- Remote undeveloped seascapes with wild, highly natural, elemental character such as the islands, north coast south west of Strumble Head and Castlemartin peninsula.
- Secluded and tranquil, well treed character of the Daugleddau estuary with its historic quays.
- Small scale, traditional historic coastal settlements such as Solva, Abercastle, Porthgain and Newport, and harbours such as Porthclais and Stackpole Quay.
- Other coastal conservation areas with dramatic settlement features such as the skyline and harbour of Georgian Tenby.
- Presence of coastal and island historic features such as peninsula forts, castles, chapels eg St Govan, monasteries ie Caldey Island, other buildings and structures and other heritage features which have a strong relationship with the coast and sea visually, physically and culturally.
- Presence of marine, intertidal and coastal edge habitats with high biodiversity particularly the Skomer Marine Nature Reserve, National Nature Reserves such as Ramsey Island, SACs covering the majority of the coast and out to sea around the Smalls, Carmarthen Bay SPA and coastal SSSIs.
- The connections of the area with St David and Giraldus Cambrensis and other historical figures.

6.2. These sensitivities are set out in more detail for each SCA informed by the factors influencing sensitivity summarised in **Appendix E**. This also sets out those factors which tend to detract from sensitivity in some areas.

SUMMARY FIGURES

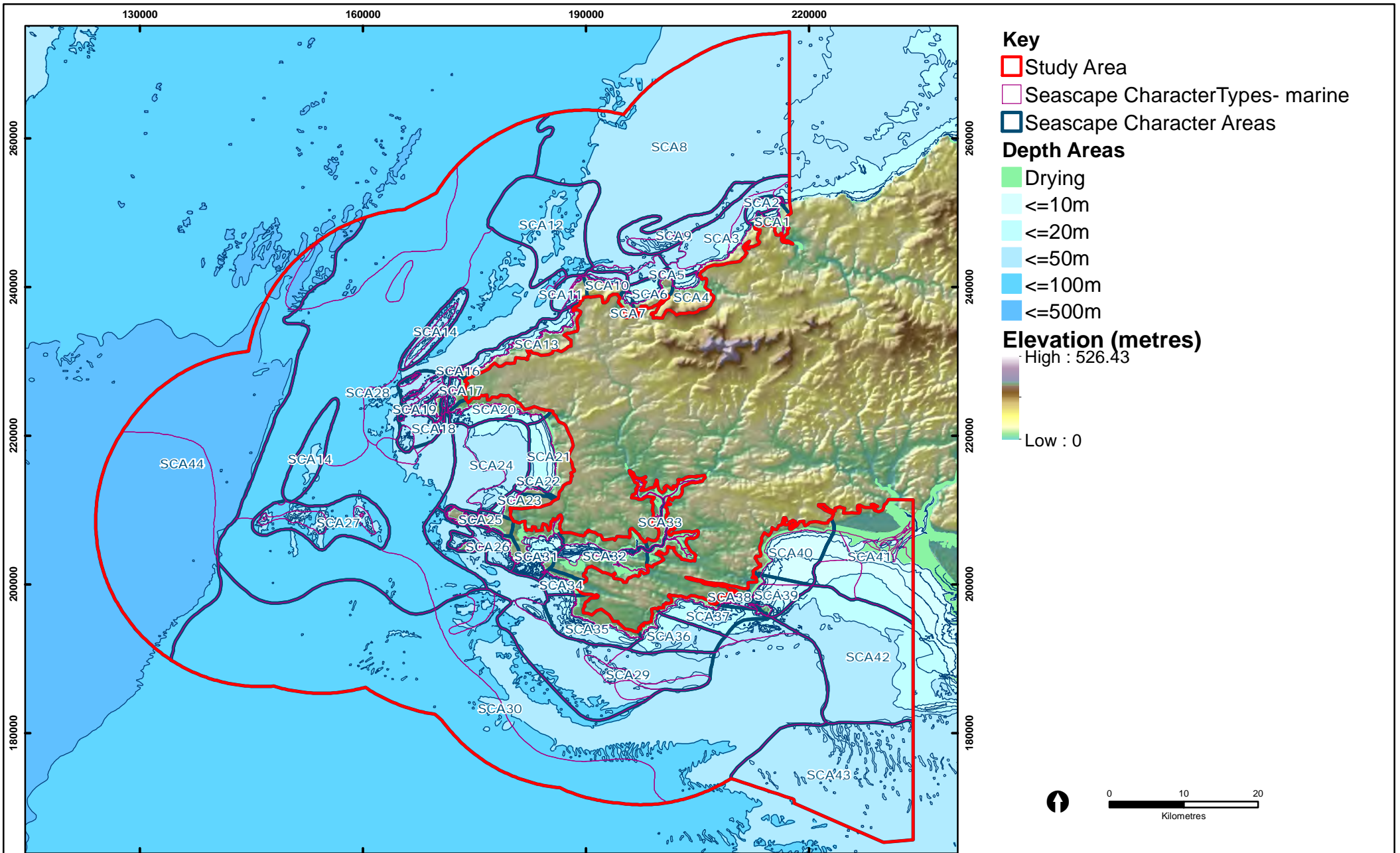


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Project: Pembrokeshire Coast National Park
 Seascape Character Assessment
 Client: PCNPA/CCW
 Date: 23/04/2013

Figure 1: Study Area



130000 160000 190000 220000

260000 240000 220000 200000 180000

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Figure 2: Bathymetry & Topography

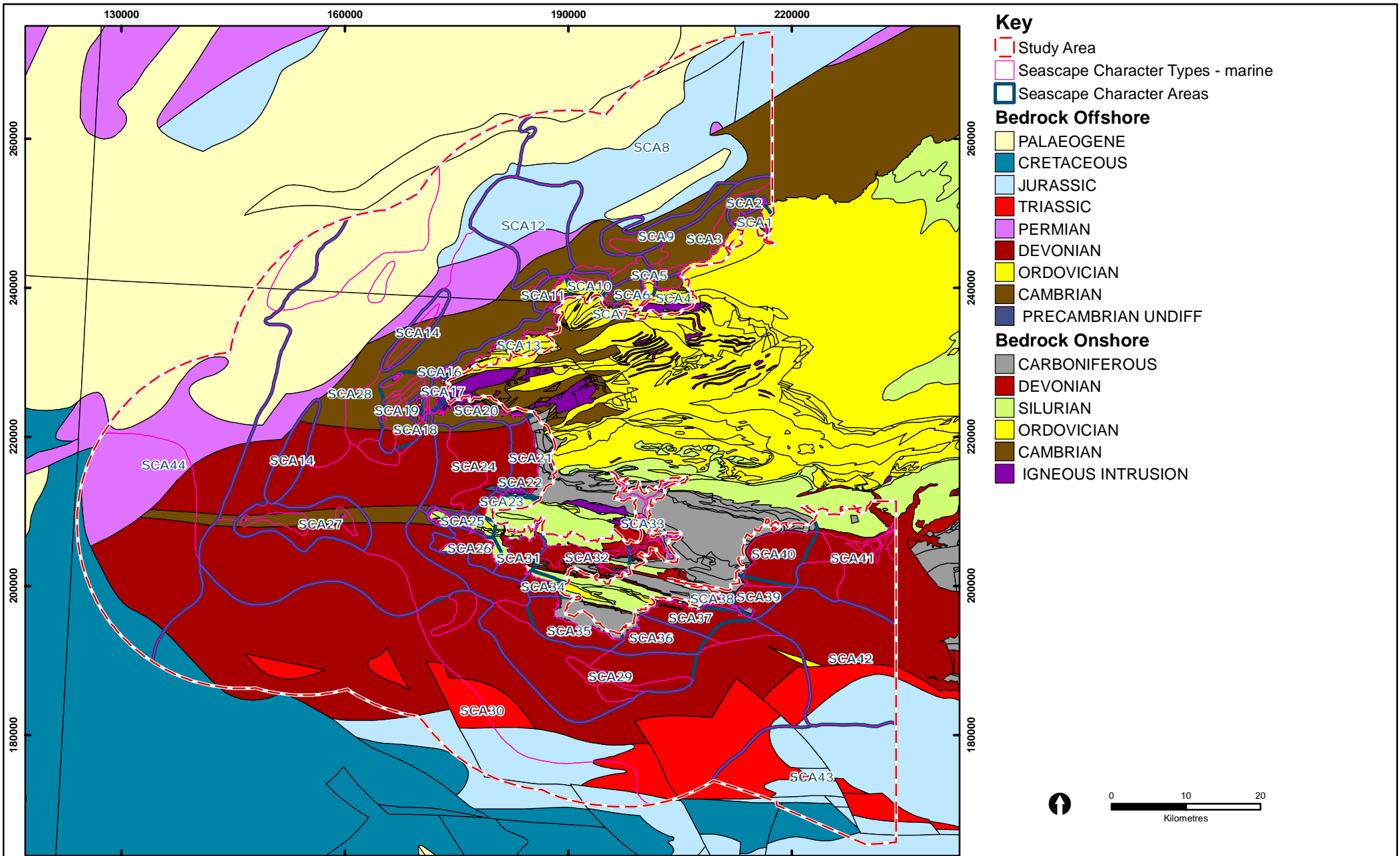


Figure 3a: Geology and Seabed Geology

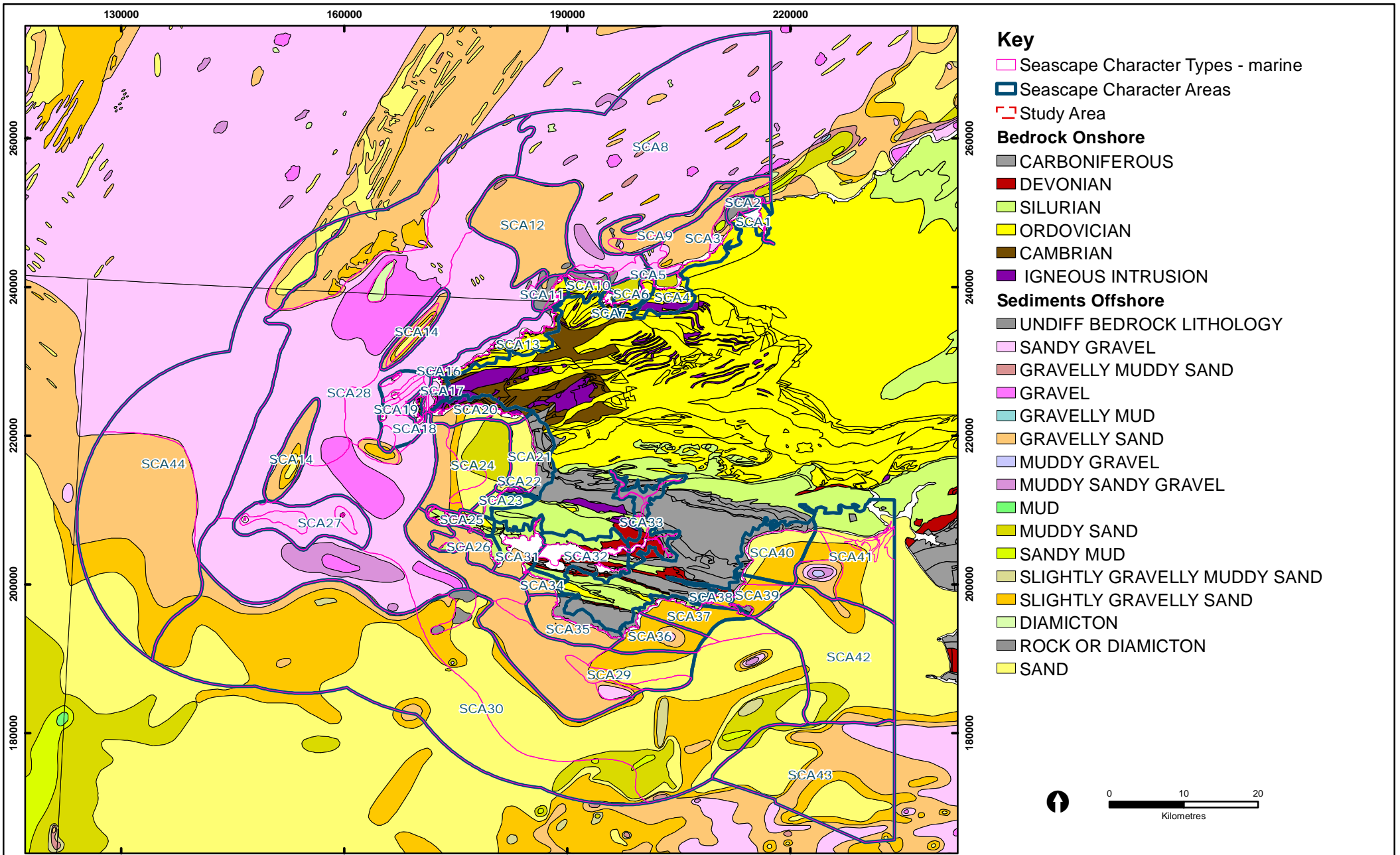
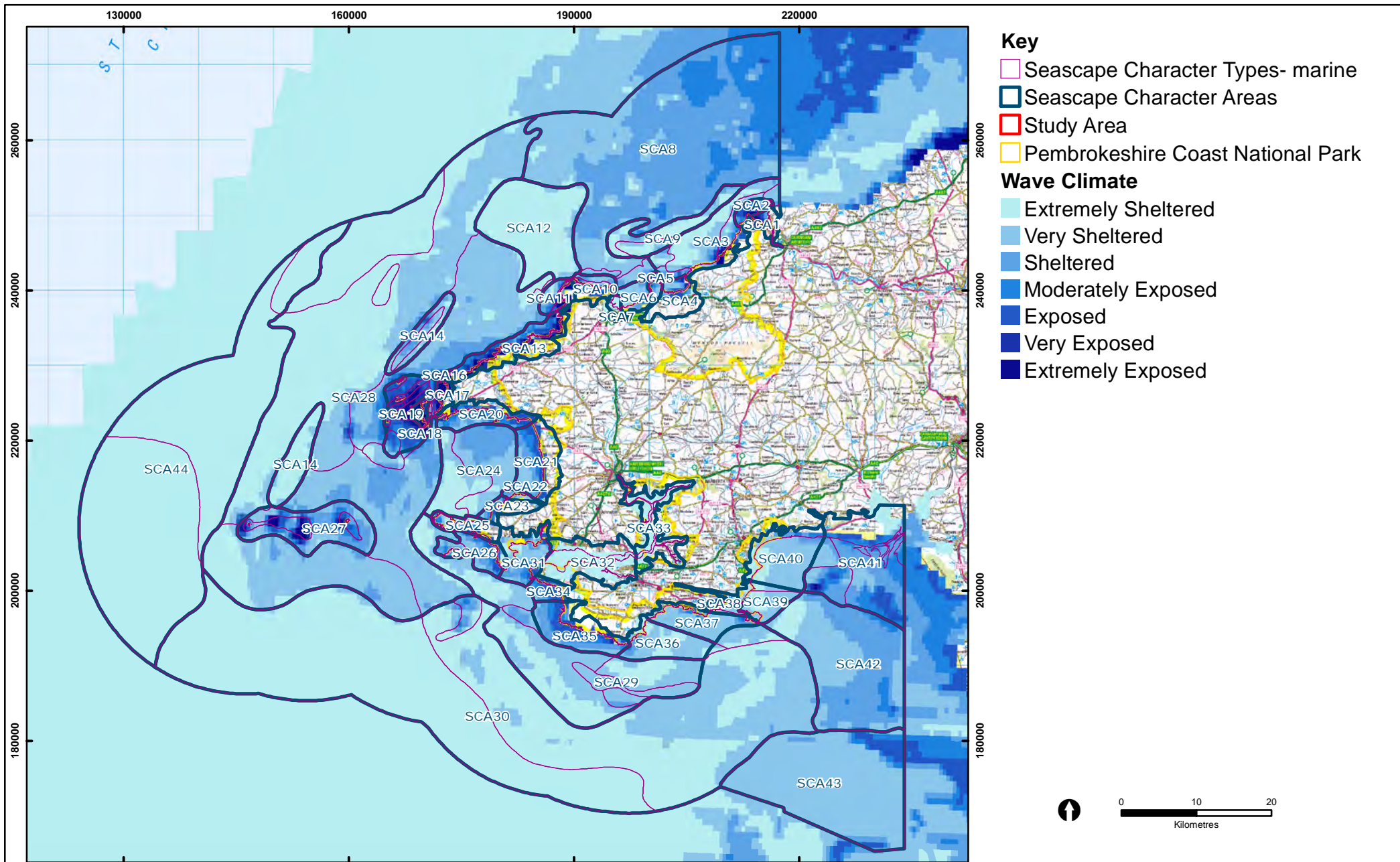


Figure 3b: Geology and Seabed Sediments



Key

- Seascape Character Types- marine
- Seascape Character Areas
- Study Area
- Pembrokeshire Coast National Park

Wave Climate

- Extremely Sheltered
- Very Sheltered
- Sheltered
- Moderately Exposed
- Exposed
- Very Exposed
- Extremely Exposed



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Figure 4: Wave Climate

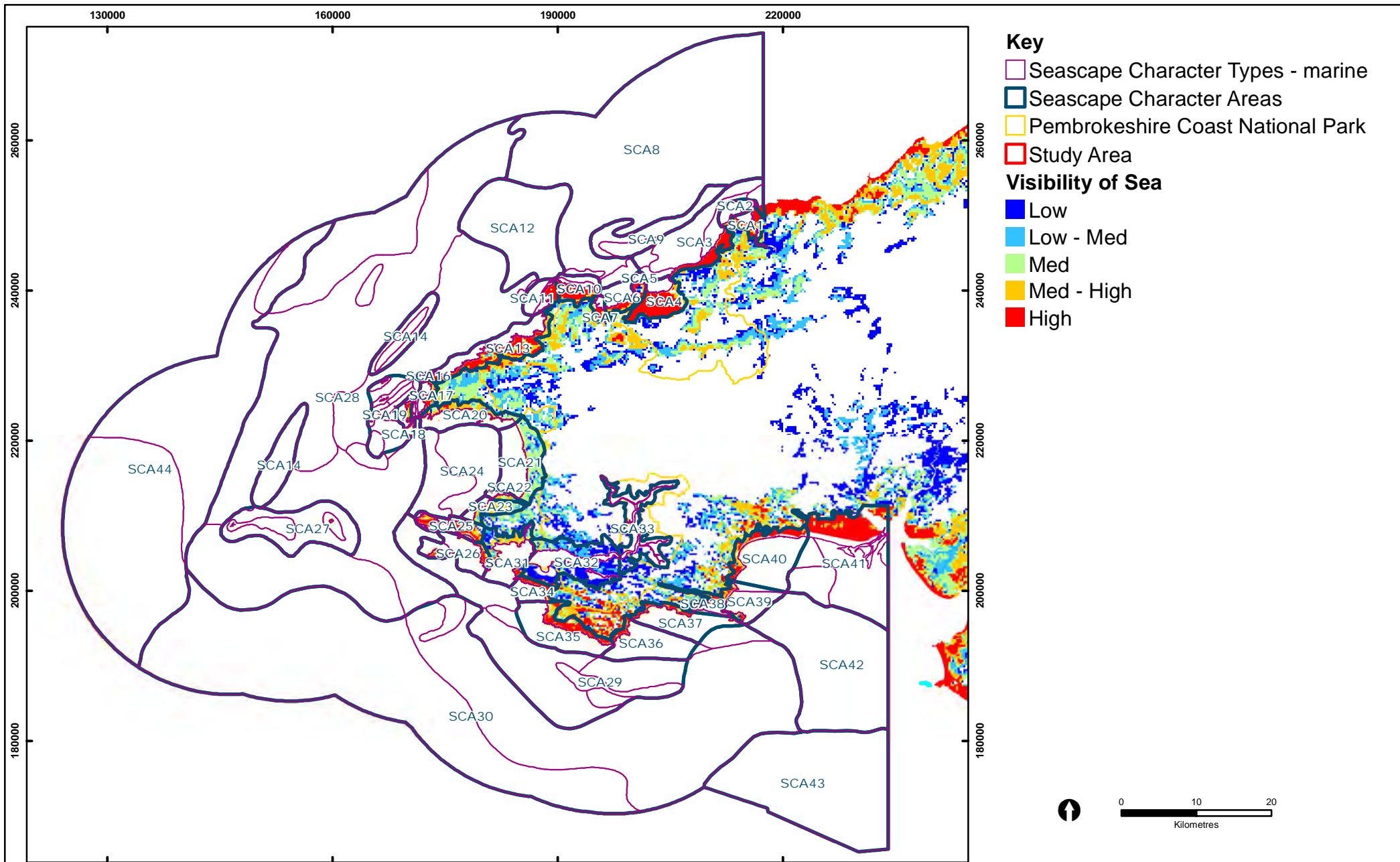


Figure 5: Intervisibility of land with the sea

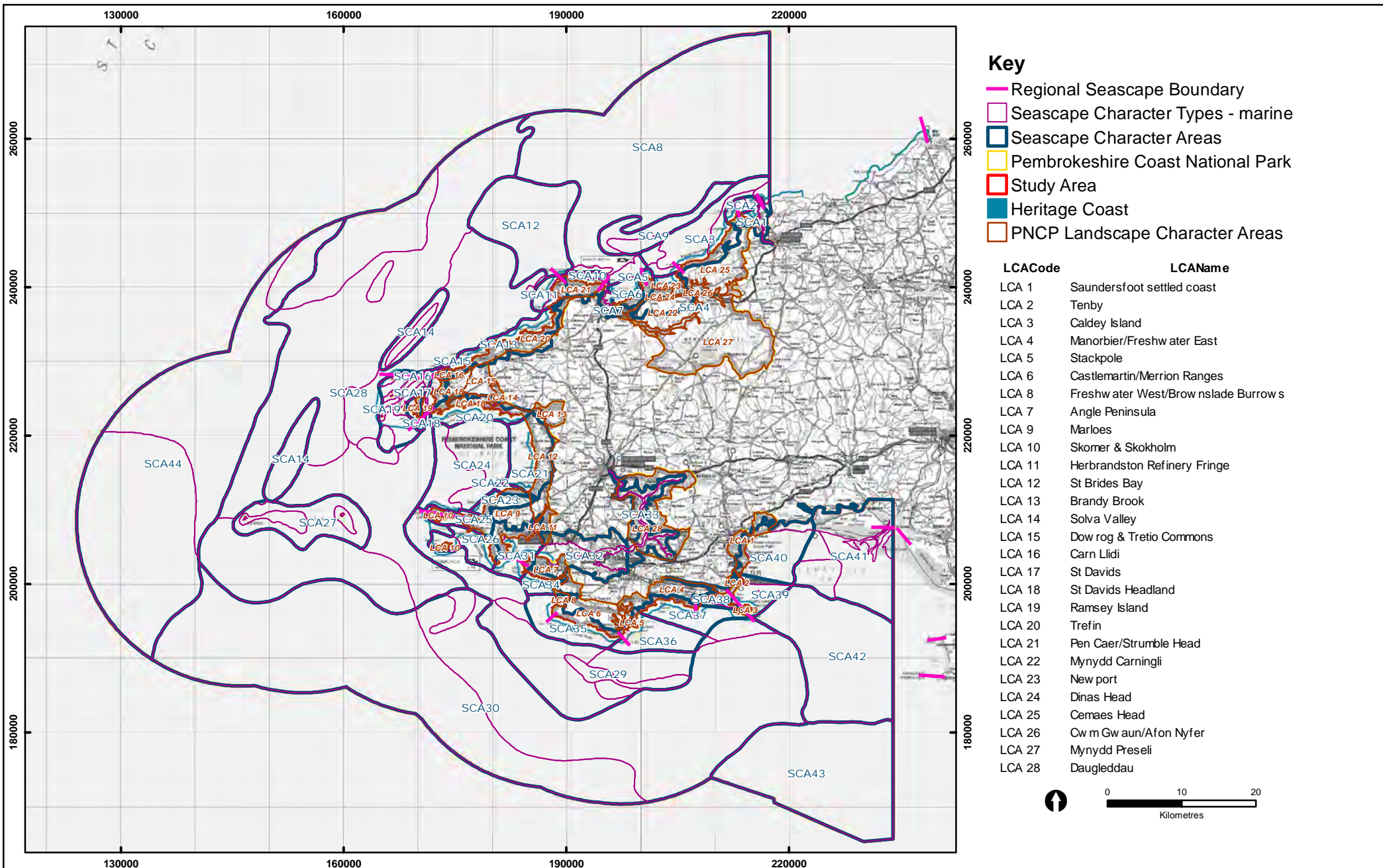
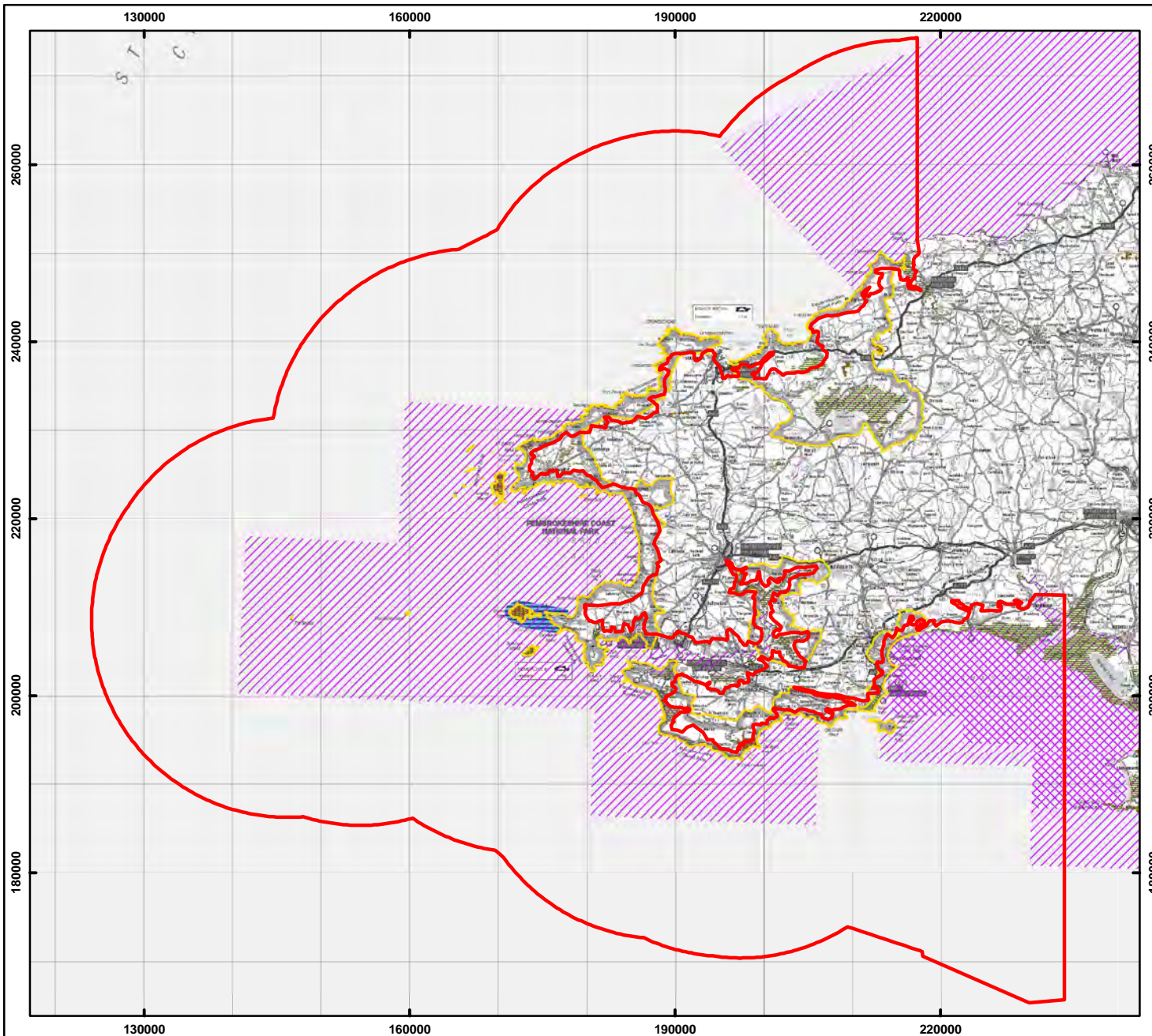

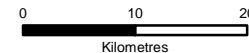


Figure 6: Landscape Character and Regional Seascape Units



Key

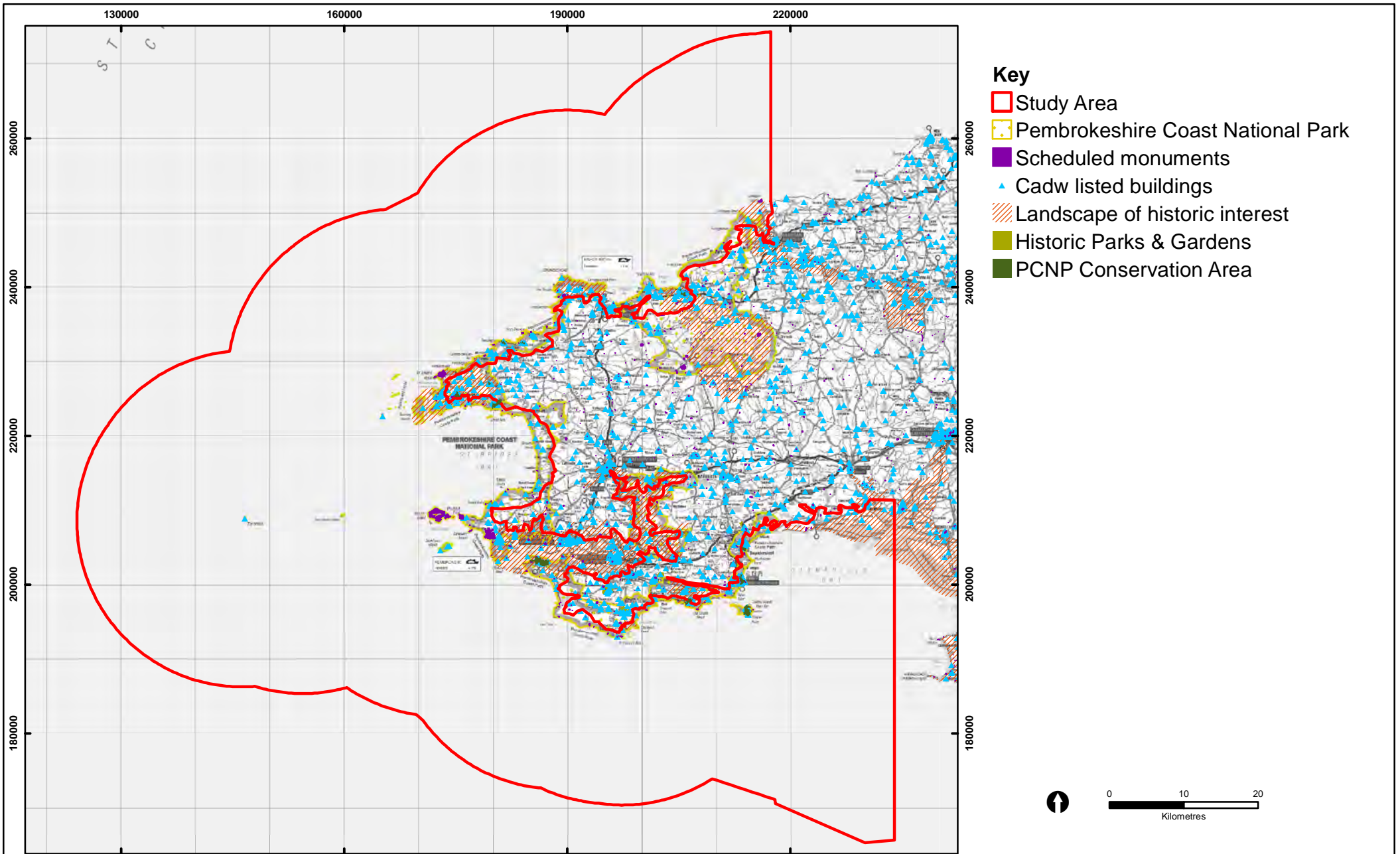
-  Study Area
-  Pembrokeshire Coast National Park
-  Site of Special Scientific Interest (SSSI)
-  Special Protection Area (SPA)
-  Special Area of Conservation (SAC)
-  Marine Nature Reserve (MNR)
-  National Nature Reserve (NNR)



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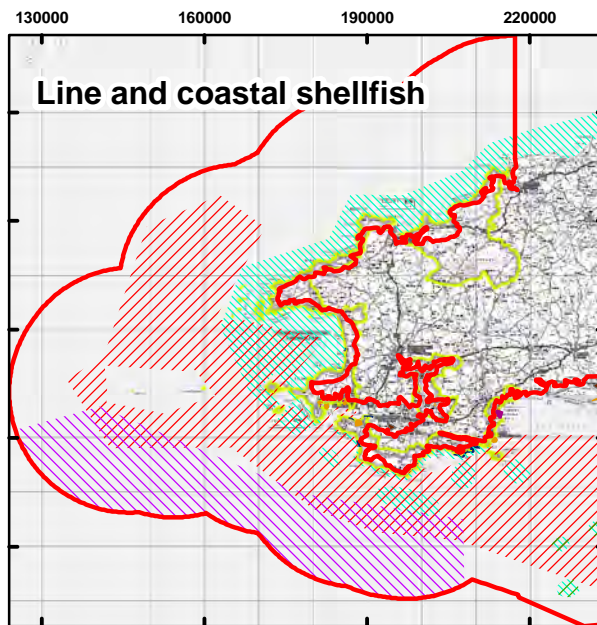
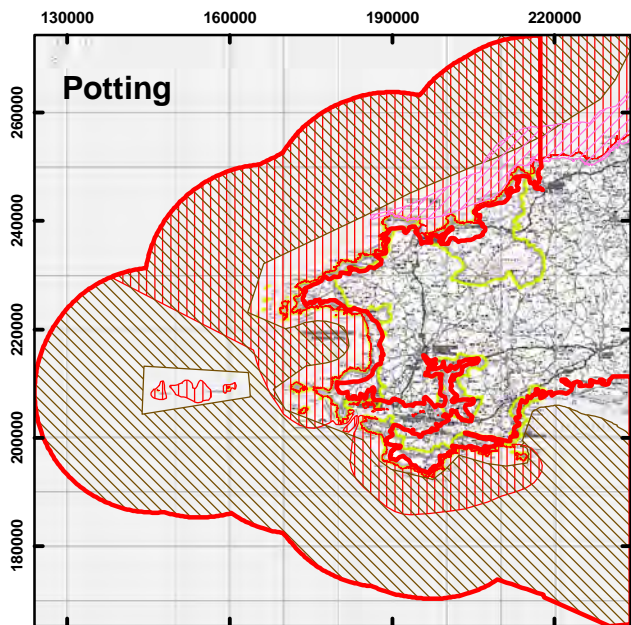
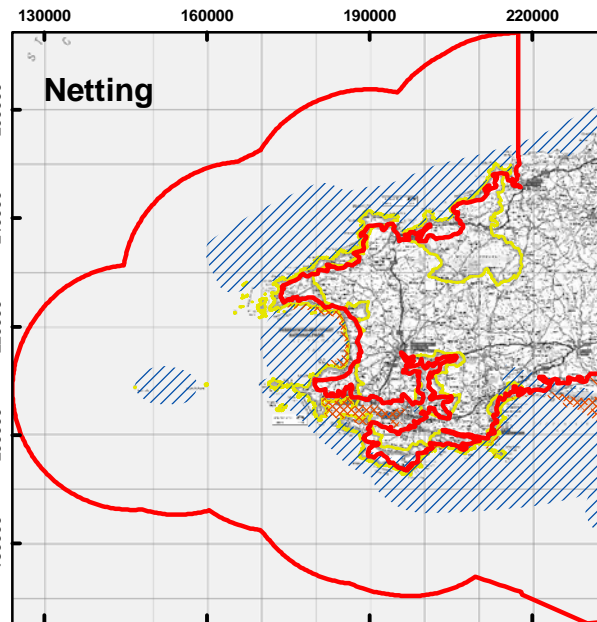
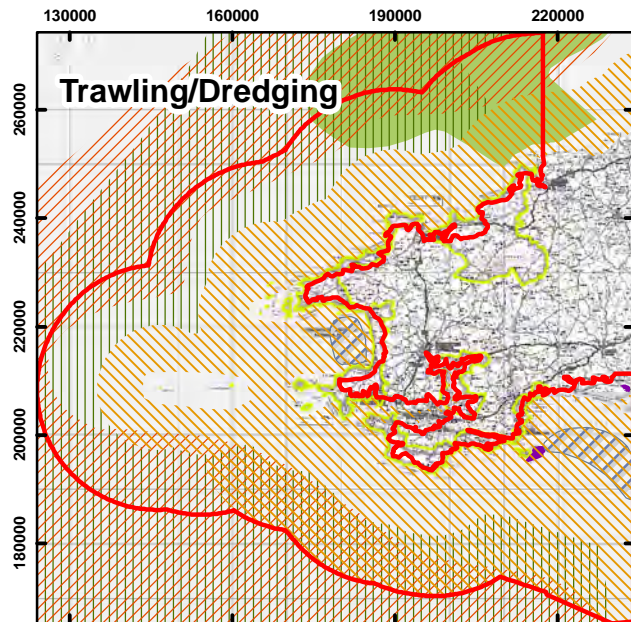
Figure 7: Biodiversity and Geological Designations



Key

- Study Area
- Pembrokeshire Coast National Park
- Scheduled monuments
- Cadw listed buildings
- Landscape of historic interest
- Historic Parks & Gardens
- PCNP Conservation Area

Figure 8: Heritage



Key

Study Area

Pembrokeshire Coast National Park

Trawling/Dredging

- Type 1a Heavy Beam Trawling
- Type 1b Scallop Dredging (King and Queen Scallops)
- Type 1c Scallop Dredging (Queen Scallops)
- Type 3a Mussel Seed Dredging
- Type 4a Otter Trawl
- Type 5a Light Otter Trawl
- Type 5b Light Beam Trawling
- Type 5c Shrimp Trawling
- Type 6a Hydraulic Dredging

Netting

- Type 8b Set Nets
- Type 8c Beach Nets
- Type 8d Beach Seining

Potting

- Prawn
- Whelk
- Lobster & Crab

Line fishing and coastal shellfish

- Type 7a Handlines
- Type 7b Commercial Rod and Line
- Type 7c Drift Lines
- Type 8a Longlines
- Type 11a Hand Gathering-Cockles
- Type 11b Hand Gathering-Mussels
- Type 11c Hand Gathering-Periwinkles
- Type 11d Hand Gathering-Razor Clams

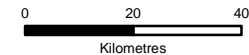
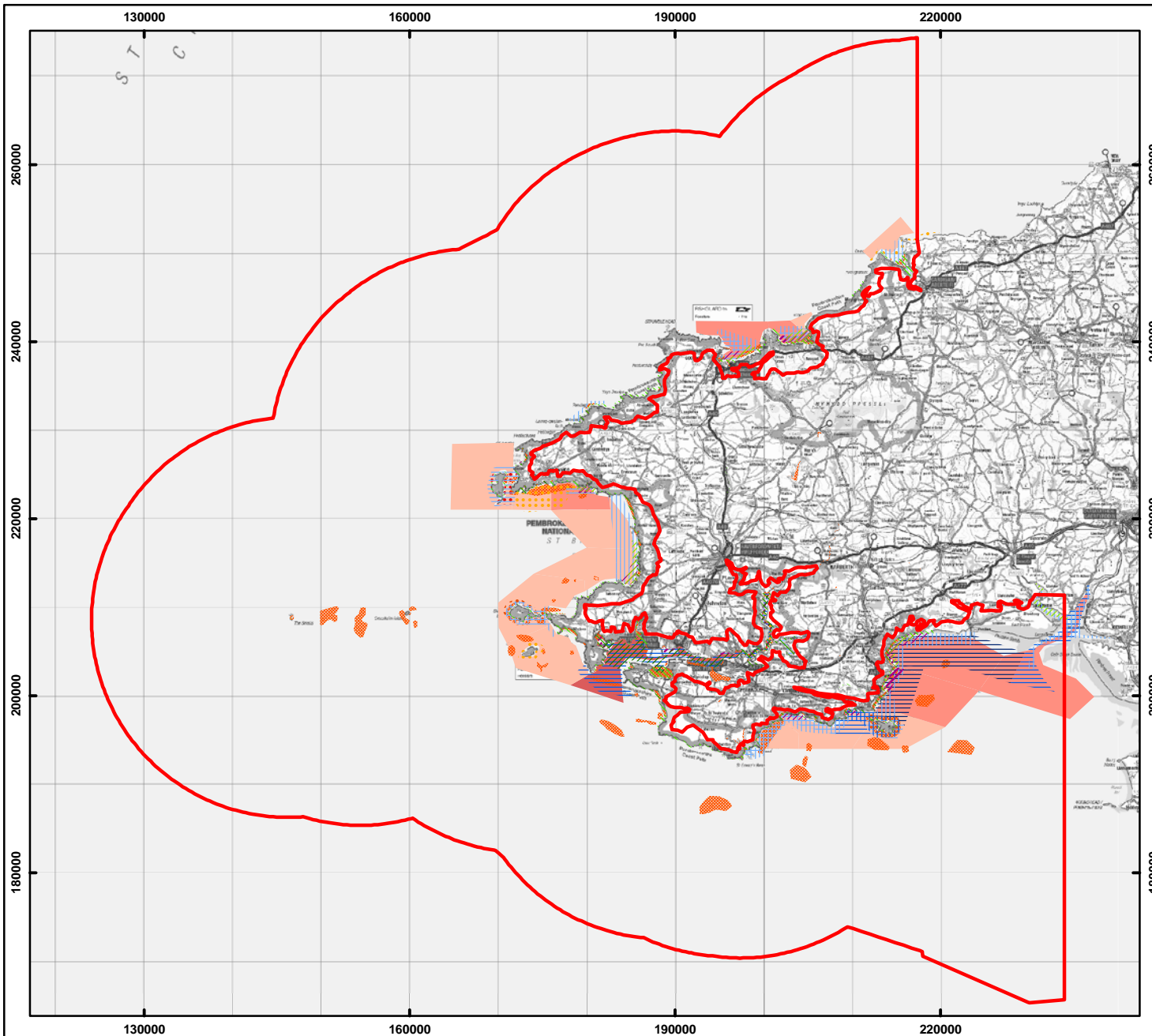
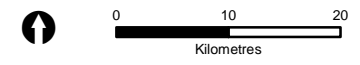


Figure 9: Fishing



- Key**
- Study Area
 - sea angling
 - Rowing**
 - low - med
 - med - high
 - kayaking**
 - low
 - med
 - high
 - dinghy sailing**
 - low - med
 - med - high
 - jet ski**
 - low
 - med
 - high
 - power boats**
 - low
 - med
 - high
 - wildlife boat trips**
 - low
 - med
 - high
 - cruiser sailing**
 - low
 - med
 - high



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Figure 10: Recreational Activity - Marine

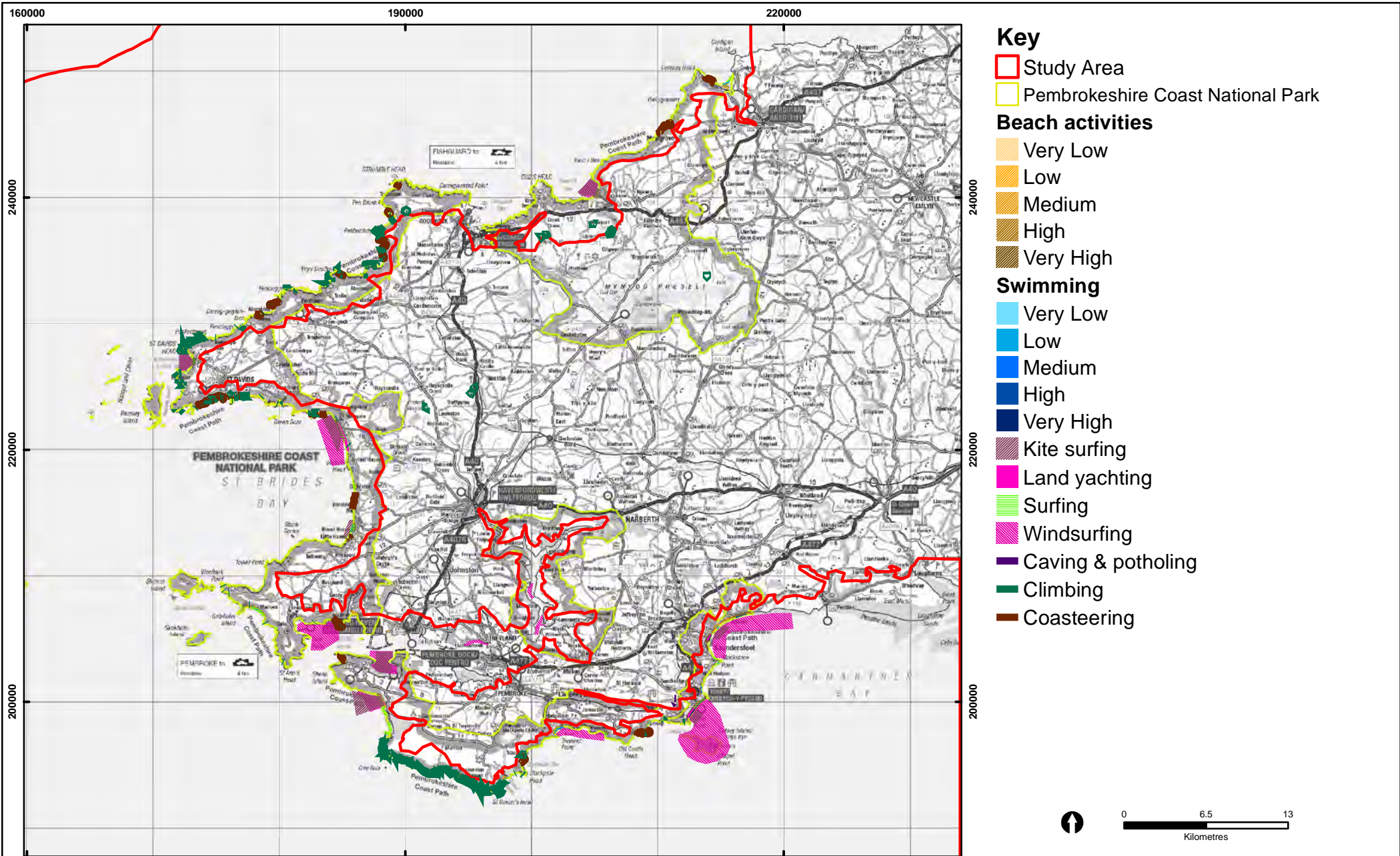


Figure 11: Recreational Activity - Coast

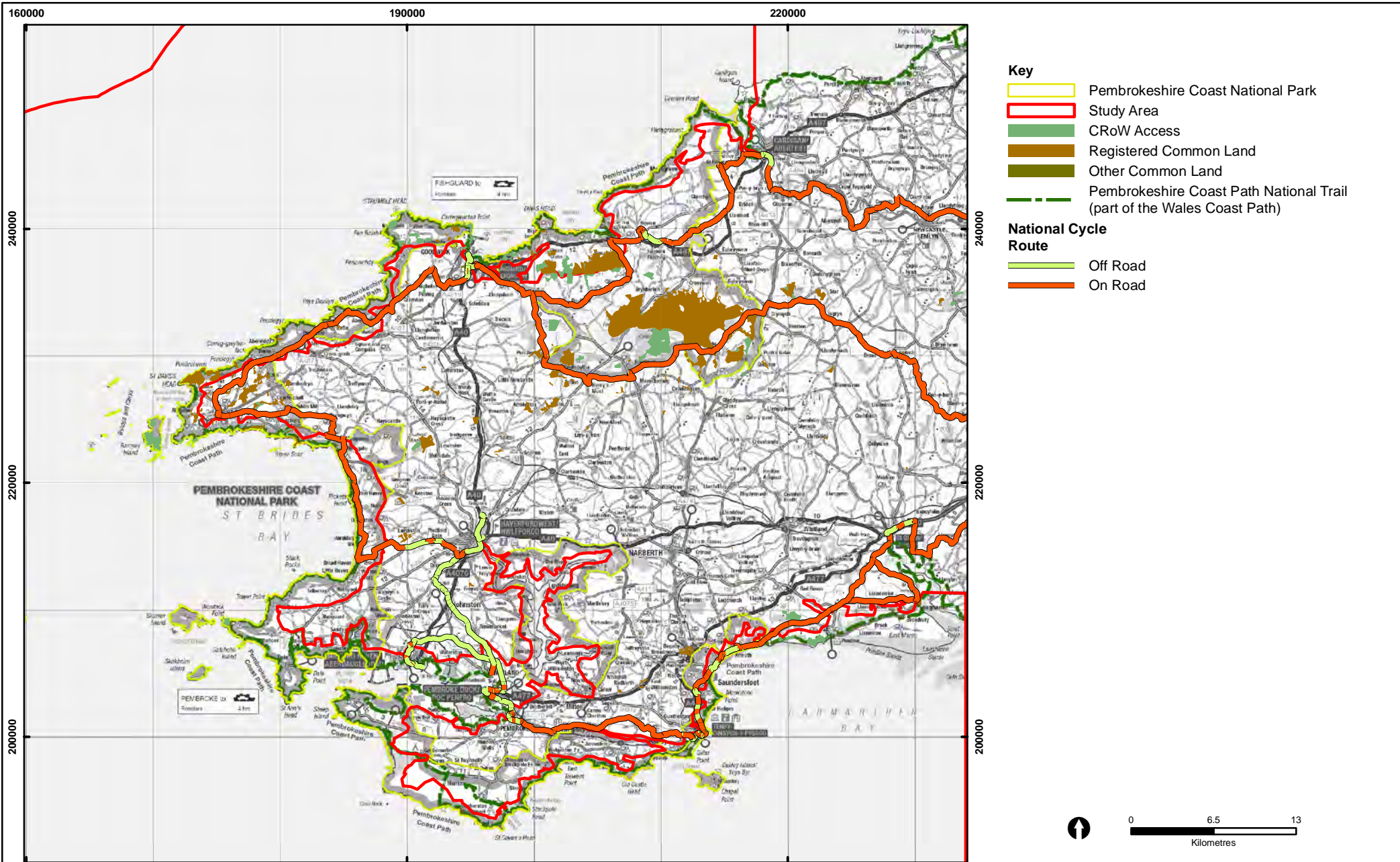
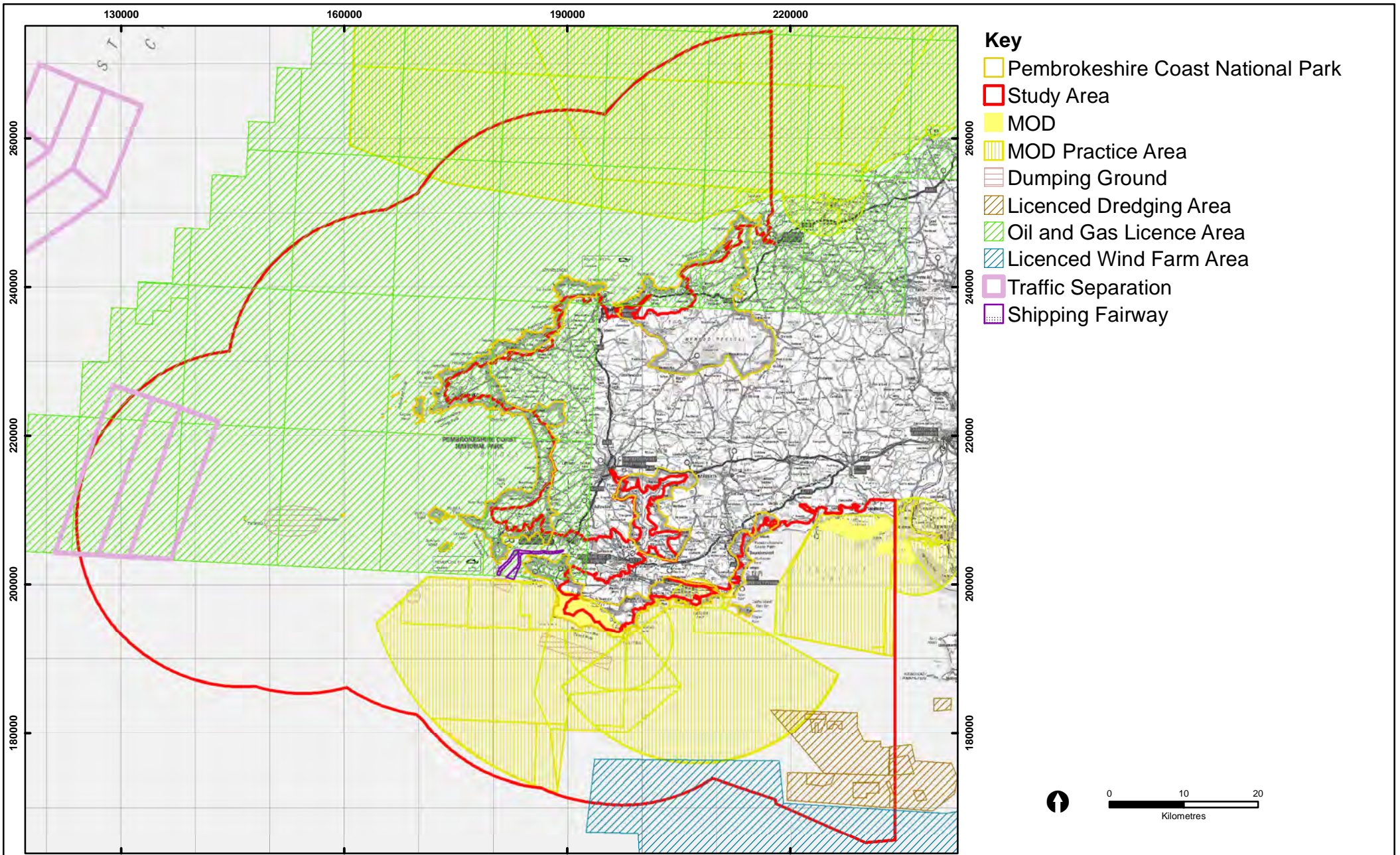
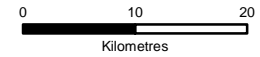


Figure 12: Access



Key

- Pembroke Coast National Park
- Study Area
- MOD
- MOD Practice Area
- Dumping Ground
- Licenced Dredging Area
- Oil and Gas Licence Area
- Licenced Wind Farm Area
- Traffic Separation
- Shipping Fairway

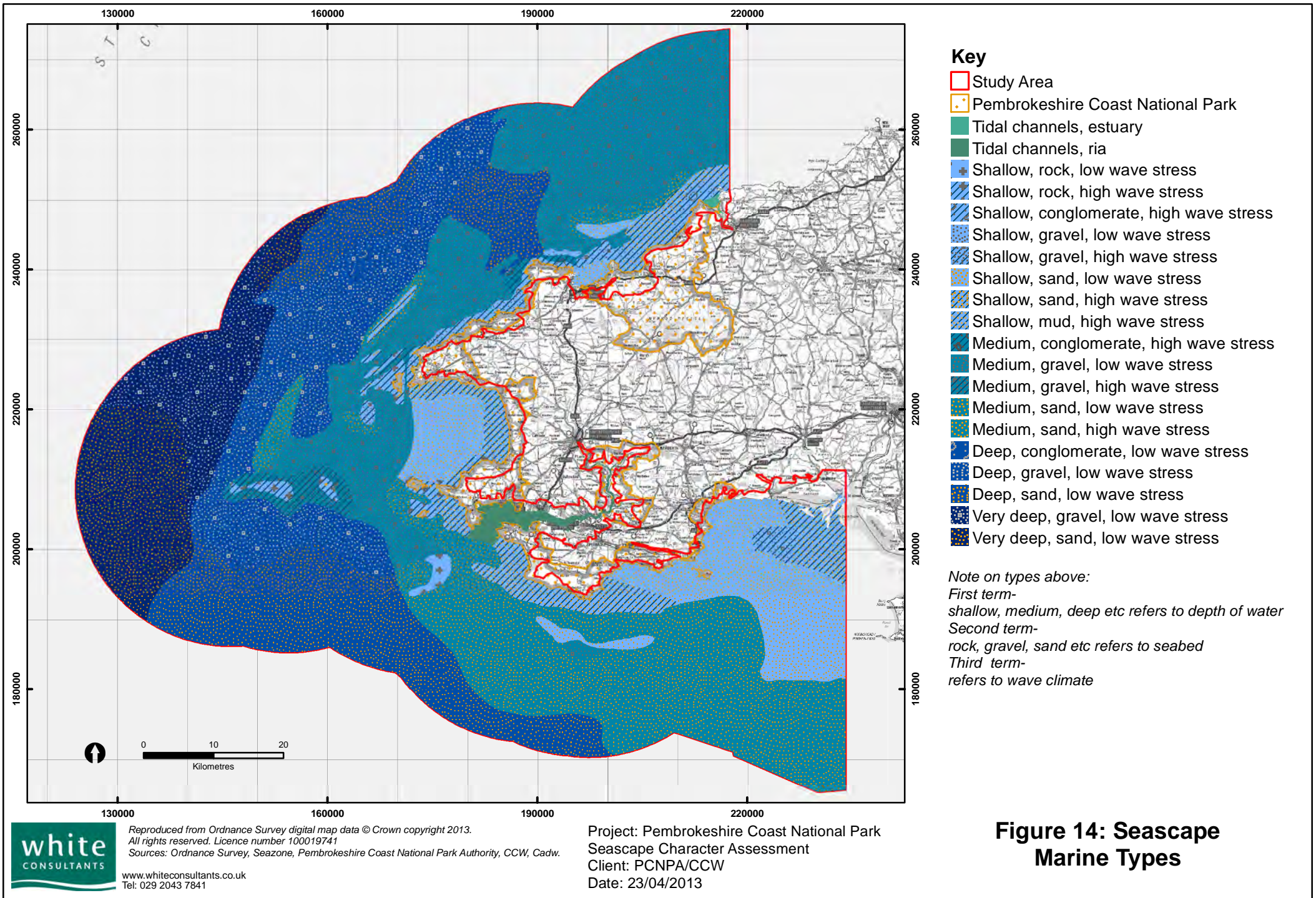


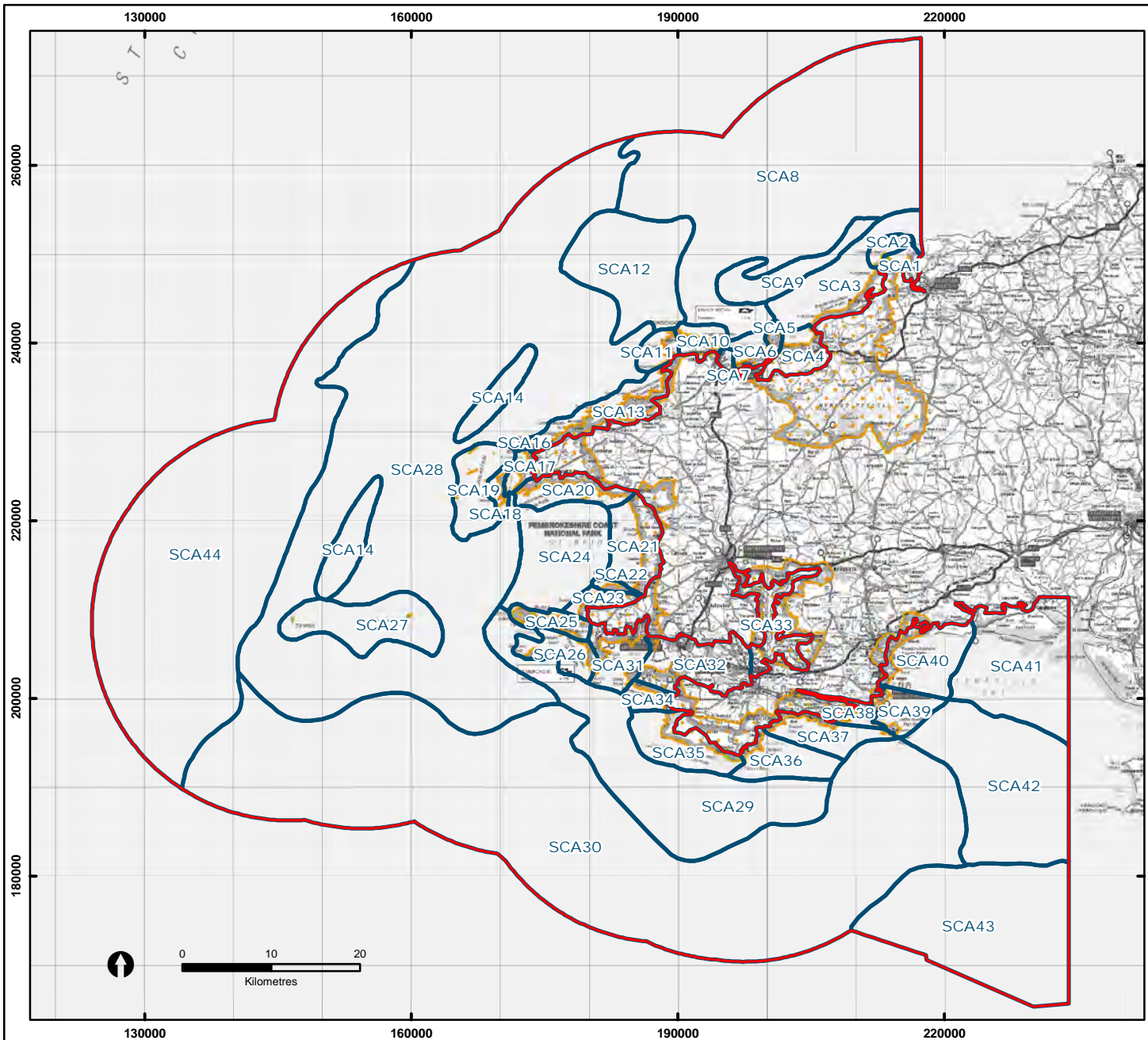
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Figure 13: Commercial and military activities





Key

- Study Area
- Pembrokeshire Coast National Park

SCA_ID	SCA Name
SCA1	Teifi Estuary
SCA2	Cardigan Island and Cemmaes Head
SCA3	Pen y Afr to Pen y Bal
SCA4	Newport Bay
SCA5	Dinas Island
SCA6	Fishguard Bay east
SCA7	Fishguard and Goodwick Harbours
SCA8	North open sea
SCA9	Newport and Fishguard outer sand bar
SCA10	Crincoed Point and Strumble Head
SCA11	Strumble Head to Penbwhdy
SCA12	Strumble Head deep water
SCA13	Penbwhdy to Penllechwen
SCA14	Western sand and gravel bars
SCA15	St Davids Head
SCA16	Whitesands Bay
SCA17	Ramsey Sound
SCA18	Ramsey Island coastal waters
SCA19	Bishops and Clerks
SCA20	St Brides Bay coastal waters north
SCA21	St Brides Bay coastal waters east
SCA22	St Brides Bay coastal waters south - Borough Head
SCA23	St Brides Bay south coastal waters - The Nab Head
SCA24	St Brides Bay
SCA25	Skomer Island and Marloes Peninsula
SCA26	Skokholm and Gateholm coastal waters
SCA27	Grassholm and the Smalls
SCA28	West open sea
SCA29	Southern inshore waters
SCA30	Southern offshore waters
SCA31	Outer Milford Haven
SCA32	Inner Milford Haven
SCA33	Daugleddau
SCA34	Freshwater West
SCA35	Castlemartin coastal waters
SCA36	Stackpole coastal waters
SCA37	Freshwater East and Manorbier
SCA38	Lydstep Haven coastal waters
SCA39	Tenby and Caldey Island
SCA40	Carmarthen Bay west
SCA41	Carmarthen Bay north - Pendine Sands
SCA42	Carmarthen Bay
SCA43	Bristol Channel offshore
SCA44	Western offshore - very deep water



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Figure 15: Seascape Character Areas

SEASCAPE CHARACTER AREAS

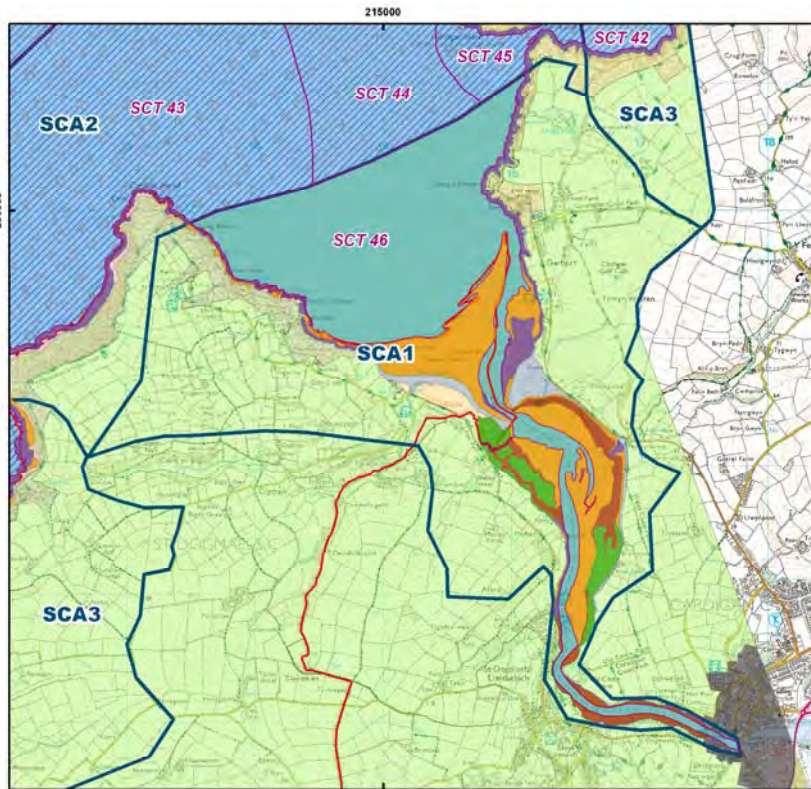
7. Seascape Character Areas

7.1. The 44 seascape character areas are now described in detail. The description is divided into physical, cultural and aesthetic and perceptual influences with ecosystem cultural services, key forces for change and sensitivities defined. The seascape character areas are listed as follows:

Number	Name
SCA1	Teifi Estuary
SCA2	Cardigan Island and Cemmaes Head
SCA3	Pen y Afwr to Pen y Bal
SCA4	Newport Bay
SCA5	Dinas Island
SCA6	Fishguard Bay west
SCA7	Fishguard and Goodwick Harbours
SCA8	North open sea
SCA9	Newport and Fishguard outer sand bar
SCA10	Crincoed Point and Strumble Head
SCA11	Strumble Head to Penbwchdy
SCA12	Strumble Head deep water
SCA13	Penbwchdy to Penllechwen
SCA14	Western sand and gravel bars
SCA15	St Davids Head
SCA16	Whitesands Bay
SCA17	Ramsey Sound
SCA18	Ramsey Island coastal waters
SCA19	Bishops and Clerks
SCA20	St Brides Bay coastal waters north
SCA21	St Brides Bay coastal waters east
SCA22	St Brides Bay coastal waters south- Borough Head
SCA23	St Brides Bay south coastal waters - The Nab Head
SCA24	St Brides Bay
SCA25	Skomer Island and Marloes Peninsula
SCA26	Skokholm and Gateholm coastal waters
SCA27	Grassholm and the Smalls
SCA28	West open sea
SCA29	Southern inshore waters
SCA30	Southern offshore waters
SCA31	Outer Milford Haven
SCA32	Inner Milford Haven
SCA33	Daugleddau
SCA34	Freshwater West
SCA35	Castlemartin coastal waters
SCA36	Stackpole coastal waters
SCA37	Freshwater East and Manorbier
SCA38	Lydstep Haven coastal waters

SCA39	Tenby and Caldey Island
SCA40	Carmarthen Bay west
SCA41	Carmarthen Bay north- Pembrey
SCA42	Carmarthen Bay
SCA43	Bristol Channel offshore
SCA44	Western offshore- very deep water

No: 1 Seascape Character Area Name: **Teifi Estuary**



- Key**
- PCNP boundary
 - Seascape character area boundary
 - Marine type boundary
- Marine Type**
- Tidal channels, estuary
 - Shallow, conglomerate, high wave stress
 - Shallow, gravel, high wave stress
 - Shallow, mud, high wave stress
- Intertidal Type**
- Mud
 - Rock
 - Sand and Shingle
 - Saltmarsh and Saline Reedbed
 - Biogenic Reefs
- Terrestrial Type**
- Sand Dune
 - Beach/rough ground above HWM
 - Coastal heath and grassland mosaic
 - Grassland and semi-natural mosaic
 - Pastoral farmland
 - Tall Herb and Fern (Bracken)
 - Built up area

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SCA 1: Teifi Estuary



The outer bay looking from Cemaes Head



Approaching Cardigan (© Bronwen Thomas)



Middle section of the estuary

Summary Description
<p>This area includes the tidal estuary of the Teifi from the bridge near the castle in Cardigan, down through a sinuous wide and open valley with mudflats, through to the extensive sand bar at Poppit Sands and the open water of the bay. There some strong contrasts between the estuary inland of the sand bar and the more exposed bay although both are well used for recreation. There are dramatic cliffs and headlands and tranquil rolling pastoral landscape enclosing the waters.</p>
Key Characteristics
<ul style="list-style-type: none"> • A sinuous estuary with mudflats running into a sandy bay backed by dunes. • The estuary is bordered by sloping ground on all sides, generally steeper and higher to the south and west and the bay enclosed by headlands. • Mature deciduous trees line the estuary west of Cardigan around St Dogmaels, and on steeper ground, with predominantly pastoral farmland adjacent. • The estuary has many moorings and slipways with established boating use and the bay is used for sailing. • High beach activity use at Poppit Sands and fishing is popular. • Built waterfront at Cardigan and St Dogmaels. • The coast path runs around the west side of the estuary • Contained views in estuary and panoramic views from headlands.
Physical Influences
<p>A subtidal estuary seafloor becoming increasingly sandy outwards, sloping gently (<1°) NE to around 10m depth between Cemaes Head and Cardigan Island. Sediments cover offshore bedrock of Ordovician sandstones and mudstones that strike ENE-WSW across the estuary. Tidal currents outside the estuary are set northeast and southwest. The tidal range is 4.1m and the tidal reach is as far inland as Cardigan.</p> <p>The northwest facing estuary mouth is incised into northeast-southwest striking Ordovician sandstones and mudstones, which form cliffs around the prominent bounding headlands of Cemaes Head and Cardigan Island. Rocky shores along the estuary have small coves, shingle and sand beaches (e.g. Poppit Sands; 17%). The estuary mouth of muddy sand with sand bars (54%) is flanked locally in the inner estuary by salt marsh (12%) and mud flats (16%). The intertidal zone reveals the meandering channel of the Teifi across the beach. The estuary is a sediment sink. Sediment transport out into the estuary is seasonally variable. Sediment is transported and deposited through traction and in suspension.</p> <p>Though a sheltered bay it is exposed to northerly winds and a high degree of wave disturbance especially where the river meets the sea.</p> <p>The Teifi estuary is an SSSI and forms part of Cardigan Bay SAC. The coastal fringe of the bay is an SSSI- at Aberarth- Carreg Wylan. Migratory fish including sea trout and salmon are famously found in the Teifi and sea bass use the estuary/bay as a nursery.</p> <p>The estuary is bordered by sloping ground on all sides, generally steeper and higher to the south and rising to around 100m AOD. The landcover is predominantly pasture, with prominent mature hedgerows. Semi-natural vegetation lies in a thin strip at the mouth of the estuary separating the coast from pastoral farmland. Mature dune vegetation lies on either side of the estuary, but is more extensive to the north. Habitats include sea cliff grassland and heath on the cliff tops and coastal slopes, rocky shores, and pebble/cobble beaches. Lowland mixed deciduous woodland occurs in the most sheltered coastal stream valleys.</p>
Cultural influences
<p>The SCA forms the tidal reaches of one of the great rivers of Wales, navigable up to Cilgerran, and which served the town of Cardigan, with its long-standing history of coastal and ocean-going trade. The town was also an important shipbuilding centre in the 19th century, mainly for timber-built coasting vessels. The location of the priory indicates the importance to monastic orders of sites where rivers joined the sea. The fish traps may be associated with the priory.</p>

St Dogmael's priory dates from 1115. Substantial remains of the abbey church survive, including the western end wall, the north wall, northern transept and the eastern end walls of the crypt. Extensive monastic buildings also survive to the south and south-east. - Albro Castle. There is a small harbour associated with the village. The corn mill indicates a local maritime trade in foodstuffs from harbour to harbour.

Scheduled monuments include:

- CD003 (hillfort): community: Cardigan
- CD116 (ringwork): community: Troedyraur
- CD274 (promontory fort): community: y Ferwig

The area forms part of the Lower Teifi valley Landscape of Special Historic Interest.

The seascape character area may possibly include the site of the battle of St Dogmael's in 1091 '.....once again Rhys [ap Tewdwr] was triumphant; in the battle of Llandudoch, fought near the mouth of the Teifi, Gruffydd [ap Maredudd] was defeated and slain.' The Teifi was where many Cardiganshire people emigrated to the USA from, especially in the 1820's and 1830's.

Commercial fishing in the area comprises of set nets and lobster and crab potting.

At the mouth of the Teifi there is a sand bar which makes navigation challenging as it moves constantly. The navigational channel is marked with buoys and marks. Dinghy sailing, including racing, kayaking and motor boating are popular. Surfing, windsurfing and jet ski take place off Poppit beach as does sea angling both from the beach and boats. Beach activities are especially popular along the wide Poppit Sands beach. Coaststeering occurs along the south coast of the bay.

Access to the water are possible at several locations down slipways with associated swing moorings- on the north shore of the River Teifi by Cardigan Bridge, St Dogmaels, the Teifi Boat Club on the north east bank and the Webley Arms public house. Those closer to the mouth accommodate dinghies and other launchable craft (kayaks, day boats, jet-skis etc.).

A couple of traditional coastal vessels are moored next to a Maritime Heritage Centre by Cardigan bridge. Downriver from Cardigan, as it bends south, there is a boat building company on the north bank using the river for boat trials. The Teifi boat club has a large hard standing area for boat storage, which can take up to 50 craft, and a dinghy park.

On land, the northern extent of the Pembrokeshire Coast Path starts at St Dogmaels but this is now part of the Wales Coast path which continues to the east to Cardigan and then on the northern side of the estuary. An 18-hole golf course overlooks the bay and Cardigan Island from the north side of the estuary. A large hotel, The Cliff Hotel, is prominently located on the headland and is a landmark for seafarers. There is also a prominent caravan park at Gwbert on former dunes with its own coastal defences extending into the estuary adjacent to the boat club. There is a lifeboat station at Poppit Sands.

Aesthetic, perceptual and experiential qualities

The estuary has a distinct character with natural scenic beauty modified by historic coastal settlement and recreational marine uses. Detractors include the Cliff Hotel, the Gwbert caravan park and Boat Club outside the National Park. The estuary is medium scale, partly enclosed by the land either side of the bay but with framed views out to sea. The sinuous tidal estuary features many moorings with boats creating picturesque scenes. The most tranquil places lie at the mouth of the estuary, away from roads, although nowhere is very remote from lines of communication.

The experience at water level is increasing openness and naturalness towards the mouth and the presence of waves replacing tidal or river flow at Poppit Sands. Boat and beach users experience strong estuarine smells, and though sheltered in places, the wind can channel down the river. Cemaes Head and Cardigan Island mark the outer limits of the area and are key orientation points for marine navigation.

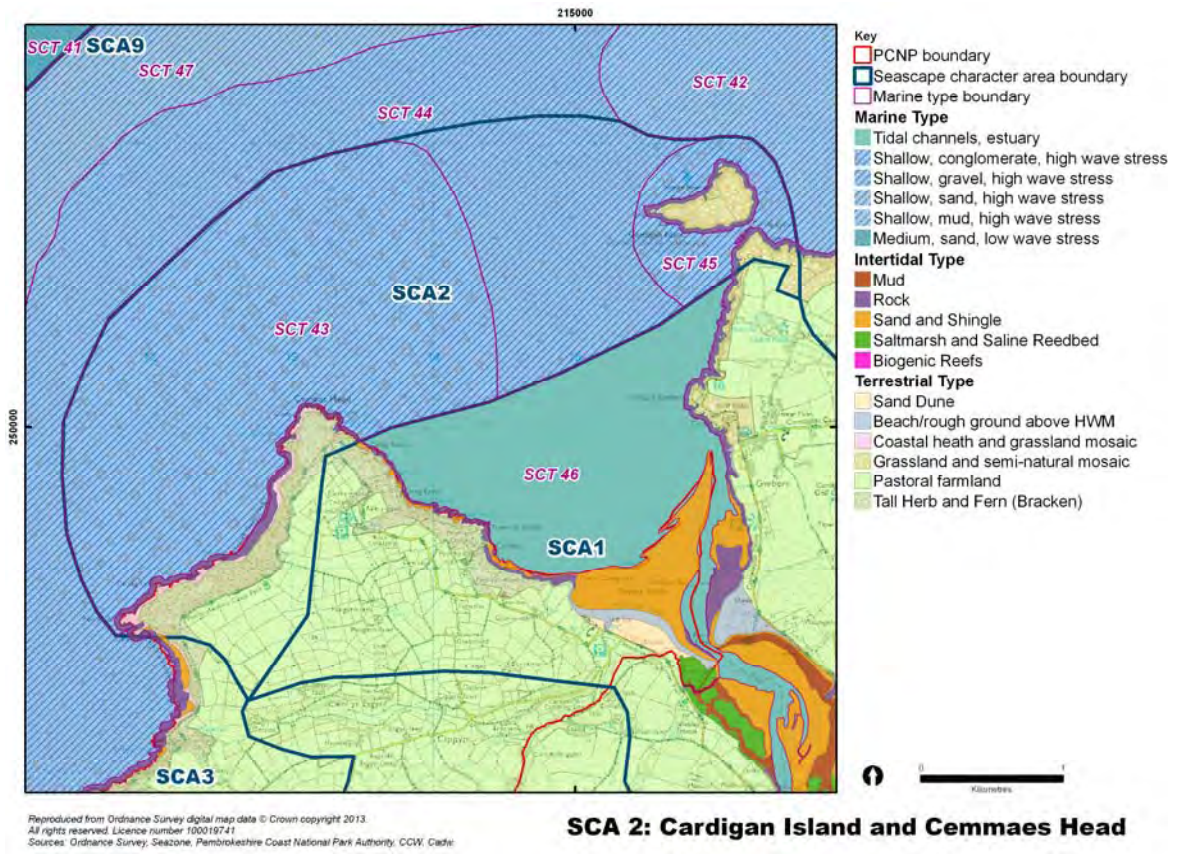
The estuary is animated with activity and movement especially in the summer months with the beach use at Poppit Sands and various boating activities. There is some effect on night skies of lighting associated with Cardigan and St Dogmaels.

There are wide views across the bay and beyond and some are spectacular, with long views

across the green valley sides and out to sea, such as from the Coast path.
Cultural benefits and services
The area contributes significantly towards leisure and recreational services in the form of marine recreation and beach activities as well as access to towns + centres of accommodation, to natural heritage in the form of the mainly unspoilt coast and estuary, and to cultural and spiritual services in respect of the sense of openness and remoteness at the estuary mouth.

Forces for change								
Summary	Key forces for change							
<p>The estuary is a sediment sink. Shoreline management plan notes the dynamic coastal sedimentary environments, with a 'do nothing' recommendation at Poppit Sands and the southern shoreline; as a result salt marsh will continue to erode back, prior to the Pen yr Erygd Spit breaching. Following the breach there will be an inundation with sand.</p> <p>Recreational pressure for sailing/canoeing may increase demand for shore-based facilities.</p> <p>There may be additional pressure to develop land as for caravan or camping sites, holiday accommodation, or leisure-based land uses.</p> <p>Agricultural activities such as small scale livestock raising may become unprofitable, which could lead to a loss of pasture and hedgerow management.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key	Change occurring in the area affecting the selected special quality						
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Remote, unspoilt rural landscape to the south west.</p> <p>Natural features of sinuous estuary and adjacent natural vegetation and habitats.</p> <p>Historic character of settlements.</p> <p>The views from higher ground are spectacular, with long views across the shallow valley and out to sea.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Presence of established recreational use at Gwbert.</p> <p>High use of Poppit Sands and Gwbert as visitor hotspots.</p> <p>Housing and caravan park.</p> <p>B roads on both sides of estuary.</p>				

No: 2 Seascape Character Area Name: **Cardigan Island to Cemaes Head**



Looking across the bay to Cardigan Island



Looking west from Cemaes Head

Summary Description

The seaward edge of the Teifi Estuary and outer bay, marked by Cemaes Head to the west and Cardigan Island to the east. Cemaes Head is marked by steep but not vertical cliffs and large areas of heathland mosaic, with the land rising behind. Cardigan Island has low cliffs and steep edges with a bare grass dome. There are panoramic views from the headlands.

Key Characteristics
<ul style="list-style-type: none"> • The high sandstone and mudstone cliffs reaching 175mAOD cliffs on the headlands to the south. The landform is lower to the north and on Cardigan Island at around 50mAOD. • The shallow sea is closely associated with the Teifi estuary, but more exposed to winds and swell from the west or north and with severe wave climate around Cemaes Head. • Rural mainly pastoral landcover with no settlement with semi-natural coastal vegetation and heathland in places. • The coastal path on Cemaes Head is slightly set back from the cliff edge but rejoins the cliff top to the west. • Wildlife trips are taken to view dolphins around Cardigan Island and there is potting and some set nets. • Panoramic views are possible from Cemaes Head and the area is remote and exposed. • General lack of light pollution.
Physical Influences
<p>These two prominent rocky headlands at the mouth of the Teifi valley are joined by steep but not vertical cliffs of north east- south west striking Ordovician sandstones and mudstones. The narrow strait of Cardigan Sound (<5m) separates Cardigan Island tidally which has lower cliffs (51m aod) and steep edges. The headland rises inland to 187m aod south of Cemaes Head. The coastline is indented by small coves, and rocks are strewn along the base of cliffs, and there is a cave near Cemaes Head. The intertidal zone comprises high energy rocky shores, flanked by shingle in coves. The coast is exposed to erosion through hydraulic action, abrasion and attrition.</p> <p>The shallow (<30m), moderately sloping (1-10⁰) sea floor is formed by tongues of poorly sorted conglomerate that fan around the headlands of Cemaes Head and Cardigan Island. Gravelly sand forms the sea floor across the open estuary. The sediment covers the Ordovician sandstones and mudstones bedrock. The seas are exposed to high wind and wave stress. The east side of Cardigan Island is more sheltered, but the headlands are generally exposed. Tidal currents are set northeast and southwest. Tidal flow is low (<1 knot). The tidal range is 4.1m.</p> <p>The area forms part of Cardigan Bay SAC. The coastal fringe is an SSSI- at Aberarth- Carreg Wylan. Cardigan Island is an Important Bird Area [RSPB] for breeding seabirds. Bottlenose dolphins, bass and mullet use these waters and a high energy littoral rock habitat lies on the shore. Above the foreshore the cliffs are in part vertical and craggy, and in part vegetated. Habitats on the cliff tops and coastal slopes include coastal cliff grassland and some heath. Permanent and improved pasture with low hedges lies on the gently rising land above. Above its cliffs, Cardigan Island is a gently domed area of area of open coastal grassland.</p>
Cultural influences
<p>The mouth of one of the great rivers of Wales, navigable up to Cilgerran, and which served the town of Cardigan, with its long-standing history of coastal and ocean-going trade. Historic marine use includes the export of timber wood and slate, and emigration.</p> <p>As a marine area, there are few features. Only the wreck of the Herefordshire, which came to grief in 1934, offers visible testament to marine historical use, a steel-hulled cargo vessel built for the Bibby Line by Harland and Wolf, Belfast, in 1905. It remained fairly intact in the late 1960s, with the boilers and machinery in situ, but the exposed location suggests that the wreck is now likely to be well broken up.</p> <p>A scheduled monument lies at CD280 (Picton Point promontory fort): community: y Ferwig</p> <p>Yacht and motor cruising out of the Teifi is popular but somewhat restricted due to navigational challenges getting back over the bar at the entrance to the estuary. Sea angling from boats is popular as is diving. Small local fishing boats use nets and pots especially round rocky outcrops and the island.</p> <p>Dolphin spotting is carried out inside of Cardigan Island from the shore and boat trips. Bird watching is possible from both Cemaes Head and the mainland opposite Cardigan Island.</p>

Walking along the Coast Path is also a popular activity. The beaches are inaccessible.

The area has a Round 24 licence for oil and gas in its outer waters and is part of the Aberporth firing range and military practice area.

Aesthetic, perceptual and experiential qualities

These two headlands mark the entrance to the Teifi estuary, creating a dynamic frame to the bay. The scale is large and the textures vary from roughness of the cliffs especially to the south contrasting with the smoother and gentler pastoral farmland to the north.

From the heights of Cemaes Head which is the major orientational landmark, there are panoramic views across the bay and beyond, and long views back along the estuary. There are panoramic views over the open sea which is apparently featureless generally and along the coast to the south west. There is a sense of danger and exhilaration on the cliff edge, especially in strong winds but is tranquil on a calm day. There is no public access to Cardigan Island. There is a general lack of light pollution.

Waves crash onto the rocky shores. On the water, the protection of the headlands diminishes swiftly with exposure to the south westerlies, tidal currents and increasingly open sea further from the shore.

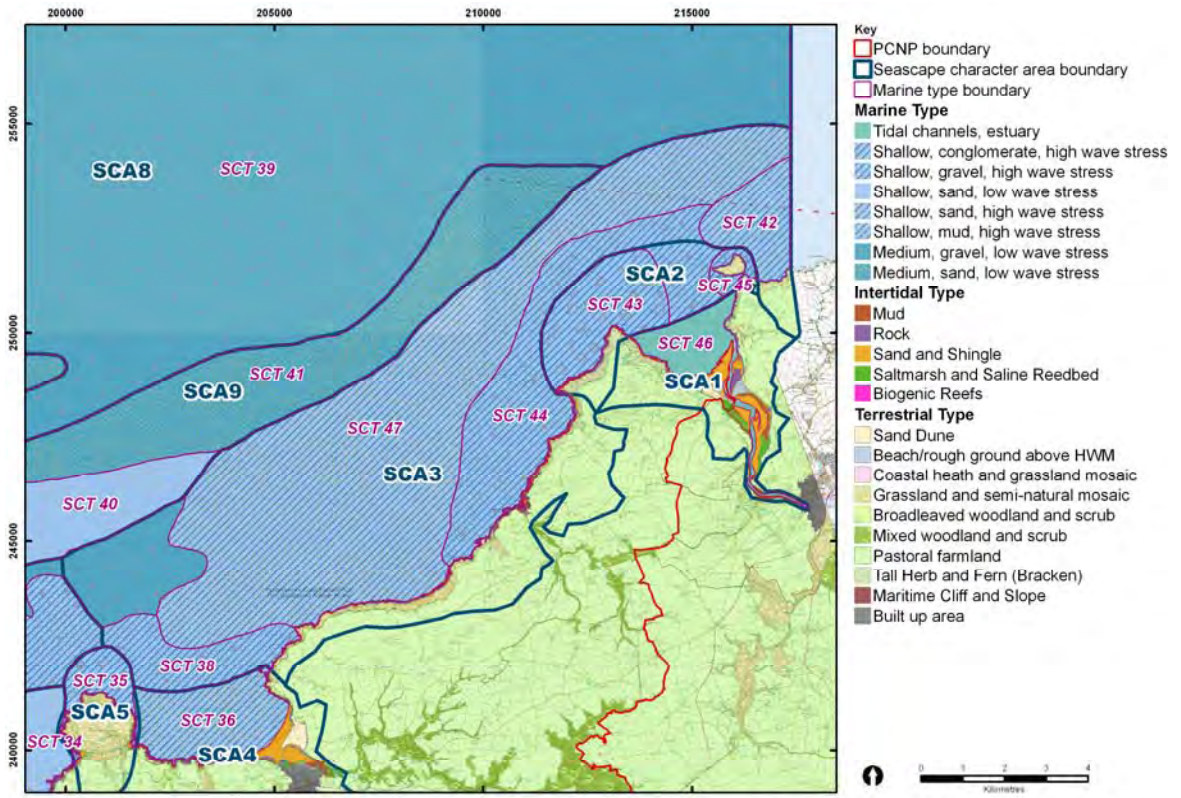
Cultural benefits and services

The area contributes towards leisure and recreational services particularly for walkers on the coastal path and form of remote headland with its panoramic views and some sailing, to natural heritage in the form of the rugged headlands and habitats for breeding birds and dolphins, and to cultural and spiritual services in respect of the sense of wildness and remoteness.

Forces for change									
Summary	Key forces for change								
<p>Slow coastal erosion of rocky cliffs. Shoreline management plan states 'do nothing'.</p> <p>More intense use of the coastal path may lead to erosion.</p> <p>Agricultural activities such as small scale livestock raising may become unprofitable, which could lead to a loss of pasture and hedgerow management.</p> <p>Potential for disturbance of cetaceans.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						

Key sensitivities	
Factors contributing to sensitivity	Factors detracting from sensitivity
Remote, unspoilt and wild character. Highly prominent headlands and open island. Wildlife including dolphins and seabirds. Pembrokeshire Coast Path as a sensitive receptor. General lack of light pollution.	Aberporth firing range and military practice area.

No: 3 Seascape Character Area Name: **Pen y Afr to Pen y Bal**



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SCA 3: Pen y Afr to Pen y Bal



Looking towards Newport Bay (© PCNPA)



Ceibwr Bay



Looking north east from Careg Wylan

Summary Description
<p>This area extends from north of the mouth of the Teifi, along the coast, with a sea component westwards to the north of Dinas Head. This is a relatively remote and wild north west facing stretch of coast, with spectacular high cliffs rising to 150m with islets and arches, jagged rocky shores and very few small shingle beaches. The coast is only accessible from land at Ceibwr Bay.</p>
Key Characteristics
<ul style="list-style-type: none"> • Spectacular high cliffs rising to over 150m AOD are in part vertical and craggy, and in part steeply sloping and vegetated key features. • A predominantly jagged rocky foreshore with cliff arches with very few rocky/shingle beaches. Islets lie just offshore linked at low tide. • At the top of the cliffs are semi-natural grassland and gorse, with permanent pasture with low hedges on the plateau above. • Settlement is very sparse, rural and scattered and set back from the exposed coast. • General lack of light pollution. • The coast is only accessible from land at Ceibwr Bay which is a small but popular beach. • Burial chambers and two promontory forts lie along the coast. • The exposed coast with limited shelter limits sailing to longer distance cruising and off Newport Bay. Potting and kayaking are other sea uses. • The coast path on the cliff top linking Newport with St Dogmaels feels remote.
Physical Influences
<p>The north east-south west headland (Foel Goch 184m aod, Foel fach 130m aod), composed of north east-south west striking Ordovician mudstones and sandstones, is incised by a north west draining narrow river valley through to Ceibwr Bay. Steep, very high rocky cliffs fringe the coast below Foel Goch, and jagged rocky cliffs fringe bays. At the south west point of Pen y bal, the rocky islet Carregedrywy (2m aod) is joined by a rocky ledge tidally to the coast. Beaches along the coast are boulder strewn, and many submerged rocks are tidally exposed. The intertidal tidal comprises high energy rocky shores (91%), with narrow shingle and sand beaches (9%) in coves. Ribs of rock extend out from west-facing cliffs. Coastal erosion takes place through hydraulic action, abrasion and attrition.</p> <p>The shallow water (<30m) sea floor of gravelly sand to sandy gravel, covering Ordovician mudstones and sandstones, is moderately sloping (1-10°), and passes offshore into sand. The seas are exposed to high wind and wave stress. Tidal currents set north east and south west along the coast. Tidal flow is generally low (<1 knot).</p> <p>The eastern part of the coast is an SSSI- at Aberarth- Carreg Wylan and to the west there is the Newport Cliffs SSSI. Above the cliffs is a narrow stretch of coastal grassland and semi-natural mosaic above which the coastal plateau is predominantly pastoral. A steep-sided sheltered narrow wooded valley runs inland from Ceibwr Bay.</p>
Cultural influences
<p>Prehistoric routes are implied by the burial chambers within this character area. The loss of the <i>Morning Star</i> of Aberystwyth in Ceibwr Bay, in the famous storm of 1859, is emblematic of local patterns of trading and of shipwreck.</p> <p>Burial chambers are evident at Trellyffaint and Llech y Drybedd. Castelltreruffydd is a tear-drop shaped enclosure, on steep coastal slopes on the north-west. The enclosure circuit serves to isolate a promontory below the coastal slope, as well as Careg Yspar, immediately offshore It has been suggested that a pot sherd recovered from the enclosure is Roman. A forge established in 1820 at Moylgrove may have contributed to coastal trade.</p> <p>Scheduled monuments include: PE211 (enclosure): community: Nevern PE212 (promontory fort): community: Nevern PE214 (promontory fort): community: Nevern</p>

The Welsh name for Moylgrove, Trewyddel, suggests Irish influence.

There are several rocky inlets popular with kayakers and cruising craft. Sailing occurs just out from Newport Bay, but elsewhere the distance from safe protected waters restricts casual boating except for a cruise sailing route linking Fishguard to points north on Cardigan Bay. The one accessible beach at Ceibwr is a popular site for tourists. There is walking along the remote Pembrokeshire Coast Path that runs along the top of the cliff edge. The hinterland is simple open pastoral farmland. Fishing in the area comprises of set nets, prawn, lobster and crab potting and there is potential for light otter trawling. The area has a Round 24 licence for oil and gas in its northern outer waters and is part of the Aberporth firing range and military practice area.

The area has very sparse settlement and no light pollution.

Aesthetic, perceptual and experiential qualities

A spectacular rugged natural coastline with a rhythmic, indented pattern of headlands and indentations with a rough, angular texture. This is a very large scale, exposed seascape with open views out to sea. Colours are muted.

This is a remote, unspoilt and wild sea coast, in which the sense and awareness of the sea dominates. There is a sense of danger and exhilaration on the cliff edge, especially in strong winds when one is highly exposed, and in high winds the seas crash on to the rocks. It is highly tranquil on calm days. There is a general lack of light pollution.

There are panoramic views over the sea and along the coast from the coastal path, and wide views over Newport Bay as one approaches the western end of this area. Ceibwr Bay has framed views out to sea.

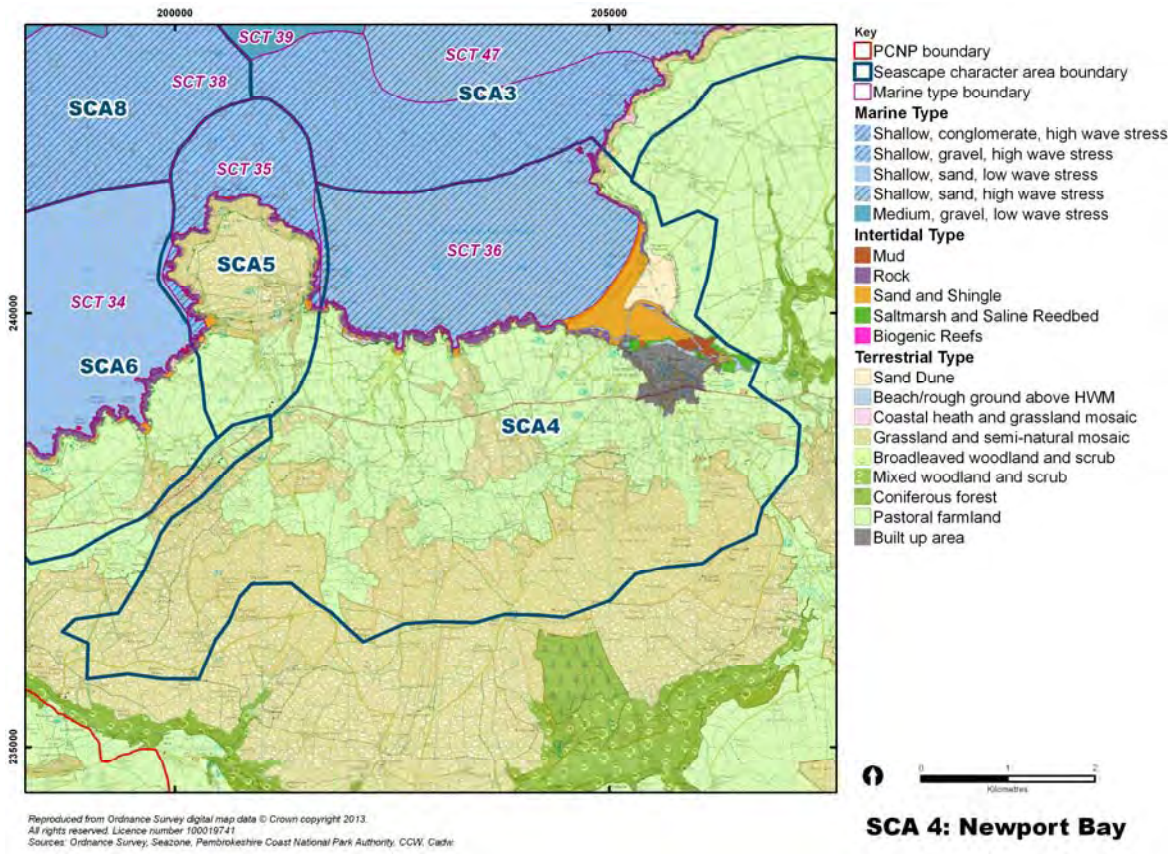
On the water, there is exposure to the south westerlies, tidal currents and increasingly open sea further from the shore although Dinas Head offers some shelter and a strong landmark to the west.

Cultural benefits and services

The area contributes towards leisure and recreational services in the form of coastal path access to a remote coastline, to natural heritage in the form of the unspoilt coast and habitats for breeding birds and seals, and to cultural and spiritual services in respect connection to nature and remoteness or space to breathe.

Forces for change								
Summary	Key forces for change							
<p>Slow wave erosion on exposed rocky coast.</p> <p>The Shoreline management plan indicates some risk at Ceibwr Bay with a policy to do nothing or hold the line. Elsewhere the recommendation is to do nothing.</p> <p>The oil and gas licence may lead to pressure for development in the future.</p> <p>More intense use of the coastal path may lead to erosion, although this is a more remote stretch of the coastal path.</p> <p>Agricultural activities such as small scale livestock raising may become unprofitable, which could lead to a loss of pasture and hedgerow management.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Indented natural rocky coast.</p> <p>Remote, unspoilt stretch of coastline.</p> <p>Long views along the coast and openness.</p> <p>Lack of settlement or road access.</p> <p>Lack of light pollution- a dark area.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Use of the area for MOD training.</p>				

No: 4 Seascape Character Area Name: **Newport Bay**



Newport Bay from Trwyn y Bwa (Photo © PCNPA)



Newport Sands



Afon Nyfer estuary

Summary Description

Located on the north coast, Newport Bay is a shallow, sheltered, north facing bay of muddy sand 3km wide enclosed and defined by Dinas Island to the west, small indented cliffs to the south and east, with the small Nyfer estuary extending inland and a strong hill backcloth of Mynydd Carningli. The fine medieval town of Newport lies back from the estuary in the rural hinterland, but extends down the hill to the edge of Newport Sands at The Parrog. The bay is a popular visitor destination for the town, the beach and watersports such as sailing.

Key Characteristics

- A shallow, sheltered, north facing bay of muddy sand 3km wide enclosed and defined by Dinas Island and the higher ground and cliffs from Pen-y-bal eastwards.
- The bay has a distinctly inshore character, providing a sea sheltered from the prevailing south westerlies which encourages swimming and beach activities on Newport Sands.
- To the south east lies the estuary of the Afon Nyfer. This estuary progresses from an area of reed beds with wooded edges, through mud to a wide area of sand before meeting the sea.
- The south coast comprises a rhythmic, linear series of indented low cliffs with some small inlets with sandy or shingly beaches. Behind these inlets run wooded, steep sided cwms.
- The medieval town of Newport with its Conservation Area lies close to but separate from the coastal edge, but extends down the hill to the edge of Newport Sands at The Parrog with its stone sea walls, where holiday homes and a busy sailing centre form a focus of summer activity.
- The coastal path hugs the cliff edge and diverts down along the Nyfer estuary, where it meets the road crossing point across the river.
- There are channelled view across the bay and out to sea from the coastal path, especially where this is on the cliff edge.
- Inland, pasture is the dominant rural landcover, with Mynydd Carningli and Mynydd Caregog acting as a strong backcloth with prehistoric remains with strategic commanding views of the sea and coast.

Physical Influences

The north facing bay comprises a shallow (<10m), gently northwest-sloping (<1°) sea floor of muddy sand. The sea is more exposed to wave stress on the west-facing side of the bay but is generally sheltered. The sea floor sediment covers bedrock of east-west striking Ordovician sandstones and mudstones.

The bay has a cliff coastline indented by small coves. The small estuary of the Afon Nyfer enters at the east side. The inner estuary of mud and saltmarsh passes outwards into muddy sand before the meandering river channel crosses the sandy beach. The wider muddy sand bay is flanked by a moderately exposed rocky shore and foreshore, with areas of shingle and sandy coves. Ribs of sandstone extend into the beach between caves and blowholes on the northeast (Traeth y bal). Tidal flow is dominantly from the northwest, with a range <4m.

Newport Cliffs to the north are an SSSI. Intertidal species include red seaweeds, barnacles and other species normal on high and medium energy littoral rocks. The estuary of the Afon Nyfer has sands with associated species and alluvial deposits with reedbeds and other saltmarsh habitat. The Afon Nyfer is important for salmon, sewin and brown trout.

The hinterland is predominantly improved pasture, with larger fields and low hedges near to the coast, and a more organic, small scale field pattern with mature hedgerows at the foot of Carnigli Common and Mynydd Caregog which have semi-natural moorland vegetation. There is some arable cropping, and a golf course near Newport Sands.

Cultural influences

The enclosed bay emphasises the strategic location of the Norman town of Newport, as with Fishguard to the west and Cardigan to the north-east. The area as a whole is rich in Prehistoric remains which reflect its coastal location and the intervisibility of shore, hillslope and sea.

The town of Newport is a late 12th century *bastide* situated where the Afon Nevern flows into the bay; its castle was the centre of the Anglo-Norman lordship of Cemais. The historic centre and the Parrog form a Conservation Area. The town may have supplanted an earlier settlement on the shore at Parrog, but silting in Nevern meant that trade reverted here in post-Medieval times, reflected in its warehouses, many old cottages and narrow lanes. Slate quarried from sea-cliffs, pottery and wool were the main exports, and limestone and coal the main imports.

There are no wrecks in the shallow bay.

The pattern of small fields and smallholdings on the hill-slopes reflect the land-hunger of the 19th century, partly relieved by the tradition of emigration to the USA. The later years of the 19th century were more prosperous, as many summer visitors came from the mining valleys.

Scheduled monuments include:

- Carn Ingli camp- an enigmatic landscape of uncertain date
- Carn Ffoi prehistoric hillfort.
- Cerrig y Gof and Carreg Coetan Neolithic chambered tombs,
- Bedd Morris standing stone.

The area includes the Newport and Carningli Landscape of Special Historic Interest.

Carn Ingli is where St Brynach Wyddel ('the Irishman') reputedly conversed with angels. George Owen of Henllys, the historian (c1552-1613), author of *The Description of Pembrokeshire*, was lord of Cemais. A more recent writer associated with Newport was the novelist Menna Gallie (1919-1990).

The boat club at Newport has mainly dinghies and most activity is during the summer with racing throughout August. There is also kayaking and Celtic Longboat racing during the summer). There are swinging moorings (approx.20) along the course of Nevern river as it reaches the sea at Newport, which mainly dries out at low water. Access to beach is reached by 4 points for launching craft which are motor dayboats, sailing dinghies, kayaks & jet-skis. Small coastal fishing boats operate out of Newport which are mainly used for potting. The navigable channel at Newport constantly changes and is marked with buoys. Surfing and windsurfing takes place off the beach, mainly towards north end of beach. Sea angling is enjoyed from both the beach and small boats.

The Pembrokeshire Coast Path runs along the top of the cliff edge, and around the Nyfer estuary. Newport Golf club offers an 18-hole links course at the Bennet. At Newport, the large sandy beach is popular with tourists, especially summer. Beach walking is a popular pastime with links to the Coast Path. Bird watching takes place on the mudflats and sandbanks in Newport Bay. Newport is popular with cultural tourists. To the rear of boat club is a boat park with small boats on the ground or on trailers. There is a car park adjacent to the boat club.

Aesthetic, perceptual and experiential qualities

The bay has a strong sense of containment, between the enclosing cliffs of Dinas Head and those to the east. The south coast has a rhythmic pattern of small headlands and bays between the cliffs, contrasting with the recreational focal points at the Parrog and Newport Sands, and again with the reedbeds and mudflats of the Nyfer estuary.

The bay has a contained, inshore quality, which creates a feeling of safety as a recreational area. There is an interesting balance and contrasts between the cliffs, small beaches, sand bars and estuary, and open bay. In places, such as the Nyfer estuary, salty smells are evident, and in onshore wind Newport Sands are exhilarating, whilst there can be significantly sheltered spots such as to the east.

The naturalness of the sea edge is set against the harder edge around Newport/the Parrog and

the recreational activities here and associated with the beach and golf course at The Bennet. The latter has a 20c linear character, slightly incongruous in the sweeping rural setting of the bay. The majority of the coast has a low level of lighting associated with Newport and the surrounding semi-rural settlement.

There are wide views across the bay and beyond. Dinas Head adjacent forms a significant focal point, rising gently to a high point on its northern edge. Also there are superb views to Newport sands, the backdrop of Mynydd Carningli and Caregog and associated open access land.

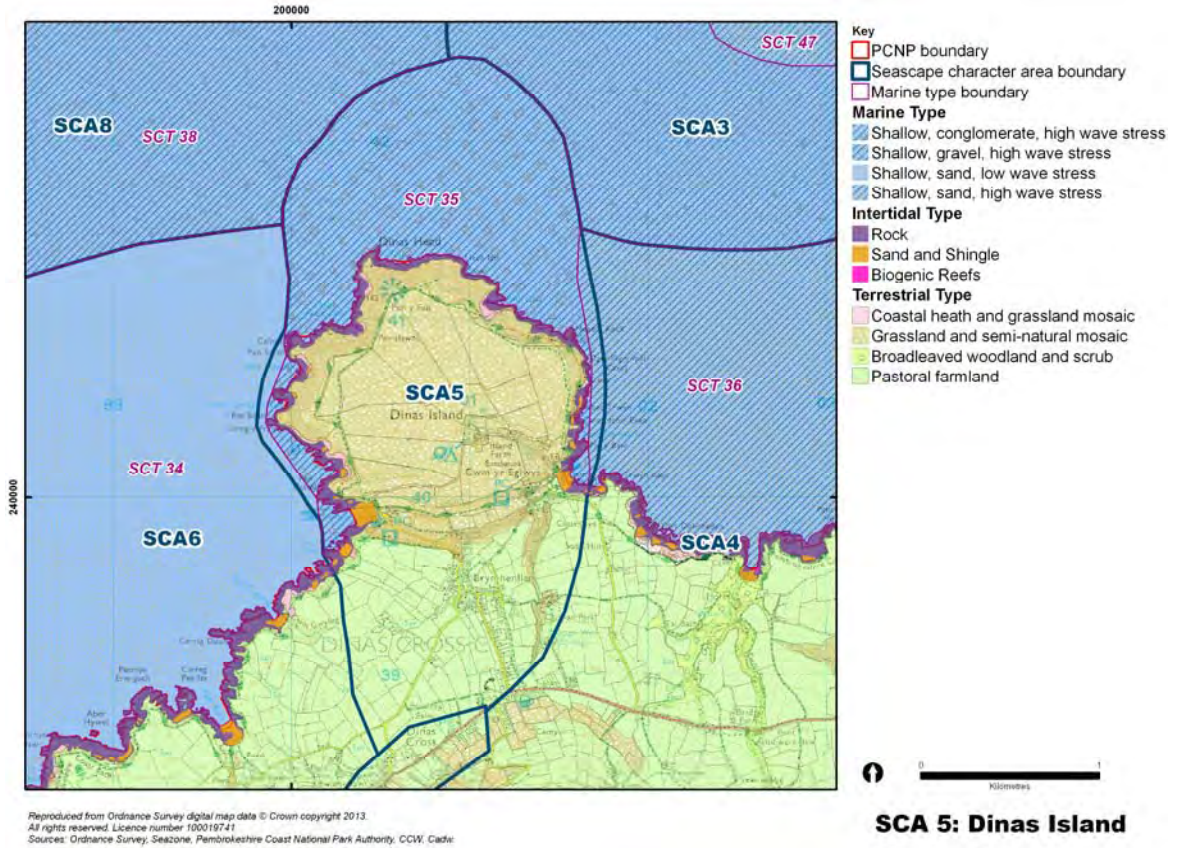
Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and beach, to natural heritage in the form of the mainly unspoilt coast and estuary, and to cultural and spiritual services in respect of the historic settlement of Newport and the prehistoric remains on Mynydd Carningli.

Forces for change								
Summary	Key forces for change							
	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
<p>The town and bay are popular and act as a honeypot for visitors.</p> <p>Parking on the beach at the Bennet is a visual detractor.</p> <p>The use of the coast path has created compaction and erosion in some areas.</p> <p>Development at the Bennet and to the east affect the rural hinterland character. Development pressures could affect the character of the settlement of Newport and its setting.</p> <p>Agricultural change has led to invasion of fields with bracken and deterioration of the field pattern and boundaries.</p> <p>The Bennet dunes, the estuary and the Parrog are prone to storm damage/high sea levels.</p>	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors making the area more sensitive				Factors making the area less sensitive				
<p>Simple, open character of the sandy bay with views possible from adjacent headlands and other vantage points mean that opportunities for further development are limited.</p> <p>The nature of the picturesque headlands either side frame views out to sea making the marine element of the seascape</p>				<p>Presence of scattered 20c housing, such as around the Bennet to the east.</p> <p>Presence of A487 reducing tranquillity.</p> <p>Presence of established recreational use at the beach by The Bennet and the golf course.</p>				

<p>sensitive.</p> <p>Steep indented coastline with cliffs and coves forming a natural coastal edge.</p> <p>Rural pastoral character of the hinterland, estuary and hill backcloth.</p> <p>Historic character of the town and The Parrog.</p> <p>Hill backcloth of the bay including the the historic landscape pattern and character of Mynydd Carningli.</p> <p>Pembrokeshire Coast Path is a sensitive receptor.</p>	
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No: 5 Seascape Character Area Name: **Dinas Island**



Dinas Head from Newport Sands



Cliffs on Dinas Head



Looking north east from Dinas Head (note disturbed seas of headland)



Cwm-yr-Eglwys

Summary Description
<p>Dinas Head/Island is a distinctive whale backed headland dividing Newport Bay from Fishguard Bay. It is a sandstone headland separated from the mainland by a low narrow valley with beaches at either end, Cwm yr Eglwys and Pwllgwaelod. Between these beaches the headland has steep cliffs with open pasture sloping back towards the mainland.</p>
Key Characteristics
<ul style="list-style-type: none"> • Distinctive prominent whale-backed headland dividing and containing Newport Bay and Fishguard Bay. • Conglomerate shallow seabed and currents lead to disturbed water and high wave action around headland with more sheltered waters to south especially in Newport Bay. • Sandstone 'island' divided from mainland by a glacial melt water channel, now a narrow wooded valley. • High vertical rock cliffs with very steep slopes above rising to high point at north, with tilted plateau to south. • Rocky foreshore with small beaches at each end of valley. • Large rationalised open fields on the island and smaller fields with hedgebanks on the mainland. • Small former fishing village at Cwm yr Eglwys with caravan park and Pwllgwaelod with pub and caravans now used for beach recreation and access to water for small boats including kayaks etc. • Pembrokeshire Coast path around the headland with panoramic views from high point at north of headland. • Use of water for sailing between bays and on route up Cardigan Bay and for kayaks and some fishing, mainly potting, but limited by sea conditions.
Physical Influences
<p>The distinctive whale back geomorphology of Dinas Head rising to 142m AOD or Dinas Island (107m aod) through to the mainland is produced by a Quaternary glacial meltwater channel (Cwm yr Eglwys (Dinas) and Esgwrn Bottom GCR). The headland is composed of east-west striking Ordovician mudstones and sandstones. The steep rocky coast is indented by shallow coves strewn with rocks. The littoral zone around the headland is dominated by exposed rocky foreshore (85%), passing up into rocky coast above HWM. Sand beach inlets at Cwm yr Eglwys and Pwllgwaelod lie at both ends of the distinct wooded valley of the Quaternary glacial meltwater channel which 'divides' the island from the mainland. The headland is exposed to wind and wave erosion through hydraulic action, abrasion and attrition.</p> <p>The sea floor sediment of poorly sorted conglomerate, covering sandstones and mudstones, fans out around the headland on a shallow water (>30m), moderate slope (1-10°). The sea is exposed to high wind and wave stress on the west side with a disturbed wave pattern. Tidal currents set northeast and southwest, with drafts into the bays. A tidal race may form off the NE of the headland with tidal flow to the west out of the bay. Tidal range is ~4.8m.</p> <p>The cliffs are vegetated in parts with scrub and gorse and bracken on the steep slopes above precipitous cliffs. The south facing back slopes consist mainly of improved pasture with fences where hedgebanks appear to have been removed but with some low cut hedges. Deciduous woodland, bracken and some marsh lie in the valley between the beaches and associated with watercourses. A more established smaller scale field pattern with hedgebanks remains inland. Habitats include rocky shores with rock pools, sandy beaches, scrub, marshy grassland, maritime cliff and slope and lowland mixed deciduous woodland.</p>
Cultural influences
<p>Historic marine uses include fishing, exemplified by the quay at Cwm yr Eglwys and the one wreck on the seaward edge of the area, the Summertime, a fishing vessel. Dinas Island is a sub-rectangular enclosure, measuring 60m by 50m, set on the promontory overlooking Cwm-yr-Eglwys, with an entrance on the north. There are traces of a sub-divided rectangular building. Cwm yr Eglwys itself is a former fishing village. There is a scheduled monument- PE 543 (Dinas</p>

Island promontory fort): community: Dinas Cross. The pub-name 'Sailors Safety' at Pwllgaelod on the west facing coast tells its own story.

Cwm yr Eglwys has a sandy beach, associated with a small settlement and churchyard, and small caravan park tucked into the valley form. Pwllgaelod is a more exposed sandy west facing beach with a small pub and some caravans with a beach which is a popular site for launching kayaks to explore the rocky shoreline and has a slipway. The beaches are linked by a path which allows holidaymakers to access and choose the most sheltered beach. Caravans and a linear settlement lie inland on the narrow lane approaches to this coastline.

The rugged cliffs and inlets are popular for kayaking. Transient cruising yachts and motor boats pass the headland and local sailors may sail between Fishguard and Newport Bays. The beach at Cwm-yr-Eglwys is popular for sheltered bathing and there is a slipway. Coastal walking on the Pembrokeshire Coast Path is a popular activity with stunning views across the bays to the east and west. A small beacon is located at the high point of Dinas Head.

Fishing in the area comprises of set nets, lobster and crab potting and there is potential for light otter trawling. The waters around the foot of the cliffs are popular for potting.

Aesthetic, perceptual and experiential qualities

A large scale rugged and unspoilt headland with a distinctive 'whale back' shape in profile when viewed from the east or west. It is exposed with a rough, angular texture of high rocky cliffs and bracken plus the smaller scale and more diverse beaches and valley contrasting with rationalised farmland of the 'island' southern slopes enclosed. Colours are muted but seasonally affected by boats and visitors to the beaches. This area varies between the exposed and threatening exposed cliff edges, to the safe and more tamed environment of the settlements and relatively sheltered beaches. There are sea and seaweed smells on the beaches. The headland is highly tranquil on calm days.

There are panoramic views over the sea and mainland and along the coast from the coastal path, and wide views over Newport Bay and further west to Fishguard Bay.

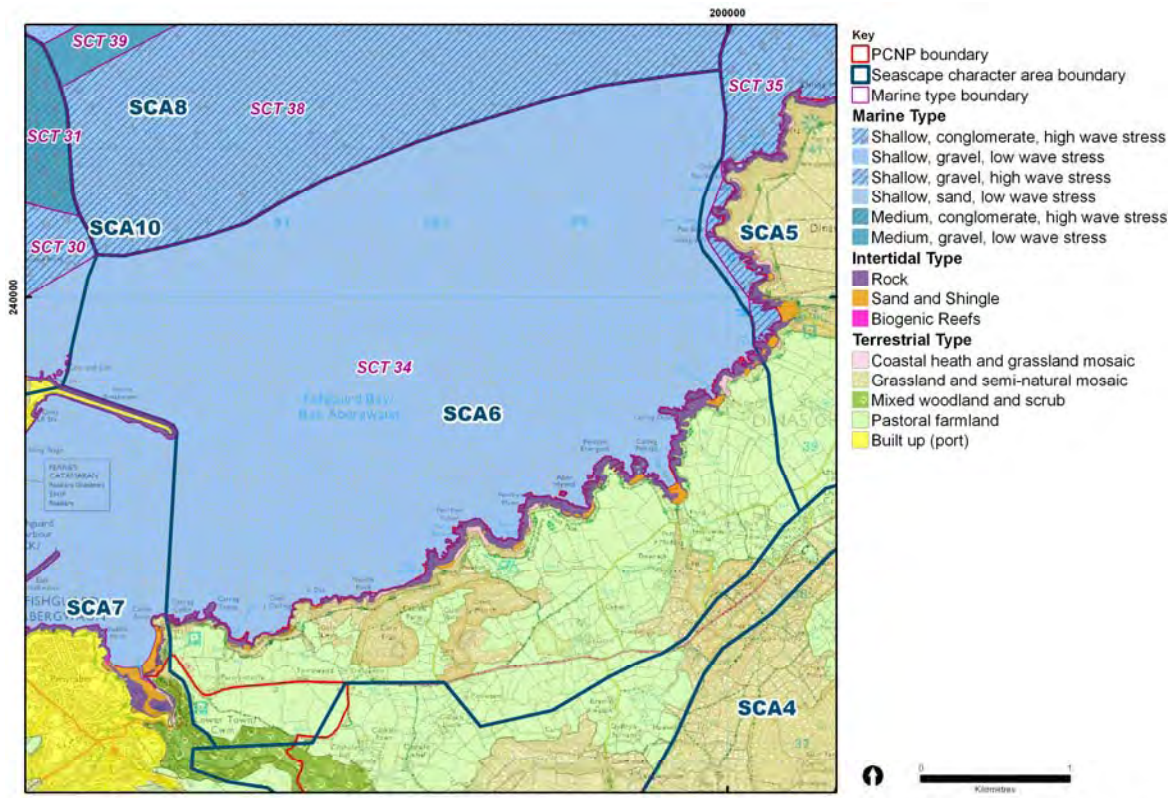
The sea would feel choppy and uncomfortable at times and would be dominated by the landform of the headland.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of walking, marine recreation and beaches, to natural heritage in the form of the rugged cliffs and prominent headland with diverse natural habitats and superb views, and to cultural and spiritual services in respect of the sense of spaciousness and wildness at the headland contrasting with the contained beaches and historical time depth at Cwm-yr-Eglwys.

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of resistant rocky cliffs. SMP states do nothing around the headland but indicates threat to sea walls and properties at Cwm-yr-Eglwys recommending hold the line here.</p> <p>Apparent loss of field boundaries/hedgebanks and increase in field sizes eroding distinctive landscape character on Dinas Island although further adverse change may be significantly reduced by National Trust ownership.</p> <p>Intensification of recreational uses and development pressure for holiday accommodation in valley, beaches and hinterland.</p> <p>Bracken dominating coastal semi-natural vegetation.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Prominent high point and tilted plateau of headland is a focal point and highly visible from many sea and land views.</p> <p>Historic character of settlements.</p> <p>Sensitivity of wetland landscape of valley to changes in management regime.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Presence of established recreational use at beaches and valley.</p> <p>Caravan development.</p> <p>Extensification of farmed landscape.</p>				

No: 6 Seascape Character Area Name: Fishguard Bay East



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SCA 6: Fishguard Bay east



Looking from Dinas Head south-west towards Fishguard © PCNPA



Looking east to Dinas Head from caravan park at Penrhyn

Summary Description
<p>Fishguard Bay lies on the north Pembrokeshire coast east of Fishguard bounded by the cliffs around Crincoed Point and Dinas Head. It is a stretch of rocky shoreline with steep rock cliffs and slopes, and rocks and rocky islets just offshore, and two accessible sandy coves [by foot] including Aber Bach, with coastal heathland on the cliff edges and small coastal hills and pastoral farmland in the hinterland. There are wide views from coast path and one prominent caravan park.</p>
Key Characteristics
<ul style="list-style-type: none"> • North facing, shallow bay defined to the east by Dinas Head and west by Crincoed Point • Indented jagged cliffs and steep slopes and rocky shores with a small sandy beach at Aber Bach and small virtually inaccessible coves such as Pwll Landdu. • Relatively sheltered sea area but exposed cliffs. • Hinterland of rock outcrops set in rolling pastoral local high points with coastal heathland and bracken. • Settlement set back from the coast except for one prominent caravan park with permanent structures on the cliff tops. • The sea is well used with rowing boats (Celtic Longboats), sailing boats, motor cruisers and jet skis come out from Fishguard into these waters and kayakers ply close to the coast. • Coastal path gives access along cliff top and very little vehicular access. • Wide coastal views to sea, along Fishguard Bay and east to Dinas Head.
Physical Influences
<p>The south to east side of north-facing Fishguard Bay is enclosed by the prominent headland of Dinas Head (107m aod). The cliffs around the bay, which are generally 30-65m aod, are composed of an east-west to northeast-southwest striking Ordovician succession of mudstones and sandstones, with more resistant volcanic lavas, tuffs and intrusions (Fishguard Volcanic Group). The rocky coastline is indented by small coves. Rock boulders are strewn on beaches and across the shallow sea floor around the coast. Variably exposed rocky shores (88%) dominate the intertidal areas, flanked by narrow shingle beaches (12%) in N-facing inlets. There are some small rocky islets (e.g. Pwll y Blewyn). In the shelter of the bay coastal erosion is limited. Sediment transport is swash aligned with little net longshore drift, and sediment is kept within the bay.</p> <p>The sea floor of muddy sand overlying Ordovician sedimentary and volcanic rocks slopes gently (<1°) into the shallow (<20m) bay. The seas in the shelter of the bay are exposed to low wave stress. Tidal currents outside the bay set north east and south west, with indrafts into the bay.</p> <p>The inaccessible rocky shores encourage use by seals.</p> <p>To the south east, the immediate hinterland is rolling with local high points with distinctive rock outcrops such as at Carn Fran.</p> <p>Semi-natural vegetation of heathland and bracken covers the higher cliff slopes. Pastoral improved and unimproved grassland enclosed in small- medium sized fields with low hedgebanks abuts this reaching the cliff edge in many places. A narrow wooded valley runs inland from Aber Bach.</p>
Cultural influences
<p>The area generally has a very strong visual linkage to Irish sea-route and Fishguard/Goodwick harbour with its breakwaters, quays as part of the broader seascape.</p> <p>World war 2 remains such as coastal searchlight at Penrhyn Ychen.</p> <p>Scheduled monuments include:</p> <ul style="list-style-type: none"> • PE200 (standing stone): community: Dinas Cross

- PE485 (cross): community: Dinas Cross

The coastal edge is very sparsely settled with most settlements and dwellings associated with the A487 coast road further inland. There is one prominent caravan site with permanent structures at Penrhyn.

Sailing, including racing, takes place out of Lower Town Fishguard into these waters as do cruisers in transit. Cruise sailing route linking Fishguard to points north on Cardigan Bay. Rowing boats (Celtic Longboats) and motor cruisers and jet skis also come out from Fishguard into these waters. Sea angling is also active in this area from both the shore and boats. Kayakers approach the area from the east.

Fishing in the area comprises of set nets, lobster and crab potting and light otter trawling.

Ferries operate out of Fishguard with a vehicle ferry and catamaran to Rosslare and can be seen regularly from the cliffs and boats in this area.

There is a small inlet at Aber Bach which is popular for sea angling and wildlife watching (seals). Walking the Pembrokeshire Coast path continues to be popular and Pwll Landdu is also just accessible from the path. Climbing takes place at Needle Rock.

Aesthetic, perceptual and experiential qualities

A large scale jagged and rough textured coastline, in a simple pattern of indented headlands and small generally inaccessible [from land] coves. The small coastal hills with their coastal heathland reinforce the semi-natural character and screen the coast road set back from the coast. A sense of danger lies at the cliff edge with precipitous slopes and the coast feels exposed to the sea and northerly winds.

The coast generally feels remote area with little settlement and virtually no vehicle access, but the caravan park is a prominent detractor to the feeling of remoteness and naturalness. There are long views along the coast with Dinas Head dominating to the east and Fishguard with its settlement climbing the coastal hills high noticeable to the west.

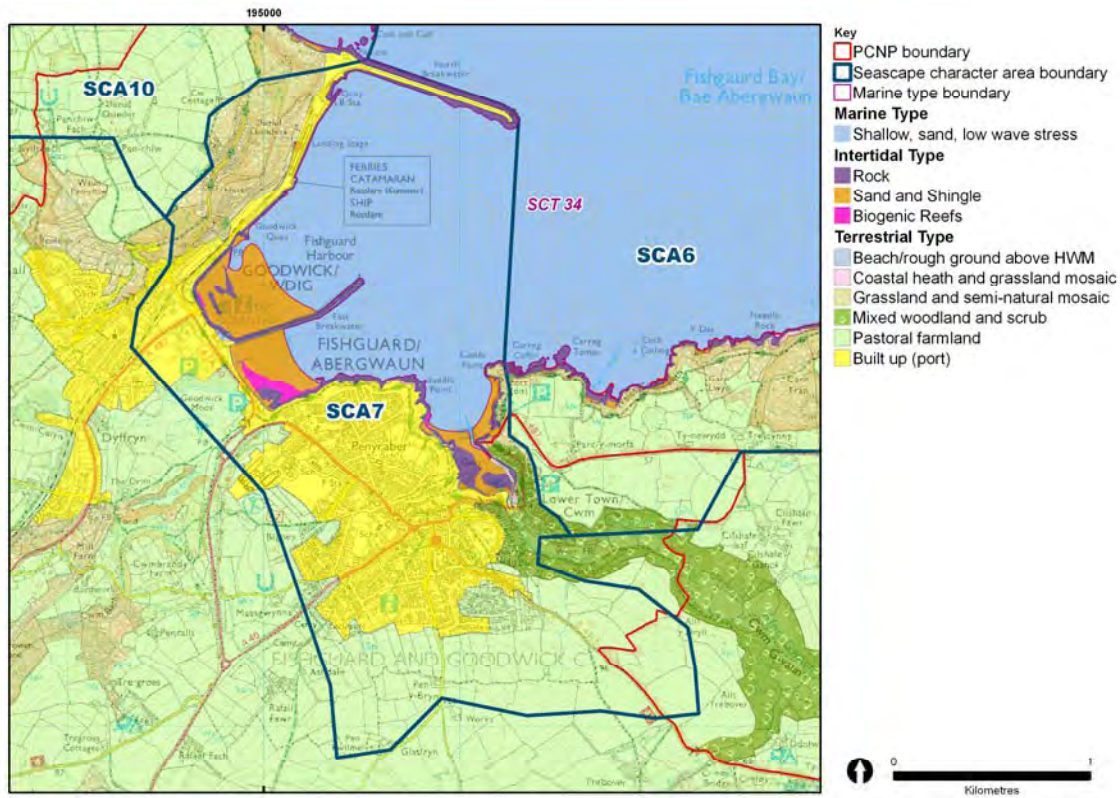
The sea would feel relatively calm and sheltered from the south westerlies in the bay which is perhaps why it is used for rowing. There would be animation and movement from ferries to the west, motorboats, sailing and other craft. The coast would dominate views on three sides with open unspoilt sea views to the horizon to the north.

Cultural benefits and services

The area contributes towards leisure and recreational services in the form of marine recreation, coast path and remote accessible beach at Aber Bach, to natural heritage in the form of the largely unspoilt cliffs and sea views, and to cultural and spiritual services in respect of the sense of wildness and degree of remoteness.

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky cliffs. Shoreline management plan states do nothing.</p> <p>There will be a new 450-berth marina to be built at Fishguard, starting late 2013 with 250 apartments which will significantly affect motor and sailing boat activity as well as general number of visitors/walkers, in this area.</p> <p>Possible pressure for expansion of holiday accommodation or caravan site.</p> <p>Land management changes may change character of coastal farmland.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Remote, unspoilt rugged cliffs and coastal hills.</p> <p>Coastal heathland on cliffs and hills.</p> <p>Wide and open views.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Caravan park.</p> <p>The marine activity of Fishguard Bay.</p>				

No: 7 Seascape Character Area Name: **Fishguard and Goodwick Harbours**



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SCA 7: Fishguard and Goodwick Harbours



Harbour and ferry terminal at Goodwick



Harbour with Fishguard above and Goodwick in distance



Old Fishguard harbour and Lower Town, © PCNPA

Summary Description
<p>Fishguard harbour including the ferry port and the old harbour, located on the north Pembrokeshire coast, is one of most intensively used areas along the coast, with significant settlement, commercial and recreational use. It is an area of contrasts between the more open and commercial Goodwick area and the contained and picturesque Lower Town harbour, with wooded valleys and sea edge to Fishguard.</p>
Key Characteristics
<ul style="list-style-type: none"> • A sheltered bay with substantial breakwaters enclosing a modern harbour and ferry terminal to the east and an old harbour with quay to the west. • 50m high cliffs and steeply sided, wooded sea edges. • Narrow and steep sided valleys at Lower Town and broad, flat valley and wetland at Goodwick. • A busy seascape with regular ferries including catamaran and traditional ferries linking to Rosslare and recreational boating and fishing [mainly from the old harbour] with two slipways including rowing and sailing and bases for diving charters. • Traditional village and harbour at Lower Town, elevated town of Fishguard, and mixed commercial and residential areas with modern landscaped seafront and facilities at Goodwick. • Long breakwaters, boat moorings and boats drying.
Physical Influences
<p>The west side of north-facing Fishguard Bay includes Fishguard and Goodwick harbours below the headland of Garn Waun at around 50m AOD. The steep headland with cliffs is formed mostly of resistant Ordovician volcanic gabbros (Fishguard Volcanic Group) striking east-west, while mudstones and sandstones dominate in the harbour areas. Fishguard harbour lies at the mouth of the Afon Gwaun at Cwm Gwaun, where volcanic rocks again form cliffs. The intertidal areas are dominated by sand (53%) and rock (42%). In Fishguard tidal estuary, the intertidal zone comprises muddy sand to sand with rocky shore margins. In Goodwick harbour a rocky shore passes seaward through biogenic reefs (4%) into muddy sand seafloor. The estuary forms a sediment sink where sediment is transported in suspension and through traction.</p> <p>The sea floor sand sediment, covering the same bedrock succession, slopes gently (<1°) and is very shallow (>10m) across the NE-E facing part of the bay. The sea is sheltered from wave stress south of the long breakwater with groynes and a sea wall on the Goodwick frontage. The tidal range is <4.8m.</p> <p>Semi-natural vegetation covers much of the cliff slopes and steeply sloping land behind. There is one SSSI- Fishguard Cliffs, either side of the old harbour. A wooded valley contains Lower Town and extends along the Cwm Gwaun. The low lying flats and marshland of Goodwick Moor contrast to the otherwise sloping landscape. The landscape scheme at the waterfront at the Parrog improves this edge. South of Fishguard there is pastoral agriculture in a pattern of small fields.</p>
Cultural influences
<p>The town displays a very strong linkage between Britain and Ireland with railway linking inland ultimately to London and busy ferry to Rosslare. As a settlement it may have a Scandinavian origin, the Old Norse <i>fiskigarðr</i> ('fish catching enclosure') indicating the importance of fishing to the local riparian economy. The town then developed as a Marcher borough. It has a long history of trading in herring and oats, with Ireland, Bristol and Liverpool, which only declined in the 19th century. There was a visit of the Lusitania in 1909 and a seaplane base was established here in 1917.</p> <p>Fishguard Fort occupies Castle Point overlooking Fishguard Harbour from the south-east, built in the 1780s. It successfully warded off the French invasion force of 1797 (the Last Invasion of Britain), and is now restored with four cannon facing bravely out to sea. The Royal Oak pub was the scene of the French surrender in 1797.</p> <p>Scheduled monuments include:</p>

- PE030 (chambered tomb): community: Fishguard
- PE096 (fort): community: Fishguard

There are a scattering of small wrecks around Goodwick harbour.

The film *Moby Dick* starring Gregory Peck was filmed here in 1955, as was the Richard Burton film of *Under Milk Wood* in 1972.

Fishguard is a major ferry port with two sailings every day to Rosslare in Ireland and two arrivals every day including fast ferries. It is served by a railway and the termination of the A40 (T), both from London. There is a proposed marina at Fishguard harbour. Diving charters and other recreation services are based here.

At Fishguard Lower Town, there is a slipway and quayside moorings which dry out at low water. There are approx. 40 swinging moorings in the small estuary which again dry out. The Parrog in Fishguard - running along the foreshore of the main Fishguard Bay - also has a slipway and boat storage facilities. Sea angling takes place from the breakwaters as well as the quay in Lower Town. Kayaking and sea rowing are popular activities the craft being launched at both Lower Town and Fishguard Bay. Inshore fishing boats operate out of Lower Town and Fishguard Harbour. Fishing in the area comprises of lobster and crab potting and potential for light otter trawling.

The waters off Lower Town and Fishguard Bay are popular with both motor and sailing cruisers. There is a heavily used cruising route from here around the coast to Milford Haven and points south east. There are also routes across to Ireland and north Wales across Cardigan Bay. There is a lifeboat station in the harbour area.

The Pembrokeshire Coast path runs around the bay, keeping close to the coast except where it diverts up the hillside above the commercial quayside at Goodwick.

Aesthetic, perceptual and experiential qualities

These sheltered harbours and associated urban areas contrast with the wild coastal scenery to west and east. Fishguard has a picturesque old harbour contrasting with the associated utilitarian ferry port with associated sprawling development at Goodwick. The area is medium scale and partially enclosed, with much diversity and busyness and movement emanating from the ferry terminal and harbour. Colours are muted in natural landscape but stronger in harbours. The rough texture of the wood, scrub and other semi-natural vegetation of the hillsides and cliffs contrasts with the settled areas and harbour walls.

Lighting pollution from the port and urban areas is evident but not severe.

There is a strong sense of place particularly in Lower Town; whilst less coherent in Goodwick. There is little tranquillity due to urban and recreational activities, ferry and industrial areas.

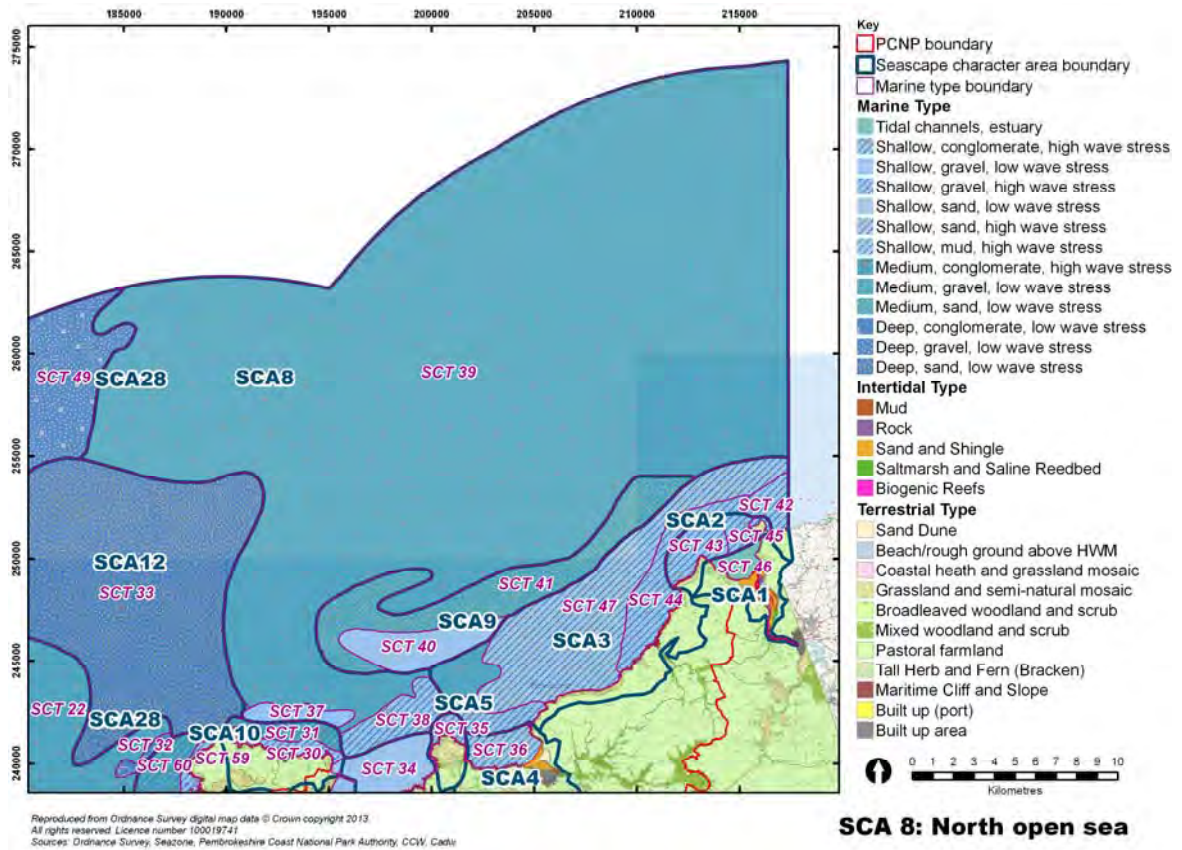
Wide views are possible from high points on coastal path and from some road viewpoints, but channelled or framed from harbour edges.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and as a centre for visitor accommodation, to natural heritage in the form of the wooded cliffs SSSI, sea edges and valleys, and to cultural and spiritual services in respect of the diversity of cultural activity in the urban areas.

Forces for change								
Summary	Key forces for change							
<p>The estuary is a sediment sink subject to deposition through river outflow and tidal flow. Shoreline management plan states 'hold the line (Fishguard, Goodwick, harbours) to 'do nothing' elsewhere.</p> <p>The proposed marina at Fishguard harbour will intensify the use of the area putting more pressure on the marine resource and coast for facilities.</p> <p>Potential conflicts between recreational and commercial use of bay.</p> <p>Litter on beaches and in urban areas, and pollution may detract from visual quality and may affect marine ecosystem.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Historic character of settlements and old harbour.</p> <p>Focal point for visitor activity.</p> <p>Open views in main area of bay and number of urban receptors.</p> <p>Initial impressions of Wales for Irish visitors on ferry.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Housing, quays and industry.</p> <p>Main roads, railway and ferry traffic.</p> <p>Established recreational use.</p> <p>Contained views from Lower Town harbour.</p>				

No: 8 Seascape Character Area Name: North open sea



Area visible from Dinas Head



Area visible on horizon from Ceibwr Bay

Summary Description
<p>This large offshore area is located in St George's Channel on the southern edge of Cardigan Bay running out to the 12nm limit. It is predominantly sandy gravel medium depth water with low wave stress but towards the coast includes the shallow sandy gravel bar of Strumble Bank with higher wave stress.</p>
Key Characteristics
<ul style="list-style-type: none"> • Mainly medium depth water on sandy gravel seabed. • Generally low wave stress and low tide speed parallel to the coast along St George's Channel. • Shallower water around Strumble Bank to the south with high wave stress. • Few wrecks, concentrated on the approaches to Fishguard Harbour, north of Strumble Head. • Used for leisure sailing by larger boats, commercial craft and ferries to and from Fishguard Harbour. • Open sea with simple, open characteristics at a vast scale dominated by swell, waves and winds with a sense of remoteness. • The key coastal features are Cemaes Head and Dinas Head with a backcloth of coastal hills including Mynydd Carningli and east of Strumble Head. • The lighthouse at Strumble Head would be highly apparent at night, as would the street lights of Fishguard and the ferry port from closer distances. Much of the coast would be dark. • Tranquillity will be reduced by MOD use as a training area.
Physical Influences
<p>Medium depth (30-60m), gently northwest sloping (<math><1^{\circ}</math>) sandy gravel sea floor with narrow bars of gravel and gravelly sand elongated east-northeast - west-southwest. Seas are exposed to low wave stress. Offshore currents set east-northeast - west-southwest along the coast. Sea floor sediments overlie Jurassic-Cenozoic bedrock striking east-northeast - west-southwest, and cut by faults that have the same trend. Towards the coast north of Crincoed Point to Strumble Head, the sea floor shallows to the sandy gravel bar of east-west Strumble Bank (<math><30\text{m}</math>). North of Fishguard bay the shallow sea floor is exposed to high wave stress. Beneath these shallow areas the bedrock is east-west striking Ordovician sandstones and volcanics.</p> <p>The eastern part of the area is in the Cardigan Bay SAC.</p>
Cultural influences
<p>The historic routes/linkages associated with this area include both the coastal trade and the history of maritime relations along the western seaways. As a deepwater area, features are confined to wreck-sites. The visual relationship of the off-shore areas with the whole of Cardigan Bay as far as Llŷn (on a clear day) emphasises the coastal culture of west Wales.</p> <p>Ferries between Fishguard and Rosslare and commercial shipping will regularly traverse the area with a concentration of activity to the south nearing Fishguard Harbour.</p> <p>The main recreational uses will be sailing locally from Fishguard old harbour and some jet skis inshore through to transient cruising craft travelling up and down the Irish Sea. There are cruise sailing routes linking Fishguard and points south/west, north across Cardigan Bay.</p> <p>Fishing comprises of set nets in the inshore part of the area, lobster and crab potting and potential for light otter trawling.</p> <p>The area has a Round 24 licence for oil and gas in its outer waters and is part of the Aberporth firing range and military practice area. There is a small seabed dumping/spoil ground just off Fishguard.</p>

Aesthetic, perceptual and experiential qualities

This area extends upto 12nm offshore so from proximity to Dinas Head to this limit there will be a wide range of experience from domination of high cliffs to open sea to land barely visible in most conditions. In much of the area the coast will be a minor but apparent feature to boat users depending on visibility. The main features will be Cemaes Head and Dinas Head with a backcloth of coastal hills including Mynydd Carningli and east of Strumble Head. The land will generally appear as a single dimensional line on the horizon with simple colours. Inshore areas will see the sprawling coastal settlement of Fishguard. From land the area is visible from the coast, including well used viewpoints such as the Coast Path, enhancing the sense of wildness and openness of this coastline in parts.

The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure which increases to the north. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The area is exposed to the south westerlies and northern winds and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea.

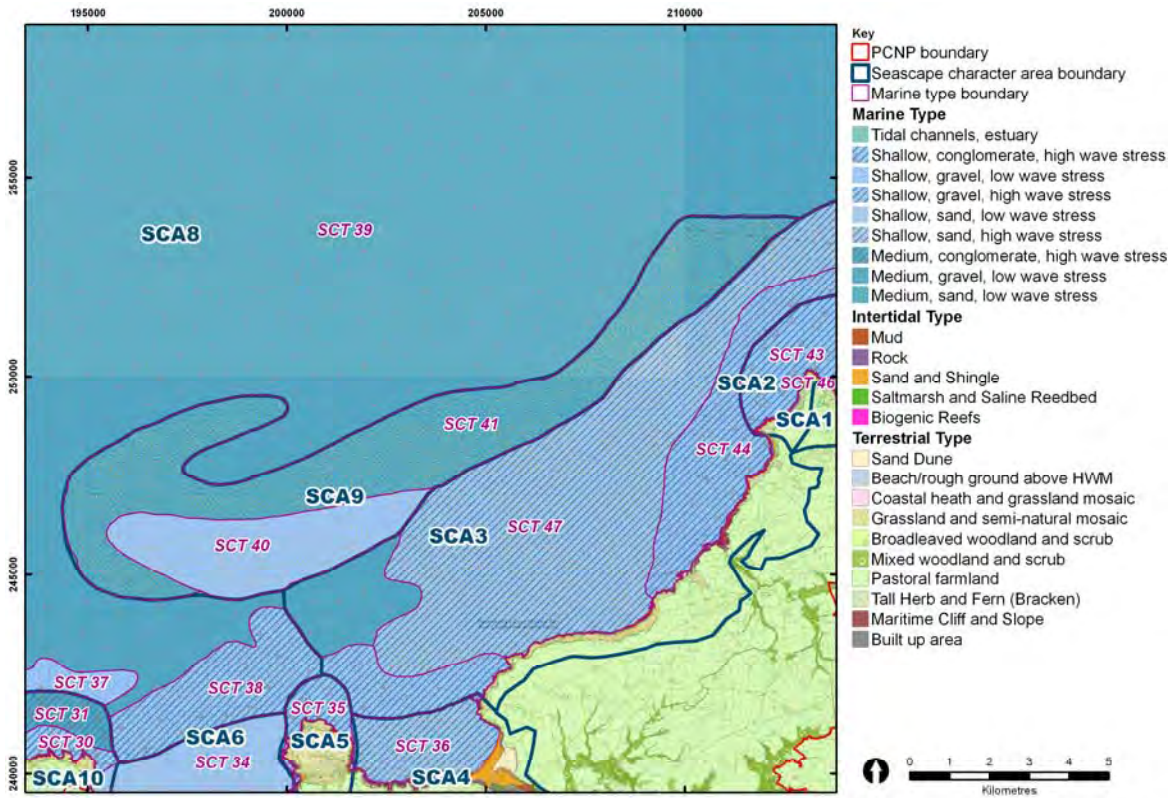
The number of leisure craft will be limited but there will be regular views of ferries entering and leaving Fishguard Harbour and occasional views of commercial vessels which will introduce man made elements and movement and reduce tranquillity and the sense of isolation. The use of the area for military exercises and training to the east will disrupt tranquillity at times.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation ie sailing and motor cruising, to natural heritage in respect of its role as part of the Cardigan Bay SAC, and to cultural and spiritual services in the form of the mainly unspoilt sea visible from the wild, sensitive western coasts of the National Park.

Forces for change								
Summary	Key forces for change							
<p>Limited forces for change in medium depth seas. The offshore shallows of Strumble Bank may accrete through longshore sediment drift.</p> <p>Potential use for oil and gas exploration and extraction.</p> <p>Use for MOD purposes.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity				
<p>Simple, open, wild and remote character with clear views of National Park coast.</p> <p>Forms part of the open setting for Cardigan Bay overlooked by the Pembrokeshire Coast National Park contributing to the sense of remoteness and wildness in the area.</p> <p>Nature conservation value of part of the area as an SAC.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p>				<p>Presence of MOD use reducing tranquillity.</p>				

No: 9 Seascape Character Area Name: **Newport and Fishguard outer sand bar**



SCA 9: Newport and Fishguard outer sand bar



Area visible from Dinas Head



Area visible from Ceihwr Bay

Summary Description
<p>This sand bar is located in St George's Channel on the southern edge of Cardigan Bay running parallel to the coast. It is predominantly medium depth water with shallow water of less than 30m deep to the south west with a sand seabed and low wind.</p>
Key Characteristics
<ul style="list-style-type: none"> • Shallow to medium depth sand bar parallel to the coast 3-5km from the coast. • Sinuous sand banks and channels on the seabed to the south. • Generally low wave stress, low tide speed parallel to the coast and slack water inshore. • No wrecks. • Used for leisure sailing by larger boats and ferries and commercial craft may be visible to the north and south entering Fishguard Harbour. • Open sea with simple, open characteristics at a vast scale dominated by swell, waves and winds with a sense of remoteness. • The key coastal features are Cemaes Head and Dinas Head with a backcloth of coastal hills including Mynydd Carningli. • The lighthouse at Strumble Head would be apparent at night, as would the street lights of Fishguard and the ferry port from closer distances. The sea and much of the coast would be dark. • Tranquillity will be reduced by MOD use as a training area.
Physical Influences
<p>A shallow to medium depth (20-40m) offshore east-west sand bar composed of sand grading offshore into sandy gravel, sloping only gently (<1°) on- and offshore. Sinuous ridges lie on the seabed to the south west off Fishguard Bay. The seas are exposed to low wave stress, with slack water in the shallower, inshore part. The sea floor sediments overlie east-west striking Ordovician sandstones and mudstones. Tidal currents are set east and west along the coast.</p> <p>The north eastern part of the area is in the Cardigan Bay SAC.</p>
Cultural influences
<p>The historic routes/linkages associated with this area include both the coastal trade and the history of maritime relations along the western seaways. There are no wrecks located in the area.</p> <p>Fishing in the area comprises of set nets, prawn, lobster and crab potting with potential for light otter trawling. Sea angling and can be expected. The only recreational uses at this offshore site will be from transient cruising craft travelling up and down the Irish Sea. The area has a Round 24 licence for oil and gas in its north eastern waters and is part of the Aberporth firing range and military practice area.</p>
Aesthetic, perceptual and experiential qualities
<p>This area is 3-5km offshore so the coast will be a minor but apparent feature to boat users depending on visibility. The main features will be Cemaes Head and Dinas Head with a backcloth of coastal hills including Mynydd Carningli. The land will appear as a single dimensional line on the horizon with simple colours. From land the area is visible from the coast, including well used viewpoints such as the Coast Path, enhancing the sense of wildness and openness of this coastline in parts.</p> <p>The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure which increases to the north. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The area is exposed to the south westerlies and northern winds and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea. There is a general lack of light pollution.</p> <p>The number of leisure craft will be limited but there may be regular views of ferries entering and leaving Fishguard Harbour at a distance to the south/west and occasional views of</p>

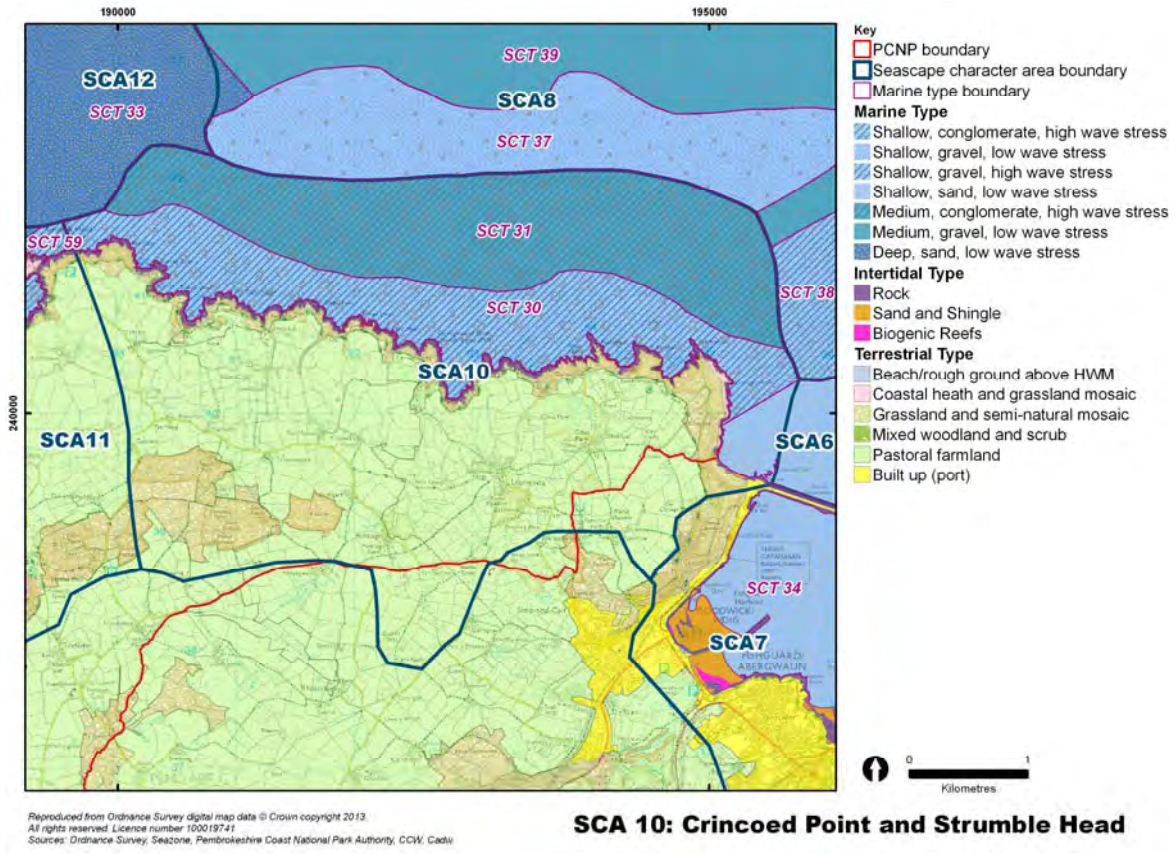
commercial vessels to the north. The use of the area for military exercises and training to the east will disrupt tranquillity at times.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation ie sailing and motor cruising, to natural heritage in respect of its role as part of the Cardigan Bay SAC, and to cultural and spiritual services in the form of the mainly unspoilt sea visible from the wild, sensitive western coasts of the National Park.

Forces for change									
Summary		Key forces for change							
<p>The sand bar may accrete through longshore drift.</p> <p>Potential use for oil and gas exploration and extraction.</p> <p>Use for MOD purposes.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key			Change occurring in the area affecting the selected special quality					
Key sensitivities									
Factors that contribute to sensitivity				Factors that detract from sensitivity					
<p>Simple, open, wild and remote character with clear views of National Park coast.</p> <p>Forms part of the open setting for Cardigan Bay overlooked by the Pembrokeshire Coast National Park contributing to character.</p> <p>Nature conservation value of part of the area as an SAC.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p> <p>General lack of light pollution.</p>				<p>Presence of MOD use reducing tranquillity.</p>					

No: 10 Seascape Character Area Name: **Crincoed Point and Strumble Head**



Strumble Head and lighthouse in high winds



Irish ferry offshore approaching Fishguard near Strumble Head



Strumble Head lighthouse showing cliffs in calm weather



Looking from near Llanwnda to Crincoed Point

Summary Description
<p>Located between Strumble Head and Crincoed Point, west of Fishguard, this is a rugged, exposed north facing coast with associated exposed waters. The cliffs are around 50m high and vertical backed by coastal heathland, pasture and a series of small coastal volcanic outcrops. There is little settlement and the area feels remote. The shore is virtually inaccessible so Strumble Head with its lighthouse to the west is the main destination, partly for dolphin watching. The sea is used for potting and the Fishguard ferry passes nearby.</p>
Key Characteristics
<ul style="list-style-type: none"> • An indented north facing coastline with rugged cliffs and headlands, interspersed with sharp indentations and inlets. Tongues of rocks build out from the coast to the east. From the cliff tops the land rises gently to abrupt rocky volcanic outcrops. • The sea character is one of high exposure, especially in north or north westerly winds, with overfalls around the headland, but shelter east of Carregwastad Point. • Landcover comprises coastal heathland and bracken with pasture enclosed with hedgebanks and stone wall field boundaries and very few trees. Sea wildlife includes dolphins and seals. • The area boasts many prehistoric remains including burial chambers, standing stones and field systems and the last (abortive) invasion of Britain occurred at Carregwastad Point. • Settlement is mainly widely dispersed farmsteads and holiday homes, with a larger hamlet at Llanwnda linked by narrow winding lanes. • The area feels remote, natural and exposed and wide views are possible from the coast and panoramic views from the outcrops. • The inaccessibility of the shores mean that Strumble Head and its light house to the west are the main attraction for visitors. • The Coast Path extends around the cliff tops but steps back inland at Crincoed Point. • The sea is used for potting and the Fishguard ferry passes nearby.
Physical Influences
<p>The prominent high rocky headland is bordered by sheer rugged cliffs that drop down to exposed rocky shores and tongues of rocks out from the coast to the east. The orientation is largely towards the north, from a high point at Garn Gilfach at 195mAOD, one of a series of small coastal volcanic outcrops, falling towards the cliff tops at around 50m AOD. Small coves are indented along the coast. At Aber Felin, a bay lies sheltered in westerly winds by Carregwastad Point, with small but inaccessible stony beach. Another small stony beach lies at Anglas Bay to the east and close to Strumble Head at Porthsychan to the west. The bedrock is dominated by resistant, east-west to north east-south west striking Ordovician gabbros among black shales (Fishguard Volcanic Group). South of Crincoed Point lies the east-facing bay of Pwll Hir. The coast is exposed to wind and wave erosion through abrasion and hydraulic action.</p> <p>The shallow (<30m) sea floor slopes moderately to steeply offshore (1- >10°) from the cliffs, the slope decreasing into moderate depths (30-60m; <1-10°). The sea floor bedrock of volcanics is covered by conglomerate that fans out from the coast. Seas are exposed to high wind and wave stress. Tidal currents set north east and south west along Cardigan Bay turn to east and west and form an eddy off Strumble Head. Tidal rips form off Pen Anglas, and rough waters fringe the headland and the shallows of Strumble Bank. Tidal flow is <2.5 knots. The tidal range for Fishguard is <4.8m.</p> <p>The western part of the coast is covered by the St David's SAC, designated as the Strumble Head to Llechdafad SSSI and also noted as an important bird area- the Pembrokeshire Cliffs. Habitats include maritime cliffs, grassland, heathland and rocky shores. Rocky islets support breeding seabirds. Important species include grey seal, peregrine falcon and chough.</p> <p>The cliff edges and tops are covered in heath and bracken, in places extending over 100m inland. The hinterland landcover has a well defined field pattern varying from medium scale to some much smaller fields associated with mature hedgebanks or stone wall field boundaries,</p>

whilst on the rocky hilltops there is a mosaic of rough grassland and moorland. There is very little tree cover, mostly confined to small valleys or associated with the sparse rural settlements.

Cultural influences

The area as a whole is rich in Prehistoric remains including burial chambers, standing stones and field systems which reflect its coastal location and the intervisibility of shore, hillslope and sea. There is little suggestion of coastal trade in this rocky headland. The aviation beacon indicates connectivity with other forms of transport.

The Garn Gilfach burial chamber (SAM - PE32) may have been one of many more; Fenton in 1810 noted 'many Cromlechs, some overturned, and some in their original position' in this locality.' Carreg Samson is another burial chamber to the east (SAM - PE031).

Scheduled monuments include:

- PE031 (Carreg Samson chambered tomb): community: Pencaer
- PE032 (Garn Gilfach chambered tomb): community: Pencaer
- PE033 (chambered tomb): community: Fishguard
- PE258 (cross-marked stone): community: Pencaer
- PE350 (enclosure): community: Pencaer
- PE518 (standing stone): community: Pencaer

This area lies within the Pen Caer: Garn Fawr and Strumble Head Landscape of Special Historic Interest.

The Strumble Head area is forever associated with the abortive French invasion of 1797 at Carregwastad (the last mainland invasion of Britain) when the invading troops were allegedly frightened by what they thought were redcoats but were Welshwomen wearing the common red dress of the time. The memorial stone overlooking the cove was erected in 1897. A wreck lies on the coast just to the east. A further submerged wreck, the Atlas Rose, lies just offshore. John Piper, the artist is associated with this area, having lived in a cottage to the west by Garn Fawr. He painted the coast and sea.

Settlement is sparse, limited to the hamlet at Llanwnda and a few small clusters and isolated farmsteads and dwellings linked by narrow winding roads.

Fishing in the area comprises of set nets, prawn, lobster and crab potting occurring in the waters at the foot of the cliffs and there is potential for light otter trawling.

Sea angling from rocks takes place at Crincoed Point, Carreg Gybi and off Strumble Head. There is a coastal sail cruising route linking Fishguard to Milford and points south and also across to Ireland. Motorboat cruising also takes place just offshore along the coast.

Strumble Head to the west is a leading location for watching dolphins and other cetaceans with regular 'Dolphin Watches'. Seals are also visible along the coast. Cliff-top walking is possible along the Coast Path although overall the coast is thinly populated and difficult to access with no beaches. There is a lighthouse at Strumble Head to the west which is the main destination on the coast with adjacent car park. The area has a Round 24 Oil and Gas licence.

Aesthetic, perceptual and experiential qualities

This north facing rugged coast is focused on large scale sea views with an open character and strong sense of place. The cliff edges have a rough, weathered and angular appearance, with a vertical or steeply sloping pattern and a repeated series of indented bays and headlands. The coastal edge is broadly consistent in character, whereas inland the landscape is slightly more diverse with a balance of the coastal heathland and rocky hilltops, set against the enclosed pastoral landscape. The associated waters can be rough, with waves pounding the exposed shores.

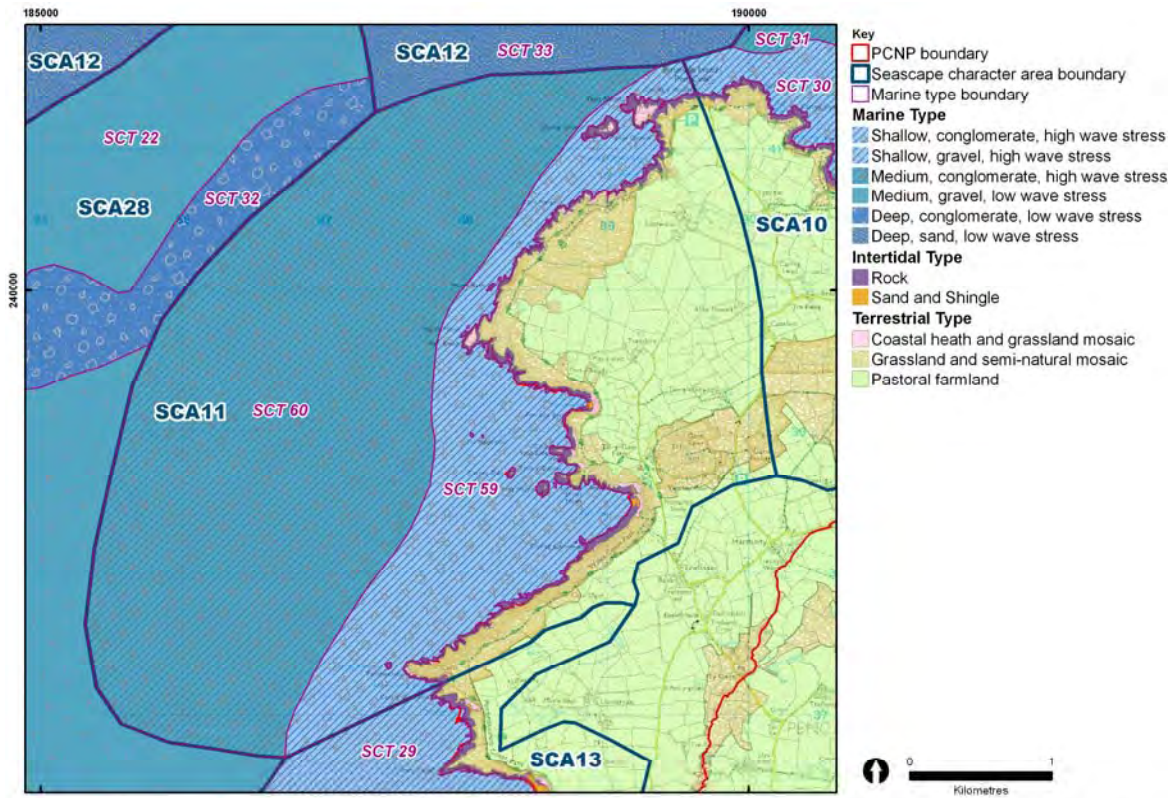
Whilst feeling remote and tranquil, strong winds can make this a wild, exposed and threatening coastline especially in northerly winds. The few trees are wind sculpted emphasising the exposure of the coast even on rare, still days. There is a general lack of light pollution.

The main landmarks in views from the sea are the coastal hills such as Garn Gilfach and Strumble Head lighthouse to the west. The Coast path route allows wide sea views and watching

for seals, and other wildlife. Those climbing the hilltops have panoramic views to the south as well as north.
Cultural benefits and services
The area contributes towards leisure and recreational services in the form of remote places to walk and appreciate nature, to natural heritage in the form of the rugged unspoilt coastline, and to cultural and spiritual services in respect of the historical richness of the area.

Forces for change									
Summary	Key forces for change								
<p>Slow erosion of hard coastal cliffs. The shoreline management plan states 'do nothing'.</p> <p>Erosion is affecting Iron Age promontory forts.</p> <p>Strumble Head as a visitor attraction leads to congestion and wear of small lanes running through the area at times.</p> <p>Conversion of dwellings to holiday cottages affects the rural character of settlement.</p> <p>Reducing agricultural management/grazing leading to loss of pasture, increasing scrub/bracken, and reduced management of hedgebanks, leading to a change in character.</p> <p>Round 24 Oil and Gas licence area may result in exploration and subsequent extraction with associated effects.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						
	Key sensitivities								
Factors contributing to sensitivity					Factors detracting from sensitivity				
<p>Rugged, remote and natural character of the coastline, with sparse settlement.</p> <p>Rural pastoral character of the hinterland, with rocky outcrops.</p> <p>Wide views from coast and hilltops.</p> <p>Narrow winding lanes.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p> <p>General lack of light pollution except ferries and lighthouse.</p>					<p>Passing ferries.</p>				

No: **11** Seascape Character Area Name: **Strumble Head to Penbwchdy**



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SCA 11: Strumble Head to Penbwchdy



Carreg Onnen Bay with Strumble Head lighthouse



Penbwchdy from Garn Fawr

Summary Description

A short stretch of rugged and remote coastline, including and south of Strumble Head. An area with very high cliffs in parts (140m at Penbwchdy) and rocky islands and seashore. A rolling rural pastoral coastal plateau lies behind the coast with the noticeable outcrop at Garn Fawr with associated hillfort. Very sparse rural settlement including remote farmsteads. The shore is virtually inaccessible so Strumble Head with its lighthouse is the main destination, partly for dolphin watching. Coast path walking, diving and climbing are the other recreational pursuits.

Key Characteristics

- An indented west facing coastline with rugged cliffs rising to 140m AOD and headlands, interspersed with sharp indentations and inlets with offshore islands and rocky stacks.
- From the cliff tops the land rises gently to abrupt rocky volcanic outcrops.
- An exposed west-facing shoreline with a severe pattern of wave disturbance.
- Landcover comprises coastal heathland and bracken with pasture enclosed with hedgebanks and stone wall field boundaries and very few trees. Sea wildlife includes dolphins and seals.
- The area boasts many prehistoric remains including hillforts on Garn Fawr and promontory forts.
- Settlement is mainly widely dispersed farmsteads linked by narrow winding lanes with a general lack of light pollution.
- The area feels remote, natural and exposed and wide views are possible from the coast and panoramic views from Garn Fawr.
- The inaccessibility of the shores mean that Strumble Head and its light house are the main attraction for visitors.
- The Coast Path extends around the cliff tops and there is climbing around Pwll Deri
- The sea is used for potting and diving and the Fishguard ferry passes nearby.
- Long views towards the west from the coast, and panoramic views from Garn Fawr.

Physical Influences

This west-facing coastline of high, rugged, indented cliffs rises from 40m to the north to 90m and then 140m around Penbwchdy. Landform rises further inland to the outcrop at Garn Fawr (211m aod) and is composed of east-west striking Ordovician basic volcanics (gabbros) and intrusions among black shales (Fishguard Volcanic Group). The sheer cliffs fall to rocky shores, with tongues of rocks building out from the coast and small rocky islets and the larger island at Ynys Meicel where the Strumble Head lighthouse is situated. The intertidal areas are exposed rocky shores, with minor sand or shingle beaches in narrow coves. The coast is exposed to wind and wave erosion through abrasion and hydraulic action.

The shallow to moderate depth seafloor, where the Ordovician volcanic succession is covered by conglomerate, slopes offshore at a low to steep angle (1° -> 10°). The seas are exposed to high wind and wave stress. Tidal currents follow the northeast-southwest trend of the coastline, and there are rough waters. Tidal races form off Strumble Head on east and west flowing streams. There is a westerly counter eddy on the east stream between Strumble Head and Penbrush. Tidal flow is <math><2.5</math> knots.

The coast is covered by the St David's SAC, designated as the Strumble Head to Llechdafad SSSI and also noted as an important bird area- the Pembrokeshire Cliffs. Seals are often seen hauled out on the south side of Carreg Onnen. The area is a good spot for wildlife watching. Habitats include maritime cliffs, grassland, heathland and rocky shores. Rocky islets support breeding seabirds. Important species include grey seal, peregrine falcon and chough.

Around the sea cliff top edges and on Garn Fawr, is semi-natural heathland mosaic vegetation and bracken. The hinterland is predominantly pasture, with some arable. Field boundaries are generally low and scrubby hedgebanks or stone wall field boundaries.

Cultural influences

There are many prehistoric coastal forts here. The lighthouse emphasises the linkages to the shipping lane that is the Irish Sea and the need to protect shipping leaving and entering Fishguard.

The great hillfort of Garn Fawr, a Scheduled Ancient Monument (PE065) occupies a prominent craggy outcrop and dominates all approaches. A complex set of stony banks and ramparts formed of loose scree, attest to its long and complex history. Dinas Mawr is a nearby promontory fort (SAM - PE075). Garn Fechan is a smaller fort nearby (SAM - 471).

Scheduled monuments include:

- PE029 (promontory fort): community: Llanrhian
- PE036 (chambered tomb): community: Mathry
- PE038 (hillfort): community: Mathry
- PE065 (Garn Fawr hillfort): community: Pencaer
- PE075 (Dinas mawr promontory fort): community: Pencaer
- PE376 (mill): community: Llanrhian
- PE382 (industrial buildings): community: Llanrhian
- PE391 (promontory fort): community: St David's
- PE392 (promontory fort): community: St David's
- PE393 (promontory fort): community: Mathry
- PE471 (Garn fechan hillfort): community: Pencaer
- PE530 (radar station): community: Pencaer
- PE542 (promontory fort): community: Pencaer
- PE549 (promontory fort): community: Llanrhian

This area lies within the Pen Caer: Garn Fawr and Strumble Head Landscape of Special Historic Interest. Garn Fawr is notable in being one of the first British hillforts to be archaeologically surveyed, by Edward Lhuyd around 1700.

There are two wrecks noted in the area- the Dan Beard, an American ship, at the foot of the cliffs at Penbwchdy and probably the Canadian Calberga off March Mawr.

John Piper, the artist is associated with this area, having lived in a cottage by Garn Fawr. He painted the coast, including Garn Fawr, and the sea. There is a memorial to Dewi Emrys who wrote the poem 'Pwll Deri' at Pwll Deri.

The car park at Strumble Head is a popular visitor destination, including watching birds, whales and seals. There is a car park and viewpoint west of Garn Fawr, on the Coast Path and a car park to the east. Both these are only accessible by narrow winding roads. Apart from these two points the shoreline is fairly inaccessible although there is a path down to Pwll Deri. Cliff climbing takes place between Pwll Deri and Penbwchdy. There are two popular dive sites - just north of Pen Bach islet and around Ynys Melyn. It is a popular, rugged stretch of coast for walking and Garn Fawr has panoramic views.

Fishing in the area comprises of set nets, prawn, lobster and crab potting and there is potential for light otter trawling. A coastal cruising route links Fishguard to Milford Haven and points south and also across to Ireland. Carreg Onnen Bay can give protection and anchorage to sailing vessels in easterly winds. The area has a Round 24 Oil and Gas licence.

Aesthetic, perceptual and experiential qualities

This is a rugged large scale seascape, focused on sea views with an open, exposed character and strong sense of place. The vertical or steeply sloping cliffs have rough and angular appearance, and very dramatic, particularly around Penbwchdy, with associated offshore small islands and islets. The coastal edge is highly unified with a backcloth of small scale treeless pastoral landscape rising to the imposing outcrop of Garn Fawr. On passage from Ireland Garn Fawr can be seen well before Strumble Head lighthouse.

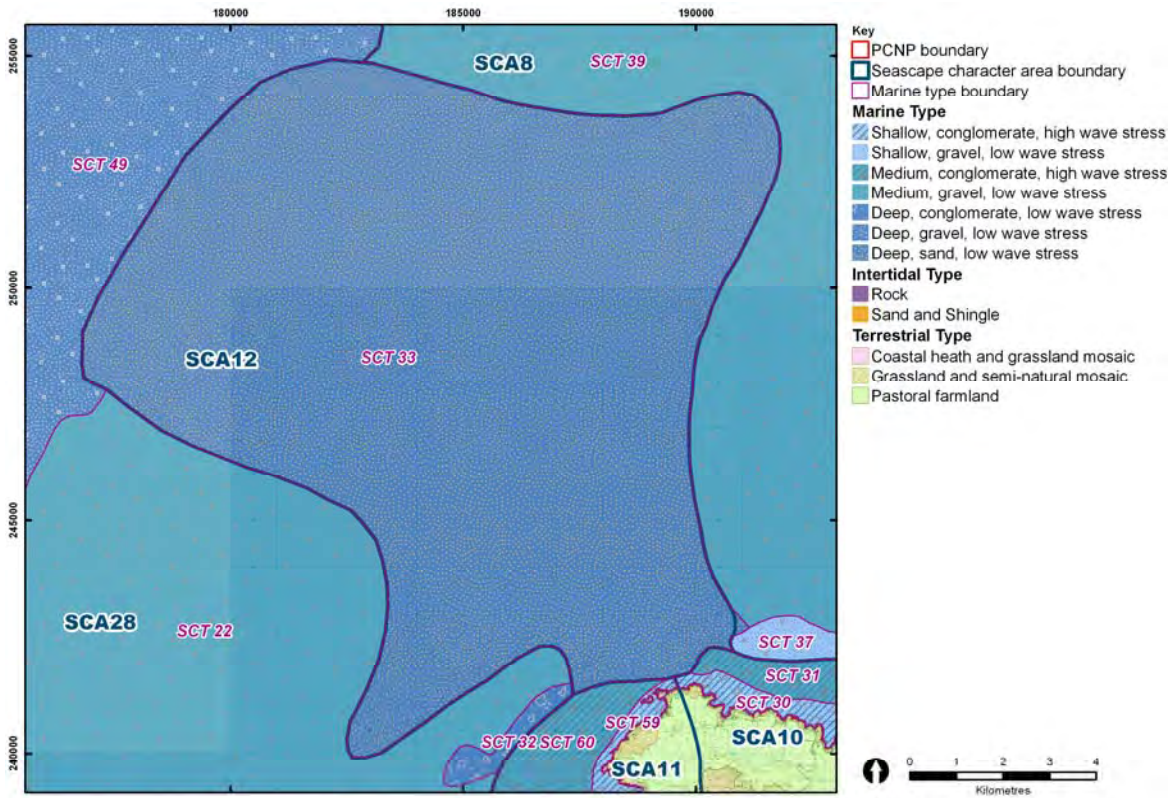
Whilst remote and tranquil, strong winds can make this a wild and exposed coastline especially to westerly winds. There is a general lack of light pollution.

Long views to the west are possible from many points along the coastal path, as far as Carn Llidi on a clear day, with many visitors enjoying sea views and watching for seals, birds and whales from the car park at the lighthouse. Those climbing the hilltops have panoramic views to the

south as well as north.
Cultural benefits and services
The area contributes towards leisure and recreational services in the form of remote places to walk and appreciate nature, to natural heritage in the form of the rugged unspoilt coastline, and to spiritual services in respect of the sense of spaciousness and connection to nature.

Forces for change								
Summary	Key forces for change							
<p>Slow erosion of hard coastal cliffs, more in the back of the bays. Shoreline management plan states 'do nothing'.</p> <p>Strumble Head as a visitor attraction leads to congestion and wear of small lanes running through the area and car park at times.</p> <p>Wear and erosion to Coast Path, associated car parks and path upto Garn Fawr.</p> <p>Potential pressure for holiday accommodation and visitor facilities at villages.</p> <p>Reducing agricultural management/grazing leading to loss of pasture, increasing areas of scrub and bracken, and reduced management of hedgebanks, leading to a change in character.</p> <p>Round 24 Oil and Gas licence area may result in exploration and subsequent extraction with associated effects.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Rugged, remote and natural character of the coastline, with sparse settlement.</p> <p>Rural pastoral character of the hinterland, with rocky outcrops and narrow winding lanes.</p> <p>Wide views westwards from coast and Garn Fawr.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p> <p>General lack of light pollution.</p>				<p>Car Park at Strumble Head.</p> <p>Passing ferries.</p>				

No: 12 Seascape Character Area Name: **Strumble Head deep water**



SCA 12: Strumble Head deep water



Sea beyond the Strumble Head lighthouse [taken from SCA 11]



Sea with ferry leaving area for waters closer to Fishguard [taken from SCA 10]

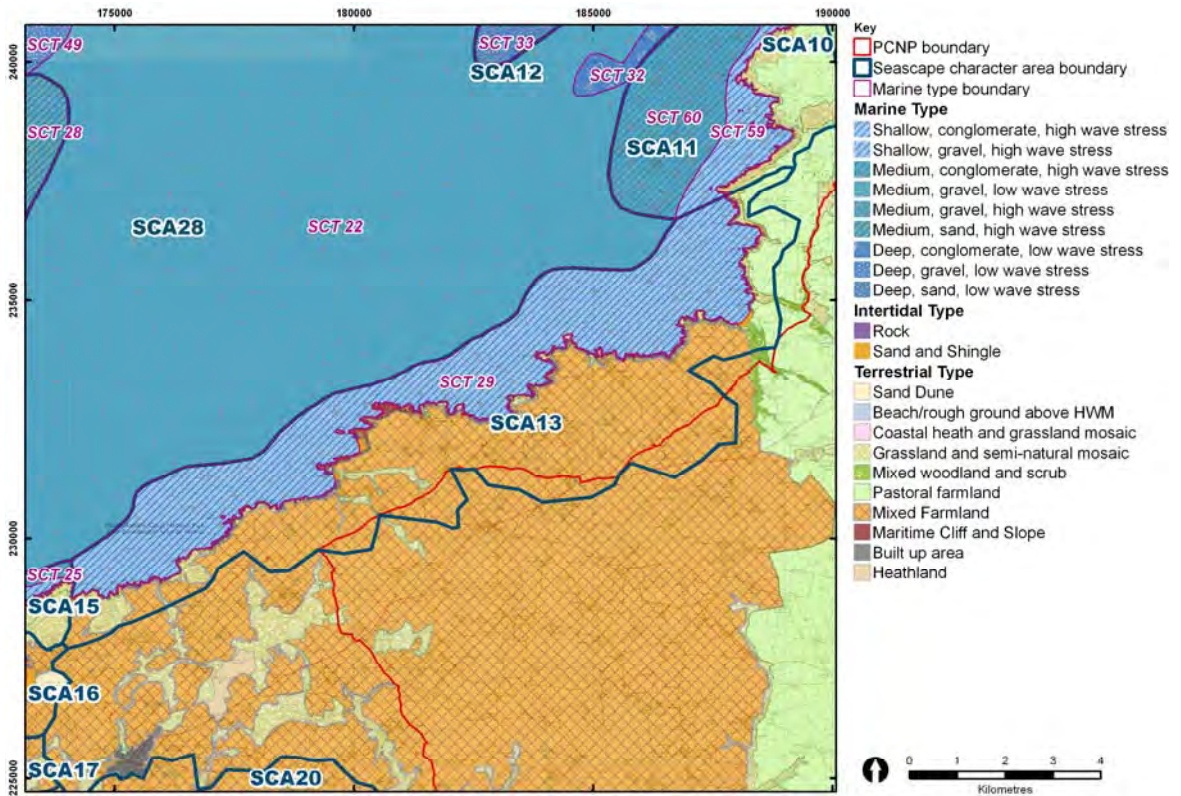
Summary Description

The area of deep water is located around 400m off Strumble Head at its closest point to the coast and runs out to sea to the north east. It has low wave stress and a gravelly sand seafloor. It is crossed by the Fishguard-Rosslare ferry and by sailing and motor cruisers passing between South Wales and North Wales or Ireland.

Key Characteristics
<ul style="list-style-type: none"> • Simple area of deep water with low wave stress and gently sloping gravelly sand seafloor close to Strumble Head to the south east. • One wreck only in the area. • Traversed by ferry, commercial and leisure cruising boats. • Forms part of the unspoilt and unbroken sea vista from Strumble Head, Garn Fawr and Coast Path contributing to the setting of the coast. • Tranquillity, wildness and remoteness of open water.
Physical Influences
<p>Deep water (60-100m), gently sloping (<1°) gravelly sand sea floor in area of slack seas exposed to low wave stress. Sea floor sediments overlies bedrock of east-north east - west-south west striking Lower Palaeozoic mudstones and sandstones, Permian mudstones and sandstones, and Jurassic sandstones and limestones.</p>
Cultural influences
<p>The historic routes/linkages associated with this area include both the coastal trade and the history of maritime relations along the western seaways. As a relatively hazard free deepwater area there is just one wreck recorded- the Moyallon, a British World War 1 type coaster, sunk in 1924.</p> <p>The area is crossed by the Fishguard-Rosslare ferry and possibly by some commercial shipping. There is a motor and sailing cruising route linking points south to North Wales across Cardigan Bay. Fishing in the area comprises of set nets inshore, whelk, lobster and crab potting and there is potential for light otter trawling. The area has a Round 24 licence for oil and gas.</p>
Aesthetic, perceptual and experiential qualities
<p>The area has not been visited, although it has been viewed from Strumble Head. It would be expected that the experience of the area would change significantly in relation to the coast ranging from the coast being dominant around 400m distance to the coast being a distant single dimensional line on the horizon with simple colours line at the outer edges of the area. Pen Caer and Strumble Head lighthouse would be the main landmarks. The latter would not be apparent at the outer edges except at night as the main light source. Closer in, detail of the lighthouse and landscape will be apparent.</p> <p>The area has a simple, consistent and unified character at a vast scale and a sense of openness, isolation and exposure. The qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this area although this would be reduced by the ferries and other commercial and recreational traffic.</p> <p>From the mainland, the area forms an important part of the superb vistas from Strumble Head, Garn Fawr and the Coast Path as part of the wild, unspoilt west coast of Wales.</p>
Cultural benefits and services
<p>The area contributes significantly towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of the unspoilt views from the coast, and to cultural and spiritual services in respect of the sense of remoteness and tranquillity and connectedness with nature</p>

Forces for change								
Summary	Key forces for change							
<p>Limited forces for change in deep water marine areas.</p> <p>Possible increase in use from commercial or leisure shipping.</p> <p>Potential for Round 24 oil and gas use.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity				
<ul style="list-style-type: none"> Forms part of the unspoilt and unbroken sea vista from Strumble Head, Garn Fawr and Coast Path contributing to the setting of the coast. Tranquillity, wildness and remoteness of open water. Traversed by ferry and leisure cruising boats. Pembrokeshire Coast Path as a sensitive receptor. 				<ul style="list-style-type: none"> Traversed by ferry and commercial shipping Lighthouse nearby with light at night. 				

No: **13** Seascape Character Area Name: **Penbwchdy to Penllechwen**



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SCA 13: Penbwchdy to Penllechwen



Porthgain harbour markers looking north east towards Strumble Head



Porth Ffynnon- west of Porthgain- with quarry building



Carn Penberry from Carn Llidi looking north east

Summary Description
<p>This exposed seascape area is located on the northern coast of the St David's peninsula. It is a highly indented coast of cliffs and rocky shores with a few small sandy beaches and coves and a couple of small harbours. The coast has significant nature conservation interest and is the focus for much low key recreation and tourism. Settlement is limited to very small villages, often related to the area's quarrying and industrial past, sparse rural farmsteads and dwellings and a few caravan and campsites.</p>
Key Characteristics
<ul style="list-style-type: none"> • Indented rocky coast with cliffs up to 50m high interspersed with steep narrow valleys, harbours and small sandy coves and a few beaches. • Coastal edge with heath and coastal grassland. • Open pastoral landscape gently sloping to the coast with some medieval strip fields and low cut hedgebanks. • Valleys with woodland and scrub on steep sides • Industrial heritage at Porthgain and Abereiddi derived from quarrying and other trade. • Exposed sea with rocky coast gives feeling of exposure and limits sea-based recreation activities to close to the coast such as kayaking. • Coast Path along length of coast. • Vehicular access to coast limited to a few locations usually associated with small settlements such as Abercastle with its harbour. Light pollution is very limited. • Unspoilt open views out to sea and long views along coast to major headlands to north east and south west.
Physical Influences
<p>This long stretch of north west facing coastline comprises small headlands between narrow river valleys opening into small bays. The north east-south west striking Ordovician bedrock is mostly shales, with some igneous intrusions, exposed in coastal cliffs 40-50m high and at Carn Penberry to the south. The land slopes gently from the cliffs to a crowned ridge just inland with views of the sea. There are numerous caves, blowholes and gullies. Historical coastal quarrying has cut back into the cliffs, for example forming the Blue Pool at Abereiddi and deep indentations at Porthgain. The intertidal zone is dominantly rocky shores (88%), with sand in small bays (12%). The coast is exposed to wind and wave erosion through abrasion and hydraulic action. Sediment is carried along swash, with little net longshore drift.</p> <p>Above the Ordovician shales with some igneous intrusions, the shallow marine seafloor (<30m) of sandy gravel slopes gently (<1°) from bays to moderately (1-10°) next to rocky headlands. The seas are exposed to high wind and wave stress. Tidal currents are set north east and south west along the line of the coast. Rough waters form off headlands. Tidal flow is <2.5 knots.</p> <p>The area west of Abereiddi is covered by the Pembrokeshire Marine SAC, the coast is designated as the St David's SAC and Strumble Head to Llechdafad SSSI to the north east and St David's Peninsula Coast SSSI to the south west. There are a series of smaller SSSIs eg Afordir Abereiddi and Abermawr and some parts are also noted as important bird areas- the Pembrokeshire Cliffs. The waters around Ynys Deullyn to the west and Aber Mawr to the east, including the harbour at Abercastle are of nature conservation interest. The important habitats include sponge and anthozoan communities on sub tidal rocks and Ross 'coral'. Other species include grey seals and kelp forests.</p> <p>The undulating hinterland is predominantly improved pasture in a range of field sizes and patterns, including medieval strip fields, with low cut hedgebanks and dry stone walls. Trees and scrub are mainly found on the valley sides and bottoms. Semi-natural heath and coastal grassland lies on the coast edge and in the abandoned workings.</p>
Cultural influences
<p>The area has links with coastal trade throughout west Wales and with Ireland. Many of Pembrokeshire's Iron Age promontory forts and defended enclosures are located on this stretch</p>

of coast. They make good use of the defensive potential of the sea-cliffs.

In more recent times this area has evolved as a seascape of small harbours and quays for both export of minerals and for the trade in foodstuffs. Slate was quarried at a number of coastal locations, nowhere more dramatically than at the coastal quarry at Abereiddi where the remains of bastions and an engine-house survive. Porthgain preserves a remarkable coastal industrial complex that includes slate and stone quarries, industrial tramways, a harbour and an extensive brickworks, which used to ship to Llanelli and Dublin. In latter years dolerite road stone was exported from the harbour with the associated brick built hoppers still a feature by the harbour. A corn mill survives in the harbour at Abercastle. Trefin was founded by bishops of St David's with a 13th century palace and later grew with sea trade and quarrying.

Scheduled monuments include:

- PE029 (Castell Coch promontory fort): community: Llanrhian
- PE036 (Carreg Sampson chambered town): community:
- PE038 (Ynys y Castell hillfort): community: Mathry
- PE260 (round barrow): community: Llanrhian
- PE376 (mill): community: Llanrhian
- PE382 (quarry buildings): community: Llanrhian
- PE391 (Castell Coch promontory fort): community: St David's
- PE392 (Caerau promontory fort): community: St David's
- PE393 (Castell Coch promontory fort): community: St David's
- PE542 (Carreg Golchfa promontory fort): community: Pencaer
- PE549 (Porth Egr promontory fort): community: Llanrhian

Part of this area lies within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest. Porthgain and Trefin are Conservation Areas.

Tregwynt is famous as the seat of the Harries family, who held a ball as the French landed four miles away. Tregwynt woollen mill is a centre for contemporary design. A current artist, John Knapp Fisher, has painted some of the area including Porthgain. There are a few wrecks spread along this coastline with the main concentration around Aberiddi. Here there are the boats from the late 19th century including the Musgrave [1892], Baron Ardrossan [1898] and, to the east, the Ragna [1900] and, to the west, the Amazon Ense [1881].

Settlement is limited to very small villages, often related to the area's quarrying and industrial past, sparse rural farmsteads and dwellings and a few caravan and campsites set back from the coast. Porthgain, Trefin, Abereiddy and Abercastle are the main settlements.

Kayaking is present all along the coast from Pwllcrochan to Abereiddy. Sea rowing is also popular out of Porthgain. Surfing occurs on beaches of Aber Mawr, Ynys Barry and Abereiddy. Diving, snorkelling and inshore fishing take place off Abercastle beach and slipway, and from boats going out from Porthgain which also has a small harbour and slipway with its own small inshore fishing fleet. There are also popular dive sites around Llech Usaf, Llech Isaf and Llech Ganol areas offshore as well as just off the Abereiddy Promontory. Sea angling from a boat is also practised around the coast of Ynys Barry and from the beach at Abereiddy. Sailing is limited due to the rocky nature of the coast, limited access and harbours and character of the sea.

There are good beaches at Pwllcrochan, Aber Mawr, Aber Draw, Porthgain, Ynys Barry and Abereiddy, popular for general beach activities. Coastal walking along the Pembrokeshire Coast Path continues to be popular. Climbing is found along the coastal cliffs, mainly from Penbwchdy to Trwyn Llwyd and around Llech Dafad, Penmorfa, Pwll Whiting and Pwll Long. There are car parks at Abercastle, Porthgain and Abereiddy as well as one inland at Trefin. Porthgain has a pub and restaurant and is a popular destination and minor honeypot for visitors to the area.

Fishing in the area comprises of set nets, lobster and crab potting and there is potential for light otter trawling. The area is covered by the Round 24 Oil and Gas Licence.

Aesthetic, perceptual and experiential qualities

This is a highly indented and rocky coastline which gives a great variety of vistas for users of the Coast Path who negotiate the exposed and open clifftops as well as the incised and sheltered valley mouths, harbours and coves. The sea is at a vast scale contrasting with the relatively

small scale and fine grain of the coastal edge with rough textured jagged rocks.

There are open unspoilt views out to sea with no discernible features and long views along the indented coast from the cliff tops as far as Strumble Head and Garn Fawr to the north east and Carn Llidi and St David’s Head to the south west.

Trefin as the only elevated settlement along the coast is a landmark from the sea. Light pollution is there limited with the light from Strumble Head the main source. The coast has a strong influence on the coastal waters, although the indentations apparent looking along the coast appear flattened at any distance from shore. The sea is exposed to westerlies and winds from the north. Some beaches such as Traeth Llyn at Ynys Barry which faces west are very exposed.

The smells of seaweed and fishing pots are apparent at harbours such as Porthgain.

The remains of quarrying and other small scale historical industry convey a strong sense of place especially apparent between and including Abereiddy and Porthgain with distinctive features like the harbour markers at the latter.

The coast has a high degree of naturalness, a sense of tranquillity and wildness. In the evening the light from Strumble Head is apparent in the distance.

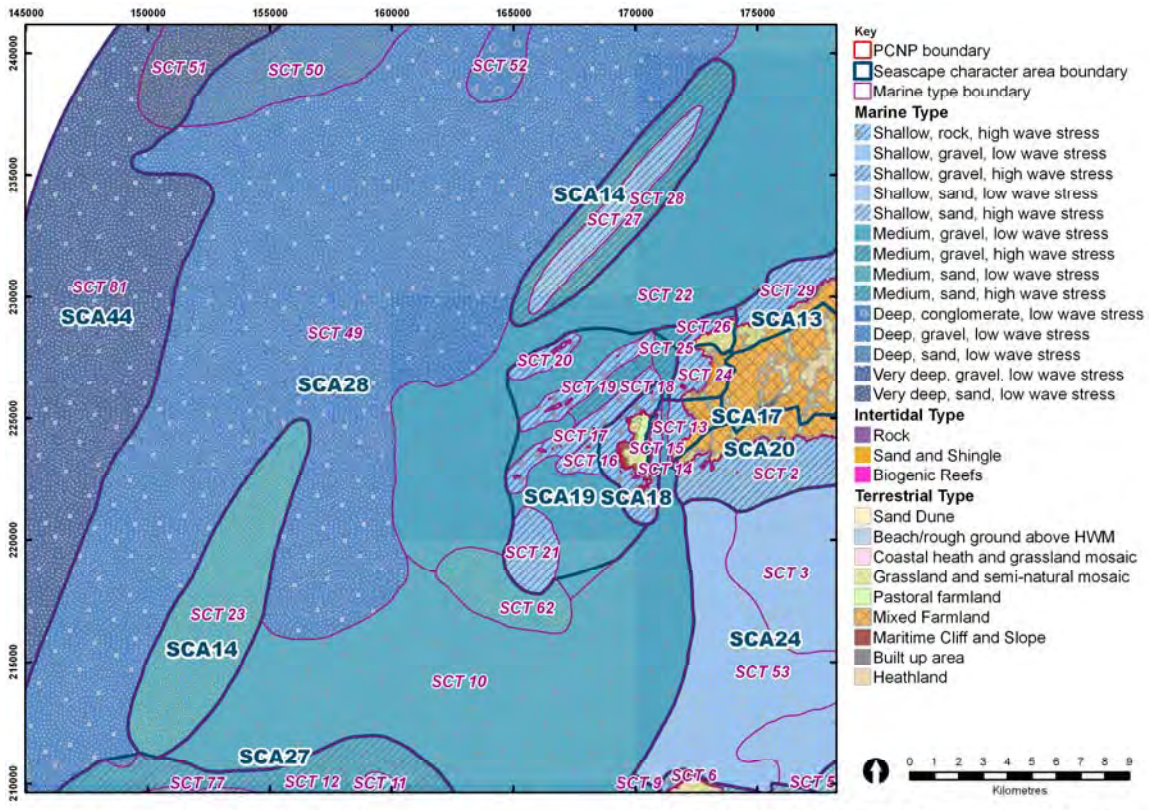
Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of remote places to walk and appreciate nature, to natural heritage in the form of the rugged unspoilt coastline, and to cultural and spiritual services in respect of the sense of place related to industrial heritage, a sense of spaciousness and connection to nature.

Forces for change								
Summary	Key forces for change							
	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
Slow erosion of rocky headlands, more in back of bays. Shoreline management plan states mostly ‘do nothing’ and locally ‘hold the line’ (e.g. Porthgain) or ‘hold the line/retreat’ (Abereiddi). There is little net longshore sediment drift.	Coastal Splendour							
Proposed ICZM may limit the recreational use of Abercastle harbour.	Islands							
Visitor pressure at limited coastal access points such as Porthgain and Abereiddi including parking.	Diversity of Landscape							
Visitor use of Coast Path including erosion near main access points.	Remoteness, Tranquillity and Wilderness							
Deterioration of industrial heritage features.	Diverse Geology							
Effects of second and holiday homes on settlement character.	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					

Key sensitivities	
Factors that contribute to sensitivity	Factors that detract from sensitivity
<ul style="list-style-type: none"> • Indented rocky coast with cliffs with natural character. • Coastal edge with heath and coastal grassland. • Historic patterns including strip fields and hedgebanks and industrial heritage. • Coast Path along length of coast as a sensitive receptor. • Limited vehicular access means much of the coast is tranquil. • Unspoilt open views out to sea and long views along coast to major headlands to north east and south west. • General lack of light pollution. 	<p>Presence of caravan parks set back from the coast.</p>

No: 14 Seascape Character Area Name: **Western sand and gravel bars**



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SCA 14: Western sand and gravel bars



View of northern component of area from Carn Llidi in SCA14 with SCA13 and SCA28 in middle ground

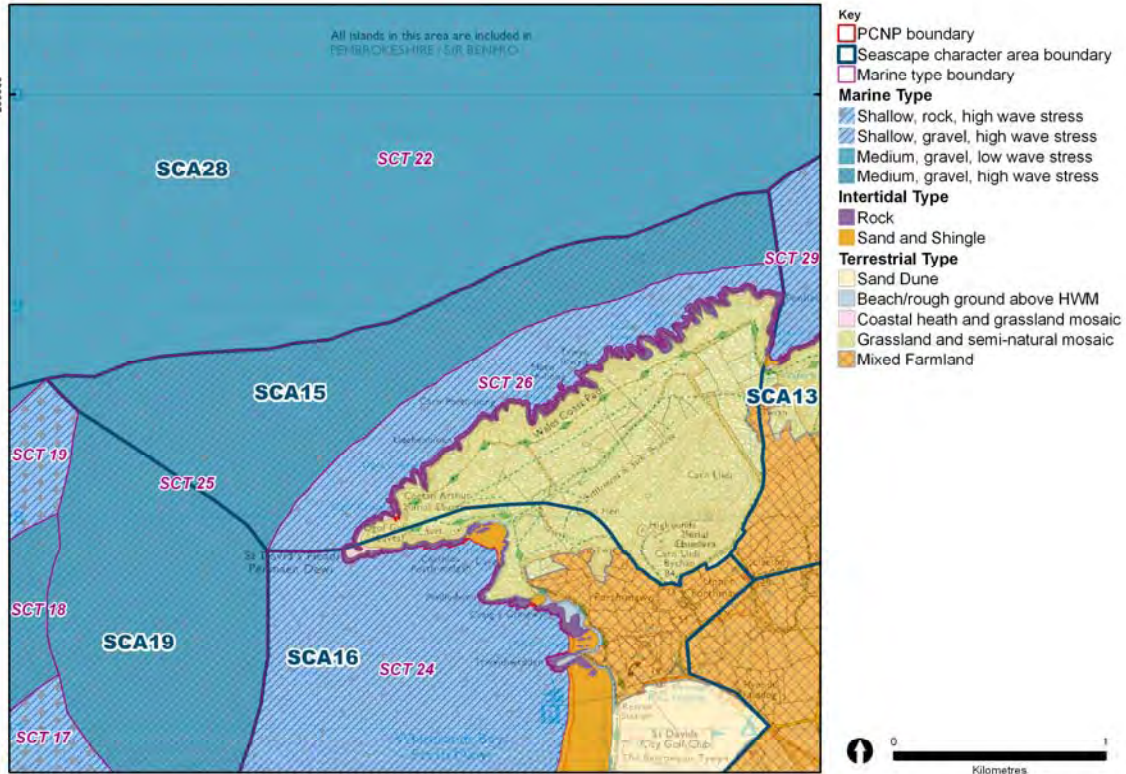
Summary Description

The area comprises sea over two offshore bars of gravelly sand running parallel to the coast reflecting tidal flows. They are located north west of St David’s Head and west of St Bride’s Bay/north of the Smalls respectively. These are relatively shallow compared to surrounding seabed but only the north is shallow at around 10m. They are exposed to the south westerlies but have no recorded wrecks.

Key Characteristics
<ul style="list-style-type: none"> • Two elongated offshore bars of gravelly sand lie on the seabed parallel to the coastline in line with tidal stream and shallower than surrounding seas. • Northern bar has high wave stress and reaches 10m depth. • Southern bar has low wave stress and reaches 50m depth. • There are no wrecks in the area. • Part in the Pembrokeshire Marine SAC. • The area is used for sea angling and fishing and commercial ships would cross the southern area. • Land would be apparent to the east, especially from the northern area and the areas form part of the unspoilt view from the coast. • Open sea areas with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure. • Both area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.
Physical Influences
<p>Two offshore bars of gravelly sand, elongate parallel to the coastline and set of tidal currents (north east-south west offshore from the Bishops and Clerks; north-north east - south-south west north of Grassholm and the Smalls) and forming shallows (<10m in 60 m depth area; <50m in 70m depth area). The very shallow, more northerly bar has a moderate slope (1-10°) into the surrounding sea floor and is covered by seas exposed to high wave stress. It overlies Lower Palaeozoic faulted against Permo-Triassic sandstone bedrock. The deeper bar has a gentler slope (<1°) and is covered by seas of low wave stress. The underlying bedrock is Upper Palaeozoic sandstones and mudstones. Sediment in the very shallow bar may be affected by storm turbulence.</p> <p>The southern part of each area is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>Association are with the traditions of maritime trade but there are no recorded wrecks in these areas. Sea angling takes place here. Fishing in the area comprises of set nets, whelk, lobster and crab potting and potential for light otter trawling. The area has a Round 24 licence for oil and gas.</p>
Aesthetic, perceptual and experiential qualities
<p>These two areas have not been visited. The northern area lies 5km off the nearest coast and the southern area 13km. It would be expected that the higher hills such as Carn Llundain or Carn Llidi and the tops of cliffs would be apparent as a single dimensional line on the horizon in moderate to good or better visibility. However, the feeling in the area would be that of open sea away from the influence of land, other than this visual connection.</p> <p>The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The areas are exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea.</p> <p>The number of leisure craft will be limited but there may be occasional views of commercial vessels using the shipping ways to the west or at anchor to the east of the southern area around St Bride's Bay.</p>
Cultural benefits and services
<p>The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of an unspoilt marine area of sea and seabed, and to spiritual services in respect of a sense of wildness and connectedness with nature.</p>

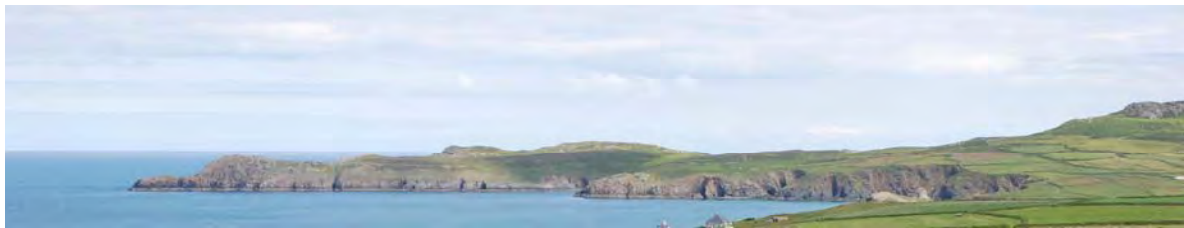
Forces for change								
Summary	Key forces for change							
<p>Limited forces for change in deeper water settings.</p> <p>The area has a Round 24 licence for oil and gas and this would change the character of the area if exploited.</p> <p>There may be pressure for sand extraction in the shallower depth sand bar in the future.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity	Factors that detract from sensitivity							
<p>Simple, open, wild and remote character with views of the western coast and islands.</p> <p>Forms part of the open setting for of the western coast and islands overlooked by the Pembrokeshire Coast National Park contributing to the sense of remoteness and wildness in these areas.</p> <p>Marine nature conservation value of part of the areas.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p>	-							

No: 15 Seascape Character Area Name: St Davids Head



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SCA 15: St Davids Head



St David's Head looking across Whitesands Bay from Carn Rhosson



View west from Carn Llidi showing World War 2 remains

Summary Description
<p>Exposed rocky headland and northern shore on the western tip of St David's peninsula with Carn Llidi as a backcloth. Rock outcrops and semi-natural vegetation surround historic features. The area has a wild character and there are unspoilt panoramic views, popular with walkers. There is no easy access to the sea.</p>
Key Characteristics
<ul style="list-style-type: none"> • Prominent, exposed rocky headland of wild character with cliffs and rocky shores on the western tip of St David's peninsula backed by the highly prominent landform of Carn Llidi. • Exposed north and west facing seas. • Important wildlife in waters and coastal edge. • Rock outcrops, stone features between semi-natural dry and wet coastal heath and grassland with bracken encroaching in places. • Historic features including promontory fort, settlement remains, walls and ancient field boundaries. • The absence of settlement mean the area is dark with no light pollution. • Superb, unspoilt views to north to the open sea and west and south to islets and islands. • The view from Carn Llidi to Ramsey island is an iconic Park view. • Popular for walkers along Coast path and visitors to Whitesands Bay due to feeling of remoteness, and tranquillity.
Physical Influences
<p>This prominent rugged rocky coastal headland runs north east-south west from Penllechwen (53m aod) to St David's Head (49m aod) and rises inland to the rocky summit of Carn Llidi (179m aod). The rocks are north east-south west striking Ordovician gabbros intruded into black shales, which are exposed in the high, jagged rocky cliffs indented by small coves. Intertidal areas are high energy rocky shores. The coast is highly exposed to wind and wave erosion through abrasion and hydraulic action.</p> <p>The bordering sea floor of sandy gravel covering the intrusive succession slopes moderately (1-10°) north westwards. The seas and cliffs are exposed to high wind and wave stress. Tidal currents are set north east and south west, with rough waters off the headland where an eddy forms. Tidal flow is <3 knots.</p> <p>The sea and intertidal areas are covered by the Pembrokeshire Marine SAC. The cliffs are designated as the Pembrokeshire Cliffs SSSI and they are also an Important Bird Area as defined by RSPB. The area is part of a Special Protection Area for Chough. Grey seals can be seen at the base of the cliffs and porpoises frequently swim through these waters.</p> <p>The headland itself is mainly bare rock due to the exposure but the rest of the peninsula and Carn Llidi are covered predominantly with semi-natural dry and wet coastal heath and grassland with bracken encroaching in places. The area supports chough, peregrine falcon, rare invertebrates and lichens. There are many rock outcrops and exposures.</p>
Cultural influences
<p>This headland forms one of the great landmarks of the Western Atlantic sea-ways known to classical antiquity. The area was identified as <i>Octapitarum promontorium</i> in Ptolemy's <i>Geography</i>, suggesting Roman familiarity with the area. Clawdd y Milwyr, rather than a small promontory fort, may be one component of a massive defended complex indicated by defensive walls inland enclosing about 25 ha of headland. The field systems date from Prehistory and may have survived in use into the Medieval period. There are a few wrecks recorded on the rocky coast including the Frederick, sunk in around 1832, the Nimrod in 1860 and the Glenisla in 1886. An aircraft, a Martin B-26 Marauder, crashed into the side of Carn Llidi in dense fog in 1943 and a memorial has been erected.</p> <p>Scheduled monuments include:</p> <ul style="list-style-type: none"> • PE071 (Clawdd y Milwyr promontory fort): community: St David's (also partly in SCA16)

- PE093 (Penmaen Dewi field system): community: St David's (also partly in SCA16)
- PE042 (chambered tomb): community: St David's
- PE054 (Coetan Arthur chambered tomb): community: St David's

This area lies within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest.

Graham Sutherland, the artist, painted many pictures of the coves and other parts of St David's Head.

The whole area is semi-natural used for rough grazing for ponies, cattle and sheep. Remnant walls remain from buildings, field boundaries and fortifications. Cliff-top walking along the Pembrokeshire Coast Path is popular due to the proximity to Whitesands Bay and its carpark. Climbing and coastering are popular along the coast. Sea angling occurs off the rocks of St David's Headland. Cruising motor boats and yachts pass the headland if on passage through Ramsey Sound.

Fishing in the area comprises of set nets, lobster and crab potting [mainly] and potential for light otter trawling. The area has a Round 24 licence for oil and gas.

Aesthetic, perceptual and experiential qualities

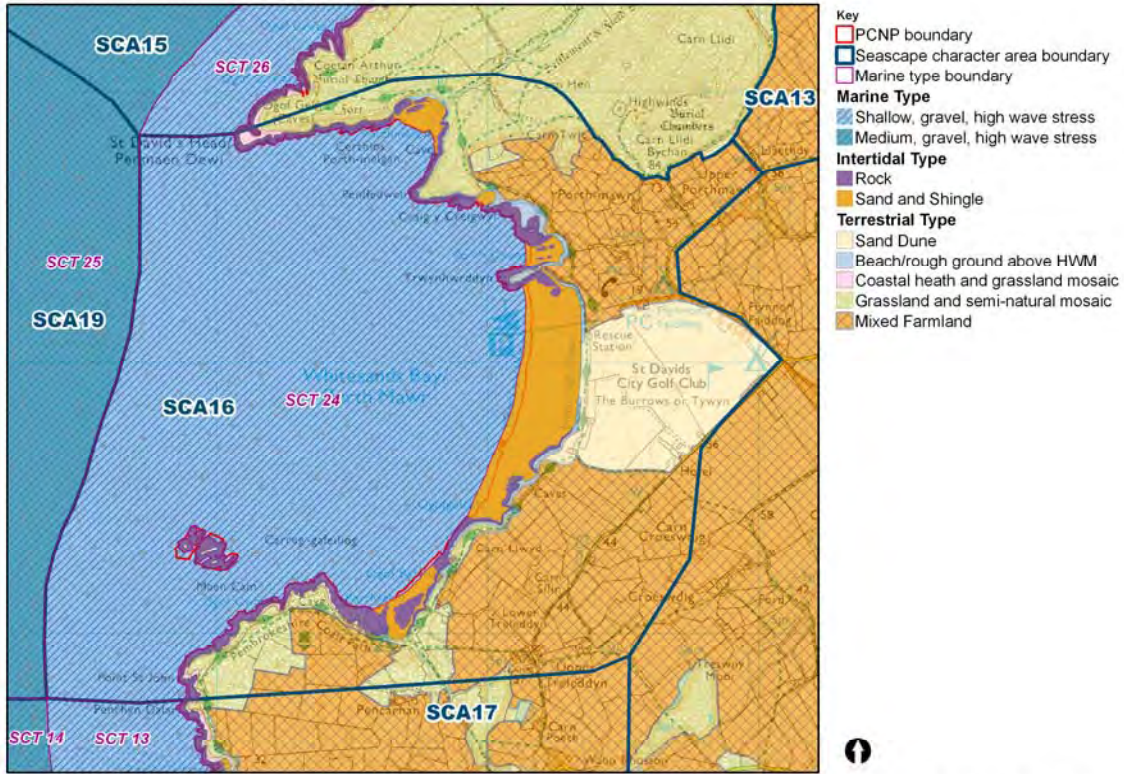
The peninsula is highly exposed jutting out into the sea with a wild character feeling large scale and open. The cliffs and rocky shores are dramatic, jagged and angular. There are strong sea smells and wind exposure in most places, with crashing noise of waves in rougher seas. The land has a rough, rich and diverse texture of rock outcrops and stone walls interspersed with heather, bracken and rough grasses. There are unspoilt panoramic and wide views out to open sea, to the Bishops and Clerks and across Whitesands Bay to Ramsey Island. The latter is an iconic Park view. Tranquillity can be reduced in summer by the number of walkers who traverse the Coast Path and other paths. However, overall there is a high degree of naturalness, remoteness and tranquillity along the coast.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of wildlife watching and walking, to natural heritage in the form of the unspoilt coast, geological and nature conservation importance, and to cultural and spiritual services in respect of the diverse history and a strong sense of space and escape.

Forces for change								
Summary	Key forces for change							
<p>Slow erosion of resistant cliffs. The shoreline management plan states 'do nothing'.</p> <p>Coasteering is subject to increased scrutiny for habitat impact.</p> <p>Walkers erode Coast Path and other footpaths.</p> <p>Tidal energy generation if implemented could significantly affect the character of the area.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Steep indented coastline with cliffs and coves forming a natural coastal edge.</p> <p>Semi-natural heath/grassland vegetation.</p> <p>Historic character and significance of the features including monuments and field boundaries/patterns.</p> <p>Pembrokeshire Coast Path is a sensitive receptor.</p> <p>Lack of light pollution.</p>					<p>Presence of visitors in season.</p>			

No: 16 Seascape Character Area Name: **Whitesands Bay**



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SCA 16: Whitesands Bay



View of the Bay and Ramsey Island from Carn Llidi



St David's Head looking across Whitesands Bay from Carn Rhosson

Summary Description
<p>The bay is located just south of St David's Head on almost the westernmost point of the mainland peninsula in Wales. It is a wide sandy bay flanked by rocky headlands which is very popular for surfing and swimming and beach activities. The coast has a historic landscape pattern especially to the north with very limited settlement.</p>
Key Characteristics
<ul style="list-style-type: none"> • Wide west facing bay with wide and gently sloping sandy beach with sandy coves to the north west and south interspersed with jagged cliffs and indented rocky foreshores. • Historical features, scattered rural settlement and landscape pattern of old hedgebanks especially around Carn Llidi. • Semi-natural heath and grassland on coastal edge. • Backcloth of Carn Lidi and St David's Head to the north. • The headlands either side frame fine views out to Ramsey Island (an iconic Park view) and the Bishops and Clerks as well as across the bay. • Popular beach with moderately large waves for surfing and swimming and with beach activities. • The sea is partially sheltered by Ramsey Island and so within the bay the waters can be calm. The bay is used for kayaking. • The Coast Path runs around the edge of the bay with fine views. • A small links golf course lies behind the dunes and caravan parks and camping sites are limited but evident.
Physical Influences
<p>This wide west-facing sandy bay is cut into a north east-south west striking succession of Precambrian to Ordovician rocks. Precambrian volcanic tuffs are overlain in the south of the bay at Ogofgolchfa by conglomerates at the base of an extensive Cambrian sandstone/siltstone succession exposed northwards, overlain at the promontory Trwynhwrddyn by black Ordovician shales that make up Pwlluog Bay. Cliffs are mostly <30m around the bay. At the southern end of the bay a stretch of submerged rocks leads out to the small rocky islet of Carreggafeiliog (3m aod). The sandy intertidal areas of the bay (60%) are crossed by areas of rock foreshore that strike across the sands (40%). While rocky areas are subject to wind and wave erosion through abrasion and hydraulic action, the beach is a depositional environment where sediment is transported through saltation, traction and suspension. There is some dune development and net longshore drift.</p> <p>The shallow (<30m) sea floor of sandy gravel across the bay slopes gently (<1°) westwards above the Precambrian to Ordovician succession dominated by sandstones and shales. The sea is exposed to high wind and wave stress, with risk of tidal rips. The gently sloping west facing beach is known for moderately large waves. Tidal currents set north and south at the edge of the bay. The tidal range is ~4.1m.</p> <p>The sea and intertidal areas are covered by the Pembrokeshire Marine SAC. The cliffs, associated coastal heath and grassland and the beaches are designated as the St David's Peninsula Coast SSSI and they are also an Important Bird Area as defined by RSPB.</p> <p>The coast is a mixture of semi-natural grassland and heath along the cliff tops with relict dunes behind the main beach, now partly used as a small links golf course. The hinterland is predominantly a mix of pasture and rough grazing, with some arable use.</p>
Cultural influences
<p>The bay has long historic linkages with Ireland. Its Welsh name is Porth-mawr or the 'great gateway', used for boat embarkations and arrivals.</p> <p>A possible Roman fort and an early Christian community, the precursor of St David's, may be hidden in the dune system. Whitesands Bay has long been the favoured site for the so-called Roman port of Menapia. It is entirely possible that the great dune system of The Burrows/Y Tywyn on the coast at Whitesands conceals not only a Roman port but also the early Christian</p>

community originally founded by St David, before it was moved inland to the valley of the Alun.

Scheduled monuments include:

- PE071 (promontory fort): community: St David's (partly in SCA15)
- PE093 (field system): community: St David's (partly in SCA15)
- PE012 (St Patrick's chapel): community: St David's

This area lies partly within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest.

Graham Sutherland, the artist, painted pictures of the coves leading to St David's Head.

The beach was traditional embarkation point for Ireland, associated with the cult of St Patrick. There is only one wreck recorded in the area- the Morning Star.

Settlement is limited to a few farmsteads, cottages, isolated 20th century bungalows and houses. Kayaking, surfing, windsurfing and sea angling are all popular activities off Whitesands beach and angling also occurs off the beach at Porthmelgan. Sailing dinghies and jet-skis are also launched from the beach. Some wildlife boat trips launch from the beach to visit the nearby Ramsey Island Bird Sanctuary.

There is a slipway in the middle of this long beach which is popular for general beach activities. There is a car park behind the beach which suffers from overcrowding in the summer. There are several caravan and campsites around this area.

The Pembrokeshire Coast Path runs along the top of the cliff edge and dunes around the bay.

Fishing in the area comprises of lobster and crab potting and potential for light otter trawling. The area has a Round 24 licence for oil and gas.

Aesthetic, perceptual and experiential qualities

The scale of the bay is large but with strong enclosure from St David's Head and the backcloth of Carn Llidi to the north and by the cliffs running to St John's Head along with Ramsey Island to the south. These landforms focus views out to sea towards the Bishops and Clerks rocks and the horizon beyond, and give interest and diversity to the view. The rough textures of the cliffs and rocks contrast with the large sweep of smooth gently sloping beach. The dunes provide a lower backcloth to the east with marram grass. The bay is exposed to westerly winds although the south westerlies are modified by Ramsey Island. The surf crashes on the beach making it an exciting and stimulating environment. This and the broad beach attracts families and surfers alike and the area is very busy and animated in season during the day [and sometimes at night with events] reducing tranquillity, although this increases to the south and west. The bay offers superb views in and out. Detractors include the few isolated mid 20th century houses and bungalows in prominent locations and the caravan and camping sites.

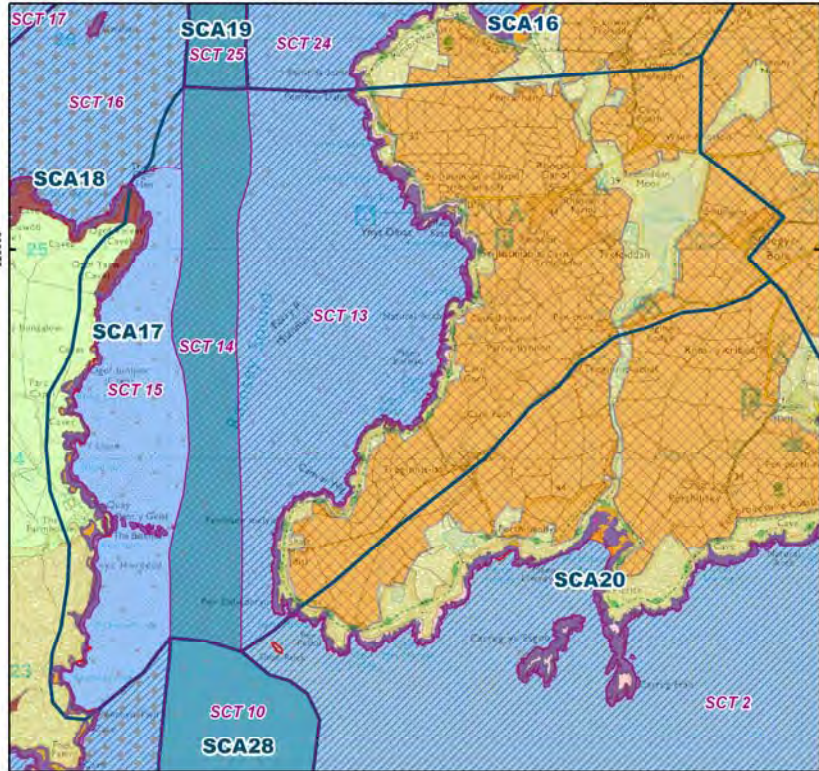
Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and beach including surfing, to natural heritage in the form of the mainly unspoilt coast and beach, and to cultural and spiritual services in respect of its national historic interest and features related to St David's as the 'great gateway'.

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky cliffs, more in bay. Some net longshore sediment drift. The shoreline management plan states 'do nothing' St David's Head-Whitesands, and selectively hold the line/retreat in the Bay.</p> <p>As a honeypot the facilities and beach have to cope with large numbers of visitors.</p> <p>Walkers erode Coast Path and other footpaths.</p> <p>Car parking overflows in fields- visual impact.</p> <p>Congestion and wear on narrow local access road.</p> <p>Camping and caravan sites are noticeable and require strict control to be maintained.</p> <p>Conversions of cottages and farms to holiday homes.</p> <p>Coastering is subject to increased scrutiny for habitat impact.</p> <p>Land management-intensification of use of fields can reduce biodiversity and affect landscape character.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Steep indented coastline with cliffs and coves forming a natural coastal edge.</p> <p>The nature of the headlands either side frame views out to sea.</p> <p>The unspoilt views out to sea and across the bay to Ramsey Island.</p> <p>Simple, open character of the sandy bay focuses views across it making any development highly noticeable.</p> <p>Semi-natural heath/grassland on cliffs.</p> <p>Rural pastoral character of the hinterland and hill backcloth.</p> <p>Historic character of the old farmsteads and field boundaries/patterns.</p>					<p>Presence of occasional 20c dwellings/ structures.</p> <p>Presence of car park, lifeguard station and facilities.</p> <p>Presence of camping and caravan sites.</p> <p>Presence of the golf course.</p>			

<p>Historic significance of the features on St David's Head and the bay.</p> <p>Pembrokeshire Coast Path is a sensitive receptor.</p>	
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No: 17 Seascape Character Area Name: Ramsey Sound



Key

- PCNP boundary
- Seascape character area boundary
- Marine type boundary

Marine Type

- Shallow, rock, high wave stress
- Shallow, gravel, low wave stress
- Shallow, gravel, high wave stress
- Shallow, sand, high wave stress
- Medium, gravel, low wave stress
- Medium, gravel, high wave stress

Intertidal Type

- Rock
- Sand and Shingle
- Biogenic Reefs

Terrestrial Type

- Beach/rough ground above HWM
- Coastal heath and grassland mosaic
- Grassland and semi-natural mosaic
- Pastoral farmland
- Mixed Farmland
- Maritime Cliff and Slope

0 1 Kilometres

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SCA 17: Ramsey Sound



Ramsey Sound viewed from Carn Rhosson



St Justinians with Lifeboat station and moorings



Mainland coast from Ramsey Sound- the lifeboat station is centrally located with Carn Llidi to the left and Carn Rhosson to the right

Summary Description
Ramsey Sound is located at the western end of St David’s Peninsula between Ramsey Island and the mainland. It is a dynamic stretch of water with strong tidal currents and hazardous rocks with very limited settlement but rich in historic and wildlife features and with superb maritime views. It is very popular for wildlife trips and thrill seekers in kayaks and other craft.
Key Characteristics
<ul style="list-style-type: none"> • Ramsey Sound is a north-south tidal sea passage separating the island from the mainland with a central deep channel, strong tidal currents and hazardous rocks. • Indented rocky coasts on both sides with cliffs up to 20-90m high interspersed with one small anchorage on the mainland and small inaccessible sandy coves. • Coastal edge with heath and coastal grassland and bracken with a wild character. • Open pastoral landscape gently sloping to the coast with some medieval strip fields and low cut hedgebanks. • Built form limited to St Justinian’s chapel which is a monument, the lifeboat station, a few dwellings and one farm on Ramsey Island. • St Justinians is the embarkation point for RHIB wildlife boat trips around Ramsey and offshore and the anchorage is popular and busy in season. • The Sound is a dynamic stretch of water used by kayakers and others for white water around the Bitches and other rocks. • There is rich wildlife using the sound and adjacent coasts including porpoises and seals. • The Coast Path runs along the length of the mainland coast. • Vehicular access to coast limited to the one locations with associated car park. • Unspoilt open views out to Ramsey Island, out to sea and long views along coast to major headlands to north east and south west.
Physical Influences
<p>Ramsey Sound (<500-1600m) is a north-south tidal sea passage separating the island from the mainland. The sea floor of sandy gravel, covering north east-south west striking bedrock, can be subdivided into three marine types: a central moderately deep channel (30-60m) is bordered by a moderate to steeply sloping (>10⁰) sea floor towards the east and a moderately sloping (1-10⁰) sea floor to the west. The sea is exposed to high wind and wave stress in the central and eastern types, but to reduced wave stress in the lee of the island. Tidal currents are strong (<6 knots), with gyres and tidal races (around the Bitches) leading to treacherous waters. Horse Rock is the main hazard which dries to 0.9m at low tide. Tidal currents split around Ramsey Island. The tidal range is ~5.5m.</p> <p>The mainland headlands (60-70m aod) are composed of a north east-south west striking succession of Precambrian-Cambrian tuffs, intrusions and sandstones. The Ramsey Island</p>

bedrock, which is much faulted, also includes Ordovician shales, and reaches 134m aod at Carn Llundain. The Sound is bordered by cliffs (25-90m aod), some with caves and coves. Intertidal areas are almost entirely (98%) high energy rocky shores, with minor sandy coves. Wind and wave erosion occur through abrasion, attrition and hydraulic action.

The sea and intertidal areas are covered by the Pembrokeshire Marine SAC. The cliffs, associated coastal heath and grassland are designated as the Ramsey Island and St David's Peninsula SPA and they are also an Important Bird Area as defined by RSPB. Ramsey Island is designated as a National Nature Reserve and SSSI. It is an important reserve owned by RSPB - puffins, seals, auks, razorbills, porpoises and occasional dolphins are all evident. The mainland cliffs are designated as St David's Peninsula Coast SSSI. The strong currents cause the upwelling of organisms from the deep channel which attracts fish and birds/larger predators.

The coast is a mixture of semi-natural grassland and heath along the cliff tops and on outcrops such as Carn Rhosson. The mainland hinterland is predominantly a mix of pasture with some arable use, rough grazing and wetland. Ramsey Islands east coast is mainly semi-natural grassland and heath with bracken.

Cultural influences

Historic use includes Medieval communication between Ramsey Sound and the mainland episcopal estate and pilgrimage. The hinterland's farming economy was supported by coastal trading and fishing.

Clegyr Boia to the west of St Davids was occupied in the Neolithic and Iron Age periods. Dated Neolithic settlements in Wales are extremely rare, but the discovery of crude huts and Neolithic round-bottomed pottery confirms occupation of this rock 5-6,000 years ago. St Justinian's Chapel a place of pilgrimage for medieval travellers to St David's and gathered donations which were passed to the cathedral. The present 16th century stone building may obscure an earlier structure, possibly dating to the early Christian period. The tidal race in Ramsey Sound is fierce. Four recorded shipwrecks all lie on the eastern side of the Sound including the coastal cargo ship, Count d'Aspremont's whose boiler still stands proud of the seabed (sunk in 1903). The Magella, a small fishing boat, was sunk as recently as 1991, even though the lifeboat station is located nearby.

Scheduled monuments include:

- PE014 (St Justinian's chapel): community: St David's
- PE109 (Clegyr Boia hillfort): community: St David's
- PE295 (Castell Heinif promontory fort): community: St David's
- PE421 (chambered tomb): community: St David's

This area lies entirely within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest.

Clegyr Boia is associated with the 6th century Irish pirate Boia although is of Neolithic origin. There is place-name evidence for other Irish settlement. The area as a whole is associated with the sea-borne nature of early Medieval Christianity.

Settlement is limited to a few dwellings around St Justinians, vernacular farmsteads further inland and the one farm complex on Ramsey, close to the landing place and now used by the RSPB. There is a Lifeboat Station at St Justinians. The current facility is located on columns with a slipway in front of the old station which is a small stone built shed set back against the cliffs. A further modern lifeboat station is proposed which indicates the changing requirements of life saving around Pembrokeshire's waters.

St Justinians is a major centre for wildlife boat trip operators taking visitors out and around Ramsey Island, Ramsey Sound and The Bitches which are known as a wild water phenomenon. There is pontoon access to the water, swinging moorings for operators' boats and a well used car park both close to the Station and inland in a discreet location. Motor and sail cruisers are active throughout this area as well as day boats, kayaks, sailing dinghies and jet-skis. The Sound is used as a coastal cruising route linking Milford and Solva to North Wales/Cardigan Bay. Sea angling also takes place both from boats and the rocks. Coaststeering is a popular activity around this coast. Walking the Coast Path affords spectacular views across the Sound to Ramsey Island in addition to wildlife watching from cliffs.

Fishing in the area comprises of lobster and crab potting and potential for light otter trawling.

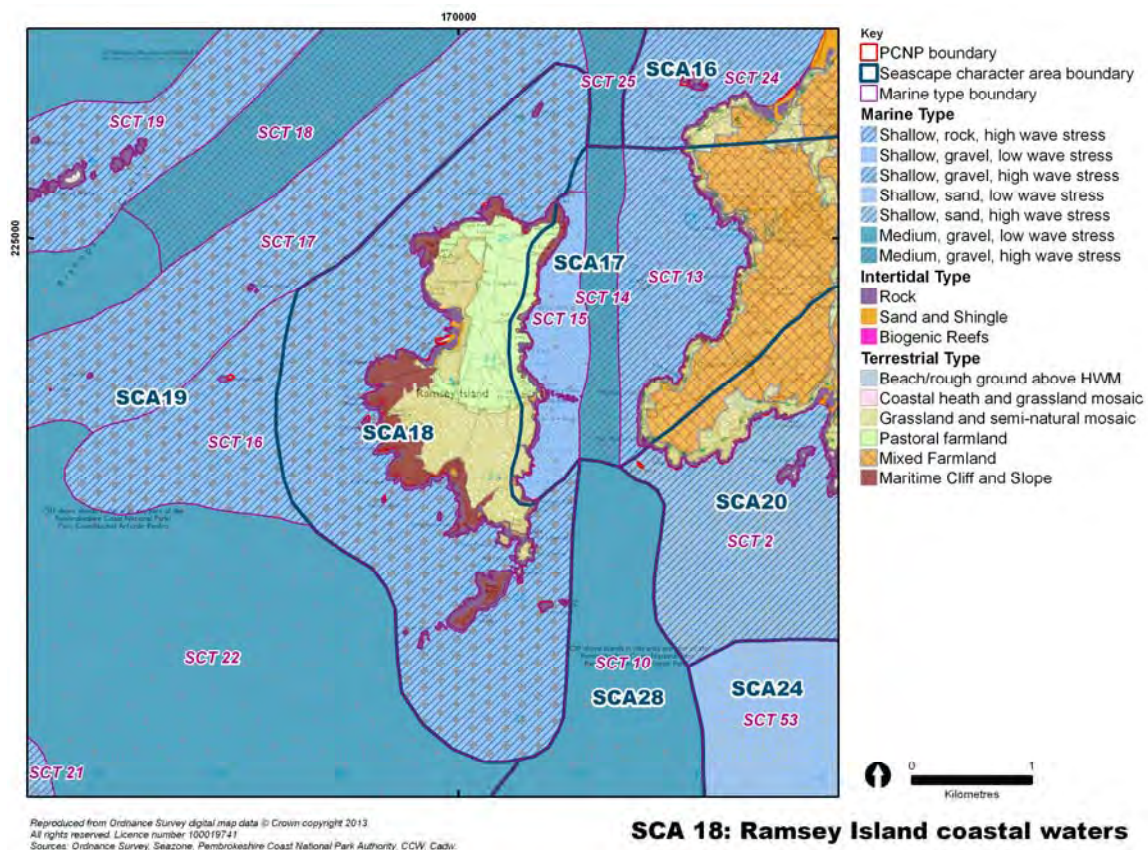
The area has a Round 24 licence for oil and gas.
Aesthetic, perceptual and experiential qualities
<p>The scale of the Sound is large and open but with enclosure from Ramsey Island and the mainland cliffs running south from St John's Head backed by outcrops back from the coast. These landforms focus views out to sea north to St David's Head and the Bishops and Clerks rocks and south to St Bride's Bay and Skomer in the distance. The rough textures of the cliffs and rocks are complemented by qualities of the water which, apart from around 20 minutes slack, clearly moves swiftly north or south on the flood and ebb tides respectively, creating standing waves and turbulence over rocks such as the Bitches. On the water these create drama and excitement and attract sightseers and thrill seekers on powerful RHIBs and kayakers who surf the waves in optimum conditions. The indented cliffs which provide interest and superb changing vistas onshore from the Coast Path appear to be two dimensional when halfway across the Sound [around 500m] and man-made structures such as the lifeboat station are hardly apparent. This gives a strong sense of tranquillity, wildness and remoteness which is reinforced by sightings of grey seals and, occasionally, porpoises. Tranquillity is reduced to an extent by the RHIBs and other boats which frequently ply the Sound, emanating from St Justinians which is a busy and colourful little harbour in season. However, this use does not significantly diminish the natural beauty, unity and balanced composition of this stretch of water and coast, rather providing further animation of the water, with sweeping wash. Detractors include the few isolated mid 20th century houses and bungalows in prominent locations, the caravan and camping sites and ad hoc WCs adjacent to the car park at St Justinians.</p>
Cultural benefits and services
<p>The area contributes significantly towards leisure and recreational services in the form of marine recreation including wildlife trips, to natural heritage in the form of the sound with the strong tidal streams and rocks, and mainly unspoilt coast, and to cultural and spiritual services in respect of its national historic interest and features related to St David's including the chapel at St Justinian's.</p>

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky cliffs, more in back of bays. The shoreline management plan states 'do nothing'.</p> <p>Pilot site for tidal energy project (Delta Stream) in Ramsey Sound, if successful, this area may be developed as landfill for access to energy grids.</p> <p>A further modern lifeboat station is proposed which indicates the changing requirements of life saving around Pembrokeshire's waters.</p> <p>Increasing use by boat trip operators and other boat users, emanating mainly from St Justinians- with effects on tranquillity and potentially on wildlife and habitats.</p> <p>Coast Path increasing use by walkers.</p> <p>Increasing use of car park and access.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Unspoilt Sound with strong tidal currents and hazardous rocks.</p> <p>Indented, natural rocky coasts and small inaccessible sandy coves with strong natural and wild character.</p> <p>Nature conservation value including coastal habitats.</p> <p>Rich wildlife using the sound and adjacent coasts including porpoises, seals and cought.</p> <p>Historic rural pastoral character of the hinterland, and hill backcloth.</p> <p>Historic features and very limited settlement.</p> <p>Prominence of small hillsides and intervisibility of the coast.</p> <p>Superb, virtually unspoilt views across the Sound and along the coast.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p> <p>Boat trips users as sensitive receptors.</p>					<p>Lifeboat station is a functional structure.</p> <p>St Justinians is the embarkation point for RHIB wildlife boat trips around Ramsey and offshore and the anchorage is popular and busy in season.</p> <p>Presence of scattered 20c dwellings.</p>			

No: 18

Seascape Character
Area Name:

Ramsey Island coastal waters



Ramsey Island from the east

Summary Description

Ramsey Island is separated from the western end of St David's Peninsula by Ramsey Sound. The area covers the Island, coast and waters adjacent outside the Sound. These are exposed to the open sea and the south westerlies. There is no settlement and the area is wild and remote with accompanying thriving wildlife as a nature reserve and superb maritime views. It is however used in season for wildlife trips and kayaks circumnavigating the island.

Key Characteristics

- Ramsey Island is dominated by the outcrops of Carn Llundain and Carnysgubor and has mainly rocky coasts with jagged cliffs, caves, arches and islets with only one beach on its western side.
- The island is highly exposed to open sea and south westerlies and is separated from the mainland by a tidal sound and so has a strong sense of isolation and wildness.
- The south of the island, outcrops and the rugged coastal edge are covered in heath, coastal grassland and bracken.

- There are limited irregular fields enclosed with stone walls.
- Built form limited to one farmstead managed by the RSPB, partly for a strictly managed number of visitors arriving at one landing stage.
- There is RHIB wildlife boat trips and kayaks travel around Ramsey in season reducing tranquillity.
- There is rich wildlife as a nature reserve including many seabirds such as razorbills, auks, fulmars as well as porpoises and seals.
- Magnificent views from the island are panoramic to the open sea, the Bishops and Clerks and to the mainland, such as to Carn Llidi.

Physical Influences

The eastern coast of Ramsey Island is composed of a faulted Precambrian to Ordovician succession of volcanic tuffs, intrusions, sandstones and shales. Coastal headlands, dominated by Carn Llundain 134m aod and also Carnysgubor 95m aod and cliffs, represent the more resistant lithologies of intrusions and tuffs, some reaching 120m to the west, while the wide bay at Aber Mawr on the western coast is carved into mudstones. Submerged rocks and small islets fringe the coastline which also has caves. South from Ramsey a chain of small islets and arches formed of acid intrusive rocks extends north east-south west (Ynys Cantwr (52m aod), Midland, Ynys Bery (70m aod), Meini Duon), also Ynys Eilun 25m aod). The intertidal areas of the island and islets are exposed rocky shores (95%) with only small sandy coves. Wind and wave erosion takes place through abrasion, attrition and hydraulic action.

The shallow (<30m) sea floor of sandy gravel slopes moderately (1-10⁰) westwards. The seas are exposed to high wind and wave stress. Tidal currents are strong (3-5 knots), setting to north and south. Rough waters and eddies are found around the southern rocks and islets (Ynys Bery, Midland Gap).

The sea and intertidal areas are covered by the Pembrokeshire Marine SAC. Ramsey Island is designated as a National Nature Reserve and SSSI. The cliffs, associated coastal heath and grassland are designated as the Ramsey Island and St David's Peninsula SPA and they are also an Important Bird Area as defined by RSPB. Ramsey Island is an important reserve owned by RSPB - puffins, choughs, auks, seals, dolphins and porpoises are all evident. Seals pup on the beach at Abermawr and use the sea caves.

The island is a mixture of heath and dry acid grassland along the cliff tops, south of the island and on outcrops such as Carn Llundain. The rest of the island is predominantly a mix of rush pasture fields which are grazed with cattle and sheep as part of the management to support wildlife eg choughs.

Cultural influences

Historic routes and linkages are exemplified in the Prehistoric, Norse and Early Christian associations. Ramsey preserves evidence of human settlement dating back 4,000 years. Both Carn Llundain and Carn Ysgubor have cairns on their summits which appear to be lofty burial mounds of the Early Bronze Age. More spectacular burial sites, facing the gales of the Atlantic Ocean, are hard to imagine. The evidence suggests that fields may have been first laid out on Ramsey in the Early/Middle Bronze Age (c 2100BC-1500BC), supporting island communities based in small hamlets and farms. St Tyfanog's chapel is thought to have been located on the site of the Ramsey Island Farm complex; graves, stone coffins and headstones were noted, c 1811-1963, the only known example being a fragment bearing an incised cross and sundial. There are around seven recorded shipwrecks which lie on the south and south western coasts of the island. They include the Hungarian steamship, Szent Istvan (1909), the Graffoe (1903) and the Gerard (1929).

This seascape character area falls partly within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest. No scheduled monuments have been designated on the island.

Ramsey is thought to be either a personal Viking name, 'Hrafn's isle', or to mean simply 'wild garlic'. In Welsh, it is known as Ynys Dewi, St David's Island, and also Ynys Tyfanog. In legend Ramsey is the burial place of 20,000 saints.

The only settlement on the island is on the east coast- a farmstead, now used by the RSPB. The

pasture fields are enclosed by irregular stone walls.

The waters are used by wildlife boat trip operators taking visitors on the coastal waters and some out to the island on a twice daily basis for unaccompanied and guided walks in season. The size of the boats limits the number of visitors. The waters are popular with motor and sailing cruisers, day boats and kayaks, with the waters generally safer within half a mile of the island than the Sound. Diving and sea angling from boats takes place off the north-east of Ramsey Island. As a wildlife reserve owned by RSPB, research takes place on the island.

Fishing in the area comprises of set nets, lobster and crab potting and potential for light otter trawling. The area has a Round 24 licence for oil and gas.

Aesthetic, perceptual and experiential qualities

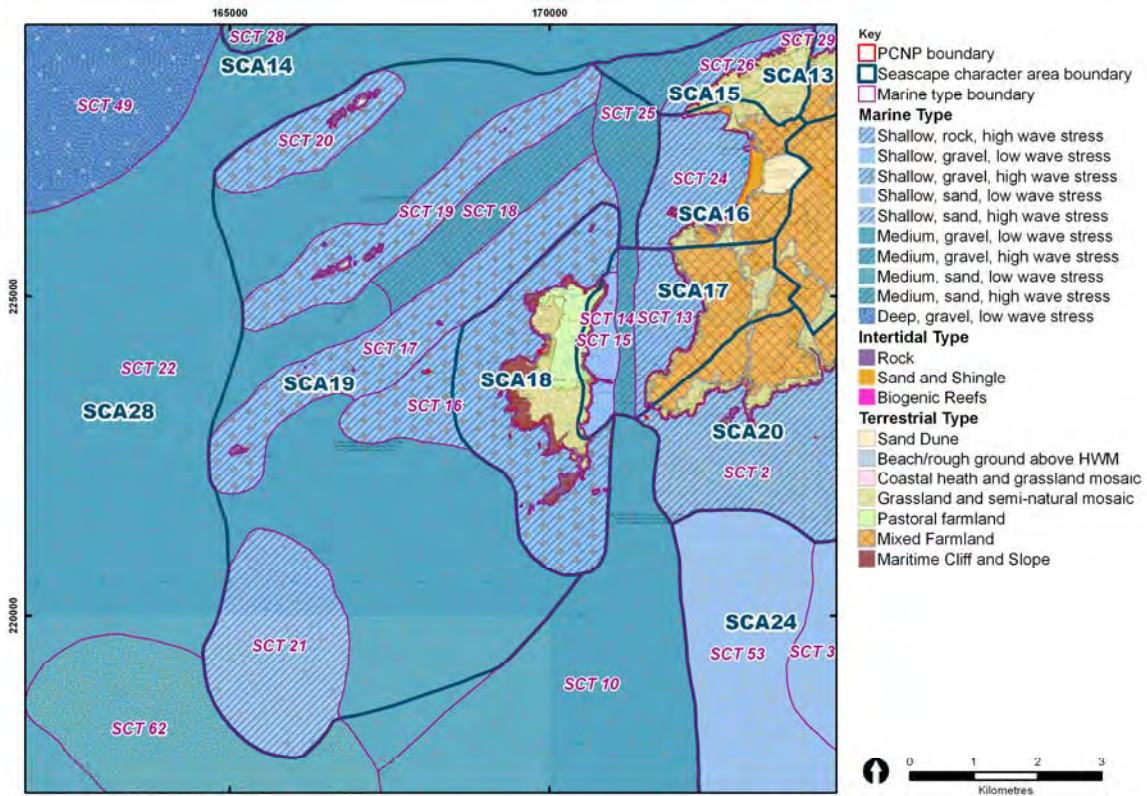
The scale of the Island and adjacent waters is large and open and the island is highly exposed to the south westerlies and open sea. It has a strong remote, tranquil, isolated and wild character especially on the semi-natural vegetated areas and coast. The magnificent views from the island are panoramic to the open sea, the Bishops and Clerks and to the mainland, such as to Carn Llidi. The visual foci at sea level are the jagged cliffs, islets and caves with rock formations like the Elephant's trunk creating interest. The rough textures of the cliffs and rocks are complemented by qualities of the water which can be rough in certain weather conditions. The diversity of the coastline is enhanced by sightings of grey seals, numerous seabirds and, occasionally, porpoises. Tranquillity is reduced to an extent by the RHIBs and other boats which circumnavigate the island. However, this use does not significantly diminish the natural beauty, unity and balanced composition of this stretch of water and coast.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation including wildlife trips, to natural heritage in the form of the national nature reserve with its animals and birds, and unspoilt coast, and to cultural and spiritual services in respect of its historic interest and features.

Forces for change								
Summary	Key forces for change							
<p>Coastal erosion of rocky islets. The shoreline management plan states ‘do nothing’.</p> <p>Pilot site for tidal energy project (Delta Stream) in Ramsey Sound, if successful, development may be apparent from this area.</p> <p>Increasing use by boat trip operators and other boat users, with effects on tranquillity and potentially on wildlife.</p> <p>Issue of management of fields and semi-natural areas to maintain biodiversity.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Prominent and unspoilt outcrops of Carn Llundain and Carnysgubor and the island’s rocky coasts with jagged cliffs, caves, arches and islets.</p> <p>The island’s strong sense of isolation, remoteness, tranquillity and wildness with very limited access.</p> <p>The nature conservation value of the National Nature Reserve including birds, animals and heath, coastal grassland and bracken.</p> <p>The pattern of irregular fields enclosed with stone walls.</p> <p>The very limited built form ie one farmstead managed by the RSPB.</p> <p>Magnificent panoramic views to and from the island.</p>					<p>Presence of RHIB wildlife boat trips and kayaks travel around Ramsey in season reducing tranquillity.</p>			

No: 19 Seascape Character Area Name: **Bishops and Clerks**



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SCA 19: Bishops and Clerks



View of the Bishops and Clerks from Carn Llidi. Ramsey Island lies to the left and St David's Head to the right.

Summary Description

This exposed area of sea is located west of St David's Head and Ramsey Island incorporating a series of rocky islets and reefs which are known shipping hazards but also a haven for wildlife and attractive for recreation including wildlife tours and diving. The remote South Bishop lighthouse marks their outer edge.

Key Characteristics
<ul style="list-style-type: none"> • Series of rock islets and reefs along submarine ridges interspersed with moderately deep channels off the west coast • Exposed seascape area with high wave stress, strong tidal currents and tidal rips and overfalls around rocks. • Wildlife especially around rocks including puffins, seals, porpoises and dolphins. • Many wrecks especially around North Bishop. • South Bishop lighthouse marks the western edge and emphasises hazardous nature of waters. • Some recreation including wildlife trips, sailing and diving. • Strong sense of remoteness, wildness and tranquillity with views to mainland and Ramsey Island and feeling of drama and threat around rocky islets. • The area forms part of the iconic Park view from Carn Llidi to Ramsey Island
Physical Influences
<p>The area comprises a series of igneous rock islets, or shallows, formed by resistant gabbro and acid intrusions along submarine ridges striking northeast-southwest, separated by moderately deep (30-60m) channels. A shallow (<30m), moderately sloping (1-10°) rock or sandy gravel sea floor surrounds the islets. The sea floor sediment of channels between rows of islets covers bedrock of northeast-southwest striking Cambro-Ordovician sandstones and mudstones. The sea is exposed to high wind and wave stress, and islets or shallowly submerged rocks are associated with tidal rips and overfalls. Waters between Ramsey and the islets can be rough, with spring tides up to 5 knots.</p> <p>High energy rocky shores around steep sided islets, some of moderate relief (e.g. North Bishop <38m aod, Carreg Rhoson <26m aod), while other smaller islets are only tidally exposed. Deep rocky inlets, generally exposed to wind and wave energy. Intertidal areas are exclusively high energy rocky shores. Wind and wave erosion takes place through abrasion, attrition and hydraulic action.</p> <p>The area is covered by the Pembrokeshire Marine SAC and the Offshore Islets of Pembroke SSSI. North Bishop has a small colony of puffins and grey seals. Manx Shearwater are apparent. Porpoises and to a lesser extent dolphins are sighted and whales are occasionally sighted.</p>
Cultural influences
<p>The historic routes and linkages are exemplified in the Norse place-names, the lighthouse, and the wrecks of ships. The South Bishop Lighthouse acted as a way-mark for vessels navigating offshore and as assistance to ships navigating around the island group. It was built in 1839 and converted to electric operation in 1959 and fully automated in 1983. James Walker FRS, builder of the light-house, was a prolific engineer. Wrecks include steamship losses in the 20th century, illustrate the hazardous nature of these rocks to mariners. There are around 13 recorded wrecks, all lying against the various islets with the majority around North Bishop which is the northernmost outer array. These include the Morna [1855], the Colonian [1915] and Cwmric Prince [1917]. The Wiema lies to the south, sunk in 1961.</p> <p>South Bishop's alternative name, Emsger, name derives from the Old Norse <i>sker</i> - a skerry, an isolated rock in the sea. There is also 'Bishop and Clerks' islet group in Australia.</p> <p>All islands are important for wildlife and thereby attract motor and sailing craft and tours, many emanating from St Justinians. These mostly use large, fast manoeuvrable ribs but also slower craft. North Bishop is popular with divers with their attendant boats. Motor and sailing cruisers taking a heavily used coastal cruising route to and from North Wales and Ireland use the outside passage to avoid Ramsey Sound. Commercial shipping often waits in St Bride's Bay to enter The Milford Haven Waterway, especially in rough weather.</p> <p>The South Bishop Rock lighthouse has a navigation light, radar beacon and foghorn indicating the presence of the Bishops and Clerks at their western extent.</p> <p>Fishing in the area comprises of set nets to the north, lobster and crab potting and the area has</p>

the potential for light otter trawling. The area is covered by the Round 24 Oil and Gas Licence.

Aesthetic, perceptual and experiential qualities

The area has not been visited, although waters to the south in St Brides Bay and around Ramsey Island have, and the area has been viewed from Carn Llidi. It would be expected that North Bishop would feel most isolated at around 5km from the coast. The coast would be apparent in clear visibility with Carn Llidi and Carn Llundain being the main landmarks at the areas outer point where the mainland and Ramsey Island will appear as a single dimensional line on the horizon with simple colours. Closer in, detail and separation of the land masses will be apparent.

The area has a simple, consistent and unified character at a vast scale and a sense of openness, isolation and exposure, interspersed with linear rocks and reefs which become the visual focus as they are approached. The qualities are determined entirely by the natural forces of water, through swell and waves, and wind, although the rocks bring drama to the seascape with crashing waves and spray in some conditions. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening, particularly close to the rocks. The remote South Bishop lighthouse is a reminder of these dangers and is the main light source in the area. In calm conditions, such as around dusk, the seas can be serene. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this area. Wildlife, particularly around the rocks enhance the richness of experience of the seascape.

Leisure craft will be apparent particularly in season as this is a popular area for wildlife watching, sailing and diving. This will reduce the sense of remoteness and tranquillity within the area. There may be occasional views of commercial vessels.

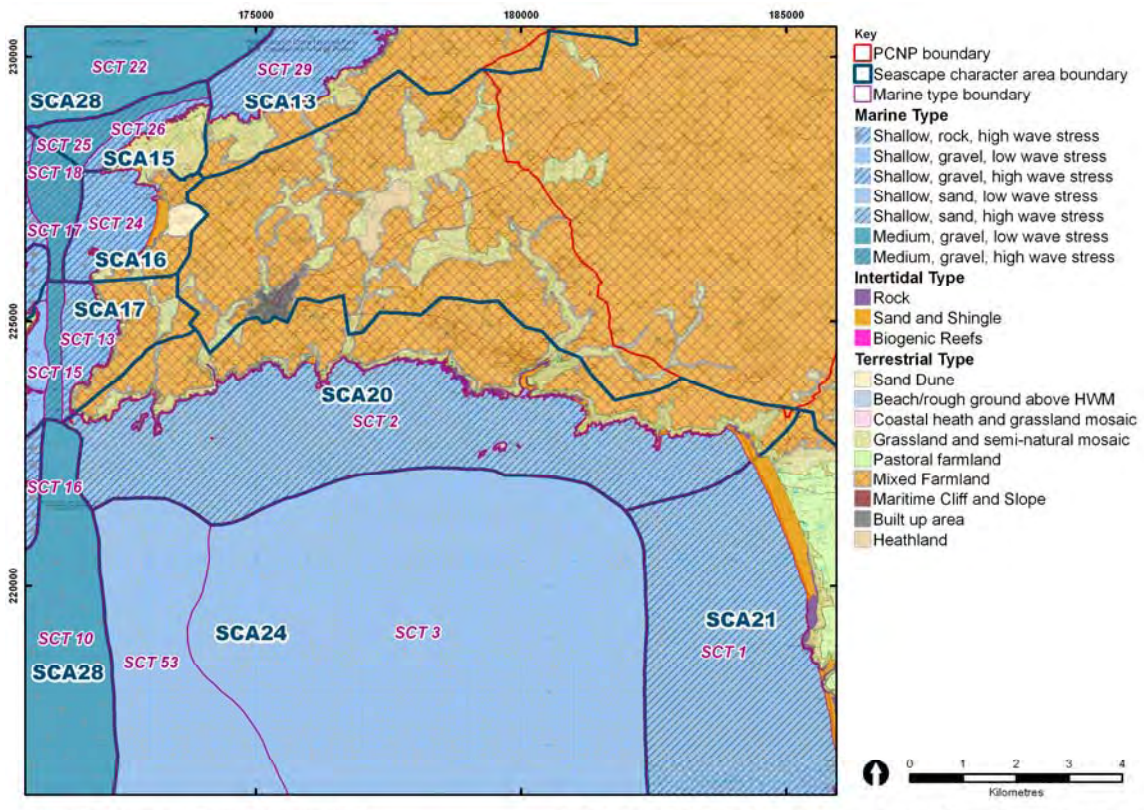
From the mainland, the area forms an important part of the superb vistas from Carn Llidi, St Davids Head, Whitesands Bay and Ramsey Sound, and the Coast Path. This is the wild unspoilt west coast of Wales enhanced by the islets giving a sense of perspective and visual interest.

Cultural benefits and services

The area contributes towards leisure and recreational services in the form of marine recreation including wildlife trips, to natural heritage in the form of wildlife, an unspoilt marine area of sea visible from the sensitive coasts of the National Park, and to spiritual services in respect of a sense of wildness and connectedness with nature.

Forces for change								
Summary	Key forces for change							
<p>Wind and wave erosion around exposed islets. Shoreline management plan states 'do nothing'.</p> <p>Increase in commercial shipping traffic into Milford may reduce tranquillity.</p> <p>Increase in leisure craft including tours may reduce tranquillity.</p> <p>Round 24 gas and oil licence.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity				
<p>Unspoilt, wild, remote and tranquil character with no development except the lighthouse which emphasises remoteness.</p> <p>Natural character of the rocks and reefs.</p> <p>Wildlife especially around rocks including puffins, seals, porpoises and dolphins.</p> <p>Use of area as destination for nature lovers.</p> <p>The contribution to the view and visibility from some of the most sensitive parts of the coast including St Davids Head, Carn Llidi and the Pembrokeshire Coast Path eg to Ramsey Island.</p>				<p>Presence of some recreation including wildlife trips, sailing and diving.</p> <p>Lighthouse is a source of light and apparent feature (although emphasises remoteness).</p>				

No: 20 Seascape Character Area Name: **St Brides Bay coastal waters north**



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SCA 20: St Brides Bay coastal waters north



Looking west from near Caerfai to Ramsey Island in distance



East from Caerfai Bay



East from near Dinas Fach



Solva harbour

Summary Description

The north coast of St Brides Bay has a coastline of jagged cliffs and promontories and small sheltered bays and inlets with some offshore islands and rocks. There are panoramic views from many headlands, contrasting with the narrow sheltered wooded valleys and inlets and the gentle pastoral plateau hinterland. The sea area is relatively exposed to southerly winds but there is shelter in several locations. It includes visitor honeypots such as Solva and lies close to the cathedral city of St David's.

Key Characteristics

- Indented jagged cliffs, small promontory headlands, islets, and bays with narrow inlets with semi-natural heathland and coastal grass vegetation with a series of national nature conservation designations.
- Gently sloping plateau hinterland with incised valleys and farmland of mainly pasture with some arable.
- Dispersed farmsteads with popular traditional village of Solva in a wooded steep sided inlet but new development extends up onto the plateau.
- Caravan parks are visible near the coast in several locations. The A487 runs close to and parallel with the coast.
- The sea is relatively exposed to southerly winds, with some wave disturbance near the coastal edge, but affords shelter to northerlies. Drying or submerged rocks are shipping hazards.
- Marine activity is focussed on Solva which is a honeypot for visitors with sail cruising routes and slipways for other craft. Porthclais also has a small harbour. Fishing is mainly potting.
- The Coast path is particularly well used, especially near St David's and Solva and allows access all along the sea edge and around the indented inlets.
- Views are panoramic from several high viewpoints, and narrowly channelled in inlets. The view from around Newgale is one of Pembrokeshire's iconic views.

Physical Influences

The northern coastline of St Brides Bay is composed of an east-north east -west-south west striking, faulted Precambrian to Cambrian succession of tuffs, sandstones and mudstones. The south facing coastal plateau averages 30 to 80m AOD, with cliffs generally 30 to 50m high although reaching 85m. The rocky headlands have steep cliffs and indented bays with rock boulders and tidally exposed rocks. There are small rocky promontories like Dinas Fawr and Dinas Fach, stacks, arches, caves and drying rocks. The narrow, steep incised valleys of the Solva and Alun provide small, sheltered harbours where they meet the coast. Intertidal areas are dominated by rocky shores (76%), with minor sandy coves. Wind and wave erosion take place through abrasion, attrition and hydraulic action.

The shallow (<20m), sand to gravelly sand sea floor overlying tuffs, sandstones and mudstones shelves gently (<1°), with some exposed islets (e.g. Green Scar 33m aod, Black Scar, The Mare) and areas of shallows over submerged bedrock. The seas are exposed to high wind and wave stress. Tidal currents in the outer bay set north and south. In the bay, small tidal flows set east and west along the coast. Tidal range <6.5m.

The sea forms part of the Pembrokeshire Marine SAC and the coast is part of the St David's SCA, the Ramsey and St David's Peninsula SPA and the St David's Peninsula Coast SSSI. The cliffs are also an Important Bird Area. The coastal strip of semi-natural heathland and coastal grass vegetation and rough grazing extends in places to promontories such as Pen Dinas. There are a number of disused quarries along the coastal edge. Priority species include chough, peregrine falcon, rare lichens and invertebrates.

The hinterland is predominantly pasture, with some arable. The field pattern varies from medium sized and more rectilinear to smaller organic shaped fields, with low hedgerows and some areas of deciduous woodland, especially associated with the narrow, short, steep sided stream valleys.

Cultural influences

St David's cathedral just to the north was established on the great seaway of the early Christian church in Wales and Ireland. It is a historic landscape containing extensive and well-preserved evidence of land use and intense ritual and religious activity from the prehistoric period onwards. The area includes Neolithic chambered tombs and settlement; Iron Age forts and field systems; and St David's Cathedral and city and their settings nearby which are of continuing supreme cultural significance and importance in Wales as Dewisland. Promontory forts such as Gribin and Porth y Rhaw indicate the need to defend this coastal area in prehistory.

Scheduled monuments include:

- PE013 (St Non's chapel): community: St David's
- PE043 (chambered tomb): community: Solva
- PE272 (motte): community: Brawdy
- PE273 (Porth y Rhaw promontory fort): community: Solva
- PE294 (Caerfai promontory fort): community: St David's
- PE378 (kiln): community: Solva
- PE395 (farmstead): community: Solva
- PE410 (Gribin promontory fort): community: Solva
- PE429 (mill): community: St David's
- PE480 (enclosure): community: Solva
- PE539 (Dinas Fach promontory fort): community: Brawdy
- PE540 (enclosure): community: Brawdy
- PE548 (promontory fort): community: Solva

The Gribin ridge fort is yet to be scheduled. The western part of this area lies within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest.

The associations of the area are above all with the history of the church at St David's and its marine links. St Non's Chapel is reputedly built on the site where St Non gave birth to St David. St Bride's Bay takes its name from St Brigit of Kildare, who was venerated throughout Europe. Graham Sutherland painted along the coast such as around Port Clais eg 'Welsh landscape with roads'. A current artist, John Knapp Fisher, has painted scenes including Solva.

Wrecks are clustered around Portllysgi Bay at the western end of the area [7] and around Solva [4]. In the former area the wrecks include the St George, Portland near the bay and Prince Cadwgan, and the Lewis and Whiteplain further offshore. The Vernicos Alexia, Vernicos Barbara IV and Vernicos Giorgis all lie west of Solva.

The main settlement is Solva, which has a traditional character with small cottages although 20c estate development has expanded onto the plateau to the west. Static caravan parks and camping sites are located close to the coast at Caerfai and Porthclais. The popular A487 linking St Davids with points east runs close to the coast but does not generally impinge on tranquillity at the sea edge.

Solva has a small natural harbour with approx.50 swinging moorings for recreational boat owners and inshore fishermen located up the waterway which dries out at low water. There is a yacht club at the seaward end of the village with a car park. Dinghy sailing and motorised day boats come out of Solva. There is a coastal cruising route linking Milford/Skomer with Solva and points north across St Brides Bay and beyond Ramsey Sound and sailing yachts use this and other anchorages along this stretch of coastline. Porth Clais is a small tidal inlet with a small seawall offering protection for a few inshore fishing boats. There are slipways at Porth Clais and Solva which are used for launching kayaks, day boats, sailing dinghies and a few jet skis. Sea angling off boats and the rocks is popular along all this coastal area, as is diving and snorkelling. Porthllysgi Bay is a good anchorage before going north through Ramsey Sound. Dinas Fawr also affords shelter to boats from N and E winds, and Dinas Fach from W and N.

Caerfai Bay offers a small, but the only moderately accessible beach along this coast. The Pembrokeshire Coast Path runs along the top of the cliff edge and is popular and accessible on this stretch due to the attractions of St Davids and Solva, linking roads and carparking nearby.

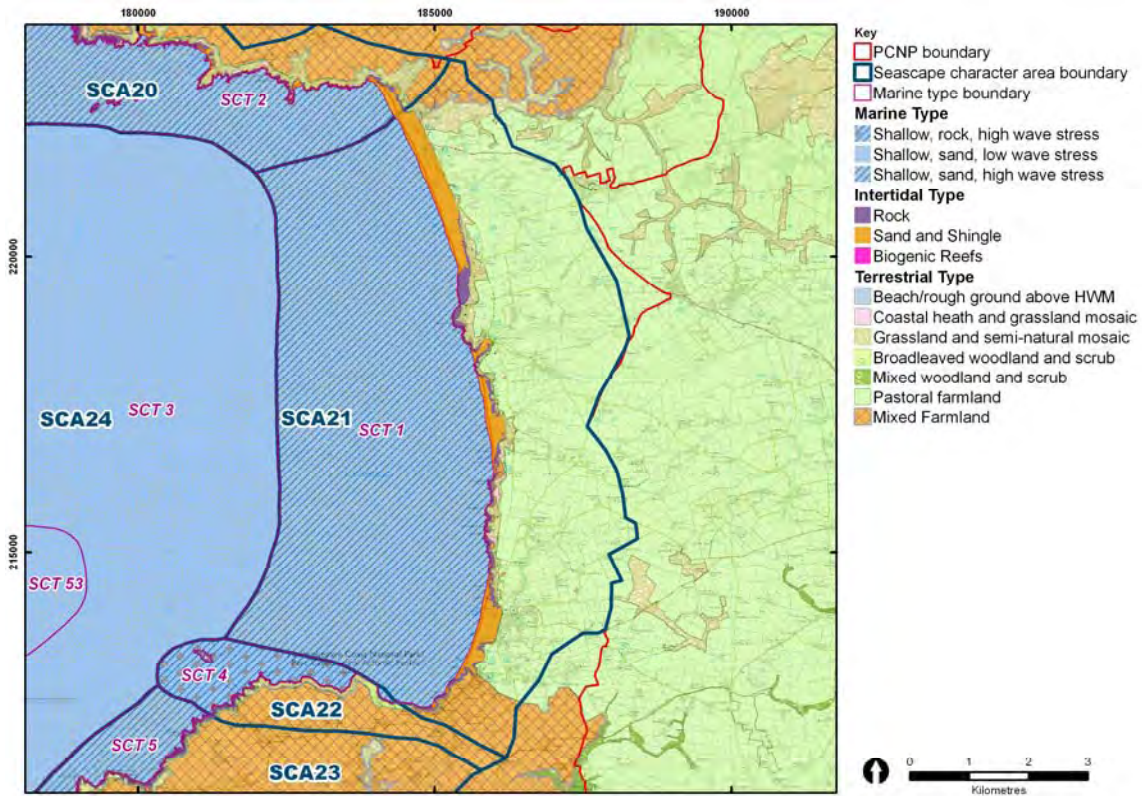
Fishing in the area comprises of beach seining and beach nets, set nets, lobster and crab potting using the rocky shoreline and there is potential for light otter trawling. The area has a Round 24 Oil and Gas licence.

Aesthetic, perceptual and experiential qualities
<p>The area is large scale in terms of the views across St Bride’s Bay, with a contrast between the open exposed cliff edge and headlands, and the confined inlets with narrow channelled views. One of the Pembrokeshire coast’s iconic views is from around Newgale looking west with dramatic rocks and features. The textures at the sea edge are rough and angular, with strong verticals then the undulating plateau behind.</p> <p>It is a highly unified and balanced landscape, with exposure and drama at the cliff edge, again contrasting with the safety and enclosure of the inlets, which have more diversity and strong colours. In Solva and other inlets there is a strong sea or estuarine smell.</p> <p>There is naturalness in the coastal vegetation and tranquillity is high in most places, although at Solva, close to the A487 and around caravan parks this tranquillity reduces due to visual intrusion, road noise, visitor activity and night-time lighting.</p>
Cultural benefits and services
<p>The area contributes significantly towards leisure and recreational services in the form of marine recreation, beach activities and recreation, galleries, and visitor facilities opportunities at Solva village, to natural heritage in the form of the unspoilt coast and inlets, and to cultural and spiritual services in respect of the rich history and artistic associations and connection with sense of remoteness, tranquillity and connection with nature.</p>

Forces for change									
Summary	Key forces for change								
	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
<p>Generally slow coastal erosion of cliff headlands, more in back of bays. Shoreline management plan states mostly ‘do nothing’, and locally ‘hold the line’ at Solva and Porth Clais.</p> <p>Development pressure and visitor activity, especially at at Solva and Caerfai affect the historic character of the former, scenic quality and tranquillity of the seascape.</p> <p>The coastal path is worn in places due to its popularity in the area and there is an eroding slope adjacent to the beach access path at Caerfai Bay.</p> <p>Litter and pollution at Solva affects the habitats and scenic quality of the inlet.</p> <p>Effect of recreational activity on important fish spawning area at Solva.</p> <p>Round 24 Oil and Gas licence area may result in exploration and subsequent extraction with associated effects.</p>	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						

Key sensitivities	
Factors contributing to sensitivity	Factors detracting from sensitivity
<p>Unspoilt rural character of sea edge with highly indented, rocky character with cliffs and features.</p> <p>Wide views across St Bride's Bay.</p> <p>Historic character of Solva and St David's Conservation Areas and other historic features.</p> <p>Coast Path as a sensitive receptor.</p>	<p>Housing development, visitor activity and recreational use at Solva and Caerfai, and caravan parks.</p> <p>Noise and movement on the A487.</p>

No: 21 Seascape Character Area Name: **St Brides Bay coastal waters east**



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SCA 21: St Brides Bay coastal waters east



Looking south from Nawnale



Nolton Haven



View from Little Haven across St Bride's Bay



View across Broad Haven beach

Summary Description

The west facing coast of St Brides Bay has a series of long beaches interspersed with short sections of cliffs with distinctive profiles such as Ricketts Head. There are wide and open views across the bay, with the cliffs and headlands of the south and north coasts containing the view. The beaches such as Newgale are popular surfing locations with associated holiday accommodation, with some lowland valleys and low rolling pastoral hills in the hinterland. Large ships at anchor deeper in the bay are visible from the shore.

Key Characteristics

- Long sandy beaches interspersed with cliffs and rocky foreshores.
- Low rolling hills running back from the coast are mainly pasture with some arable, with some narrow wooded valleys and the flat valley of Brandy Brook with marsh vegetation.
- The sea is relatively exposed to westerly winds, with strong surf over long shallow beaches. Drying or submerged rocks are boating hazards.
- Popular visitor destination with small coastal settlements and associated visitor facilities such as cafes, holiday homes and caravan/camping parks.
- Popular beaches for surfing, swimming and beach activities with some dinghy sailing, rowing, kayaking and jet skis.
- Fishing includes beach seining and beach nets, set nets, lobster and crab potting.
- Access along the sea edge on Coast Path or shared with minor road and A487 in places.
- Views are long across St Bride's Bay and contained by the distant high ground of the north and south coasts.

Physical Influences

The west facing, broad, linear, inner sweep of St Brides Bay is dominated by east-west striking Upper Carboniferous Millstone Grit and Coal Measures sandstones and mudstones. River valleys drain into the bay at Newgale, Nolton Haven and Broadhaven. The hinterland slopes gently back from the coast. The bay is fringed by Newgale Sands, and the sandy beaches at Druidstone Haven and Broadhaven. Cliffs which rise to 50m AOD around the distinctive form of Ricketts Head and become more rugged towards the south close the Broad Haven. The coast is rocky and indented in places, with resistant sandstone rock cuestas prominent on foreshores. There are also natural arches and caves in these areas. The intertidal areas are dominantly sandy beach (73%), with areas of rocky foreshores. Wind and wave erosion take place through abrasion, attrition and hydraulic action. Beaches are depositional areas with sediment transported through traction, saltation and suspension. Newgale's pebbly storm beach reflects exposure to westerly gales. Sediment transport is swash aligned with little net longshore drift.

The shallow waters (<20m) of the inner bay, covering Upper Carboniferous sandstones and mudstones, have a gently west-sloping (>1°), sandy sea floor. The sea is exposed to wind and high wave stress. Tidal currents are set north and south in the outer bay, with some residual rotary tidal movement in the inner bay. Tidal flow is low, with the southern coast generally protected except from westerly winds. The tidal range <6.5m. The long sandy beaches are shallow, creating surf in westerly winds and swell.

The sea forms part of the Pembrokeshire Marine SAC and the coast is part of the Aber

Bach/Newgale to Little Haven Coast SSSI. Land habitats include coastal cliff heath and grassland, deciduous woodland and scrub, with habitats of nature conservation interest including marshy grassland and reed bed along the Brandy Brook. The hinterland is predominantly pasture, with some arable. The field pattern is medium sized and quite rectilinear, with low hedgerows and narrow valleys with deciduous woodland.

Cultural influences

The area is rich in defensive remains from Iron Age raths to the Second World War. Nolton Haven is the sea-terminus of the pre-Norman 'causeway' from the western Cleddau. In more recent times coal was worked in St Bride's Bay; at Ricket's Head, the chimney and a tip of Trefrane coal mine survives. Trade included coal export and fishing. In the 19th century the area became popular with holidaymakers.

Scheduled monuments include:

- PE134 (standing stone): community: the Havens
- PE265 (Black Point rath promontory fort): community: the Havens
- PE362 (Harold Stone standing stone): community: the Havens
- PE456 (unenclosed hut group): community: the Havens
- The bay takes its name from St Brigit of Kildare, who was venerated throughout Europe.

The bay takes its name from St Brigit of Kildare, who was venerated throughout Europe.

There is one recorded wreck- the Attacker on Newgale Sands.

The main settlements are Newgale and Broad Haven, with smaller settlements at Nolton Haven and Little Haven. The latter with its cliffs is a Conservation Area. These settlements appear to have a focus of holiday homes, with static caravan parks and camping sites in several locations such as Broad Haven and Newgale. A minor road runs close to the coast and joins the busy A487 adjacent to the beach at Newgale.

Newgale Sands are very popular with surfers, kite-surfers and windsurfers as it is exposed to westward seas. Sea angling also takes place off the beach. There are 3 car parks and a camp site behind the tall shingle bank that separates the land from the sea. Broad Haven is popular with surfers, kite-surfers and windsurfers. Dinghy sailing, kayaking, snorkelling, swimming and sea rowing take place out of Little Haven. An inshore lifeboat operates out of Little Haven. Motor and sailing cruisers anchor off the beaches as well as inside Borough Head. Dive boats go out from Broad Haven and Little Haven to visit wrecks off Skomer Island and the closer Stack Rocks. Beach activities are popular on Nolton Haven, Setlands and Druidston Haven with associated swimming. Nolton Haven, Little Haven and Broad Haven all have a slipway for small boats such as dinghys and kayaks but do not offer an anchorage for large boats. Motor and sailing cruisers are to be found throughout St Bride's Bay and there are some jet skis. The Pembrokeshire Coast Path runs along the top of the sea edge and around settlements and wildlife such a diving Gannets to be seen.

Fishing in the area comprises of beach seining and beach nets, set nets, lobster and crab potting and potential for light otter trawling. The area has a Round 24 Oil and Gas licence.

Aesthetic, perceptual and experiential qualities

The area has a large scale, with the long stretches of beach looking out to the wide bay with its broad contained views. The textures at the sea edge vary between smooth on the beaches to rough in the cliff and rocky coast areas, with a gently rolling landscape behind.

It is generally open and exposed in westerly winds, but has a feeling of safety at the sea edge, with the exception of some of the higher and more rugged cliffs. The area has a slightly unbalanced seascape, with contrasts between the open beaches and small bays with the sometimes detractive settlements and visitor facilities.

Views are generally wide at the sea edge such as along Newgale Sands, but narrower at the small bays such as Little Haven. The hinterland slopes up from the coast more than in most parts of Pembrokeshire so there is potential for more open views inland to and from the sea.

Tranquillity is limited on the busy beaches and associated visitor areas, such as Newgale where the A487 runs along the back of the beach, particularly in summer. There is some on lesser used

stretches of the Coast Path. Large ships such as tankers at anchor deeper in the Bay are visible from the shore, which detracts from the feeling of remoteness in the bay.

The crashing sound and sight of the surf are powerful senses. At sea there would be a feeling of openness but never being far from land. Landmarks viewed from the sea would include housing running up the slopes at Broad Haven and the caravan park south of Newgale but these noticeable features are also detractors.

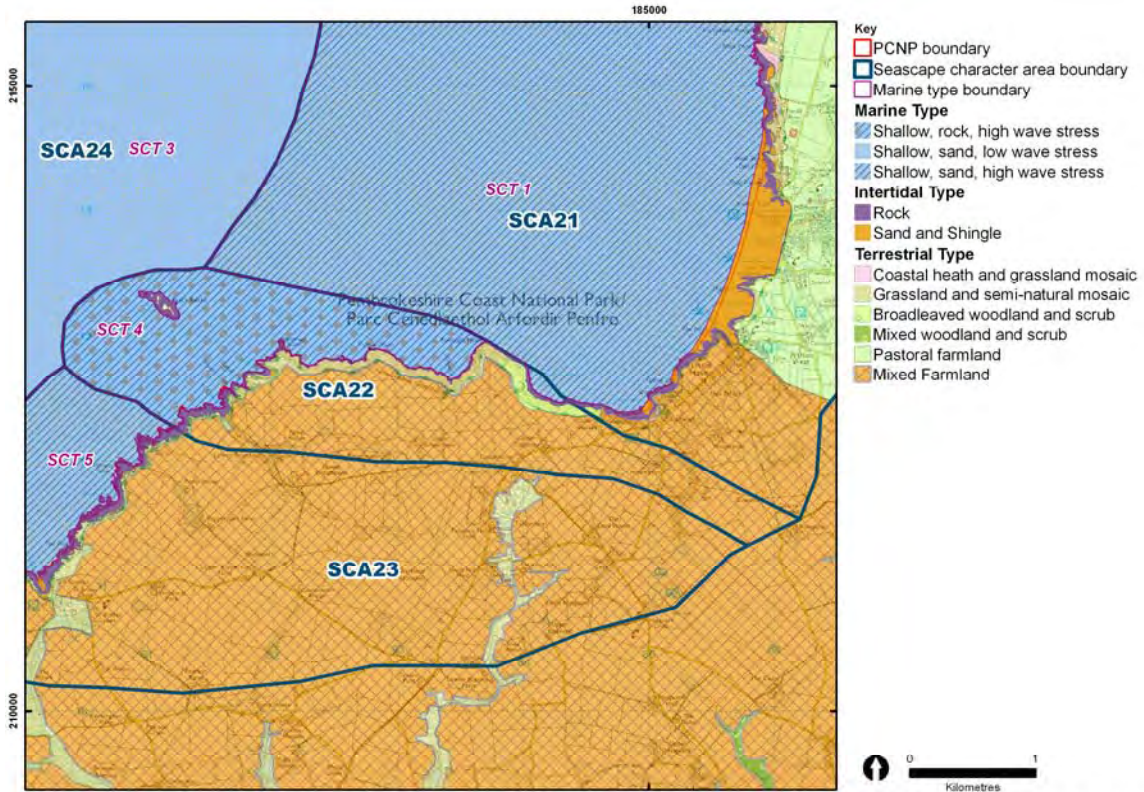
Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of beach activities and visitor accommodation, to natural heritage in the form of the long beaches and wide bay views, and to spiritual services through a sense of spaciousness and connection with the powerful force of the sea.

Forces for change									
Summary	Key forces for change								
	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
<p>Slow coastal erosion of headland cliffs, more in back of bays. Little net longshore drift of sediment. The shoreline management plan: states mostly 'do nothing', locally 'hold the line' (e.g. Nolton Haven, Broadhaven, Newgale).</p> <p>At Newgale there is a possible threat to the integrity of the shingle beach and wall which may allow incursion and flooding to Newgale and Brandy Brook valley behind.</p> <p>Development pressure and visitor activity at Newgale and Broad Haven in particular affect the scenic quality of the seascape.</p> <p>Inappropriate development at Little Haven has an impact on the character of the Conservation Area.</p> <p>The coast path is worn by users in this popular stretch of coast.</p> <p>Round 24 Oil and Gas licence area may result in exploration and subsequent extraction with associated effects.</p>	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key	Change occurring in the area affecting the selected special quality							
	Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity					
Open and wide views along the coast and back inland, juxtaposed with smaller scale visitor facilities.				Housing and visitor activity and recreational facilities at Newgale and Broad Haven, and caravan parks.					
Long stretches of open, accessible beaches				Settlements at Broad Haven, Little Haven and					

<p>and natural rhythm of the surf. Little Haven Conservation Area. Pembrokeshire Coast Path as a sensitive receptor.</p>	<p>Nolton Haven in valleys and contained by higher ground to an extent. Large ships at anchor in the bay. Road running close to the beach especially at Newgale.</p>
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No: 22 Seascape Character Area Name: **St Brides Bay coastal waters south - Borough Head**



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Looking west towards Borough Head

Summary Description

A short stretch of north facing coast and coastal waters on the southern edge of St Brides Bay, west of Little Haven. The high, steep, scrub covered cliffs culminate in Borough Head backed by a high plateau with wild rocky shoreline with no beaches. A promontory fort lies at Howney Stone. Stack Rocks, just offshore, are popular for angling, potting and diving and there is a good anchorage at Goulthrop Roads in south westerly winds.

Key Characteristics

- Steeply sloping wild, vegetated cliffs culminating in Borough Head which dominates the coastal waters.
- High plateau with rectilinear fields of pasture and arable and very few farmsteads and one static caravan park to the east.
- The Coast Path runs along the cliff edge.
- The sea offers a good anchorage at Goulthrop Roads, with Stack Rocks a hazard off Howney Stone point but popular for angling, potting and diving.
- Wide views across St Brides Bay and along the beaches and bays of the east coast.
- Tranquil and wild towards the west.

Physical Influences

The coastal headland (88m aod), Howney stones (Hen and Chicks) and the islet of Stack Rocks (23m aod) are composed of resistant, east-west striking acid intrusive rocks. Small headlands 50m high are indented with secluded coves. Steep, deeply indented cliffs form Borough Head at 70m high. The intertidal areas are almost entirely exposed rocky shores (98%). Wind and wave erosion take place through abrasion, attrition and hydraulic action.

A shallow (<20m) gently north-sloping (<1°) sandy sea floor covers the resistant igneous rocks in this southern edge of St Brides Bay. The Howney stones become tidally exposed at low water. Seas are exposed to wave stress, but protected from southerly winds. The main tidal currents set north and south across the outer bay. Tidal flow set west and east is generally low. Tidal range ~5.6m.

The plateau rises to 91m AOD and falls gently to the cliffs. On the eastern edge a small steep sided valley runs northwards to Little Haven, and on the west a shallow valley runs from Lower Broadmoor to Mill Haven.

The sea forms part of the Pembrokeshire Marine SAC and the coast is part of the St Bride's Bay south SSSI. Seals are often seen on the north side of Stack Rocks. Semi natural vegetation of scrub and stunted trees cover the steep cliff sides, with deciduous woodland in the narrow valleys. The plateau is predominantly pasture or arable with a quite rectilinear field pattern.

Cultural influences

Historic sites and features indicate the need for defence of this area from Prehistory and in the Second World War. Howney Stone rath at the westernmost point of this seascape character area consists of a rampart and ditch cut off a tapering, cliff-top promontory enclosure; the natural terracing of the interior, trending down towards the west, has suggested building platforms.

Scheduled monuments include:

- PE158 (round barrow): community: the Havens
- PE191 (rath): community: the Havens
- PE282 (Howney Stone rath promontory fort): community: the Havens
- PE283 (promontory fort): community: the Havens
- PE538 (promontory fort): community: the Havens

The name St Bride's Bay indicates a link with St Bridget of Kildare.

Settlement is scattered and rural in pastoral farmland with one caravan and camping park to the east.

Dinghy sailing, kayaking, snorkelling, swimming and sea rowing emanate from Little Haven nearby and would be at least visible from the area. The waters are also popular for sea angling from boats around Stack Rocks and headlands and the rocky shoreline is populated with lobster pots. The clear water around Stack Rocks also make this a good diving spot. Motor and sailing cruisers anchor inside Borough Head at Goulthrop Roads in south west winds, although there can be a swell. Commercial vessels are visible waiting to enter Milford Docks often on the skyline or further inshore depending on the weather conditions. The Pembrokeshire Coast Path runs along the top of the cliff edge with spectacular views across the Bay and wildlife such a diving Gannets to be seen. The area has a Round 24 Oil and Gas licence.

Aesthetic, perceptual and experiential qualities

A unified stretch of rugged steep sided, wild coastline, contrasting with the rectilinear farmed fields which mostly reach right to the cliff's edge.

The area is exposed to northerly winds and there are wide views north and east and over the bay from the cliff edge. Boat users in Goultrop Roads would be dominated and sheltered by the high cliffs adjacent. Landmarks viewed from the sea would include Borough Head and the chapel at Talbenny.

The coast feels moderately tranquil with a sense of danger at the cliff edge, but the naturalness of the sea edge is tempered by the farming, caravan park and view to settlements and beach activities to the east. Tranquillity increases to the west although there are views of tankers at anchor in the bay.

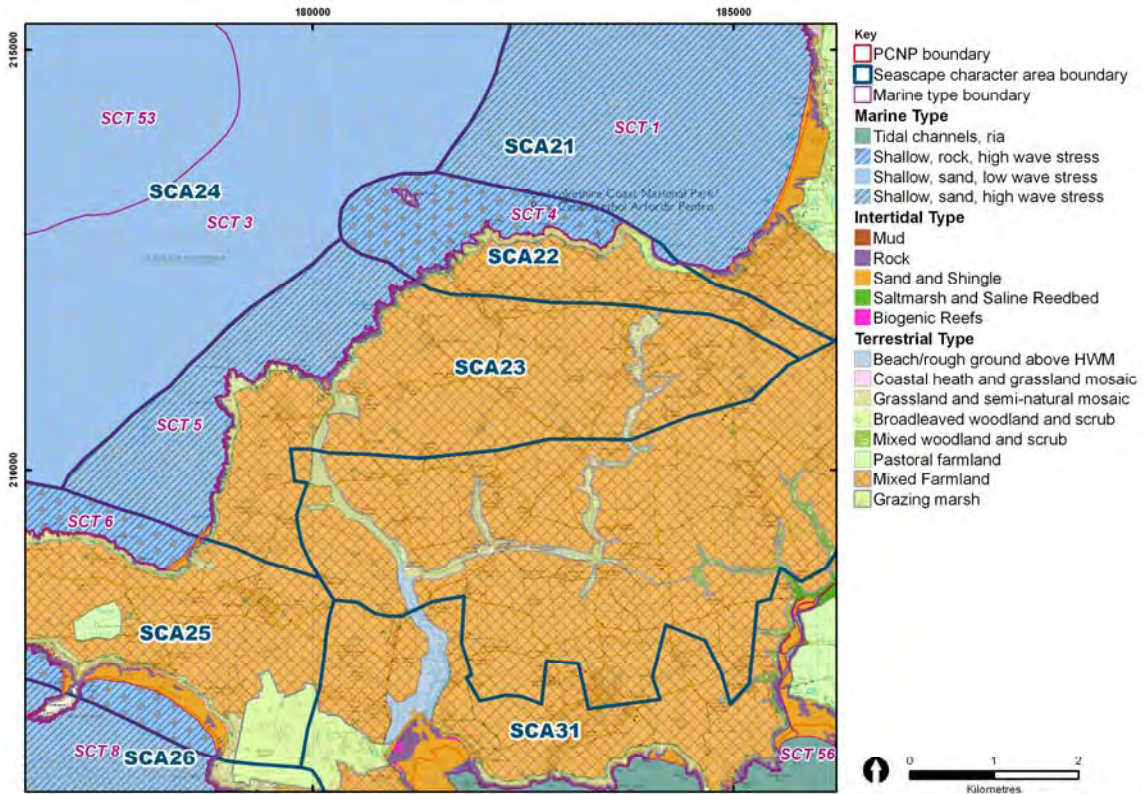
Cultural benefits and services

The area contributes towards leisure and recreational services in the form of the coastal path and sailing or diving opportunities, and to natural heritage in the form of the unspoilt and dramatic cliff edge and offshore islets, and spiritual services in respect of the sense of spaciousness and interaction with nature.

1.1.

Forces for change									
Summary	Key forces for change								
<p>Low erosion of resistant cliffs and little net longshore drift of sediment.</p> <p>Direct impact of walkers on coastal path with some erosion.</p> <p>Intensification of agriculture.</p> <p>Increase in commercial traffic into Milford Waterway with associated anchorage offshore in St Bride's Bay.</p> <p>Round 24 Oil and Gas licence area may result in exploration and subsequent extraction with associated effects.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						
	Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity					
<p>Indented character and rocky, wild character of the coastal edge and islets.</p> <p>Lack of light pollution.</p> <p>Open views to and from the bay to the cliffs and cliff top.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Caravan Park.</p> <p>More intensive agriculture.</p> <p>Large ships at anchor in the bay.</p>					

No: 23 Seascape Character Area Name: **St Brides Bay coastal waters south - The Nab Head**



St Brides Haven, Stack Rocks offshore in distance



West towards Huntsman's Leap

Summary Description
<p>A west facing red mudstone and sandstone coastline on the southern edge of St Brides Bay with generally low cliffs with a broken and jagged rocky shoreline and small beaches at St Brides Haven and Musselwick Sands. This open coast of mixed farming is generally sparsely settled and remote with key buildings being a small Norman parish church and St Bride's Castle, now a hotel.</p>
Key Characteristics
<ul style="list-style-type: none"> • Jagged and broken low mudstone and sandstone cliffs • Inland plateau with rectilinear fields of pasture and arable • No good anchorages, but kayak launch point and diving location at St Brides Haven • The coastal path runs along the cliff edge but otherwise the coast is fairly inaccessible. • A remote seascape with a few farmsteads and a hotel. • Wide views out to sea and westwards to Skomer Island and to tankers anchored in St Bride's Bay.
Physical Influences
<p>This coastal headland in east-west striking Devonian (Raglan Formation and St Maughan's Formation) is composed of crumbling red mudstones and sandstones. Submerged rocks and rocky fingers flank the low coastal cliffs which average 20m in height although in one place rises to 50m. The intertidal areas are predominantly exposed rocky shores (93%), with caves and minor sandy beaches, the main one of which is St Bride's Haven and Musselwick to the south. Wind and wave erosion take place through abrasion, attrition and hydraulic action.</p> <p>A shallow (<20m, gently northwest sloping (<1°) sandy sea floor covers the red beds. Seas are exposed to high wave stress. The main tidal currents set north and south across the outer St Brides Bay and an eddy creates a tidal stream that runs west from Goulthrop Roads to St Brides Haven for over 9 hours. The tidal range is ~6m.</p> <p>The cliff edge vegetation is semi-natural with coastal grasses and bracken but is of limited width, with fields coming close to the cliff edge. Inland is a gently rolling landscape, rising to 60m AOD, which is both pasture and arable, including potato cropping. The field pattern tends to be formal/rectilinear near the coast with hedgebanks and few trees. There are some stream courses and ponds with associated natural vegetation, and a belt of mature deciduous woodland associated with the historic landscape of St Brides.</p>
Cultural influences
<p>Mesolithic and possibly later material has been recovered from Nab Head. There are several defended coastal sites within this character area, such as Tower Point rath, which consists of triple banks with intermediate ditches, having a central causewayed entrance, defining a cliff-top promontory.</p> <p>The wreck of the <i>Englishman</i> schooner is visible in St Bride's Bay. It ran ashore near Musselwick on 5 May 1933. Talbenny airfield opened on 1 May 1942 as 19 Group Coastal Command station and is still apparent, though unused.</p> <p>Scheduled monuments include:</p> <ul style="list-style-type: none"> • PE281 (Tower Point rath promontory fort): community: Marloes and Brides • PE537 (Castle Head promontory fort): community: Marloes and Brides <p>The name St Bride's Bay indicates a link with St Bridget of Kildare. The artist, John Piper painted 'St Brides Bay' from St Brides.</p> <p>Kayaking is popular around the coast as is angling from both the shore and boat, especially close to nearby Stack Rocks and the Hen & Chicks. There is a beach and slipway with adjacent car park at St Bride's with a church behind and St Bride's Castle close by. This is the only vehicular access to the coast. Musselwick Sands are accessed from the Coast Path with steps cut into the rock. The clear water in the area means it is a good diving spot, with divers and kayakers launching from St Brides Haven. There is no good anchorage. Fishing in the area comprises of</p>

set nets, lobster and crab potting and potential for light otter trawling. The area has a Round 24 Oil and Gas licence.

The Pembrokeshire Coast Path runs along the top of the cliff edge.

Aesthetic, perceptual and experiential qualities

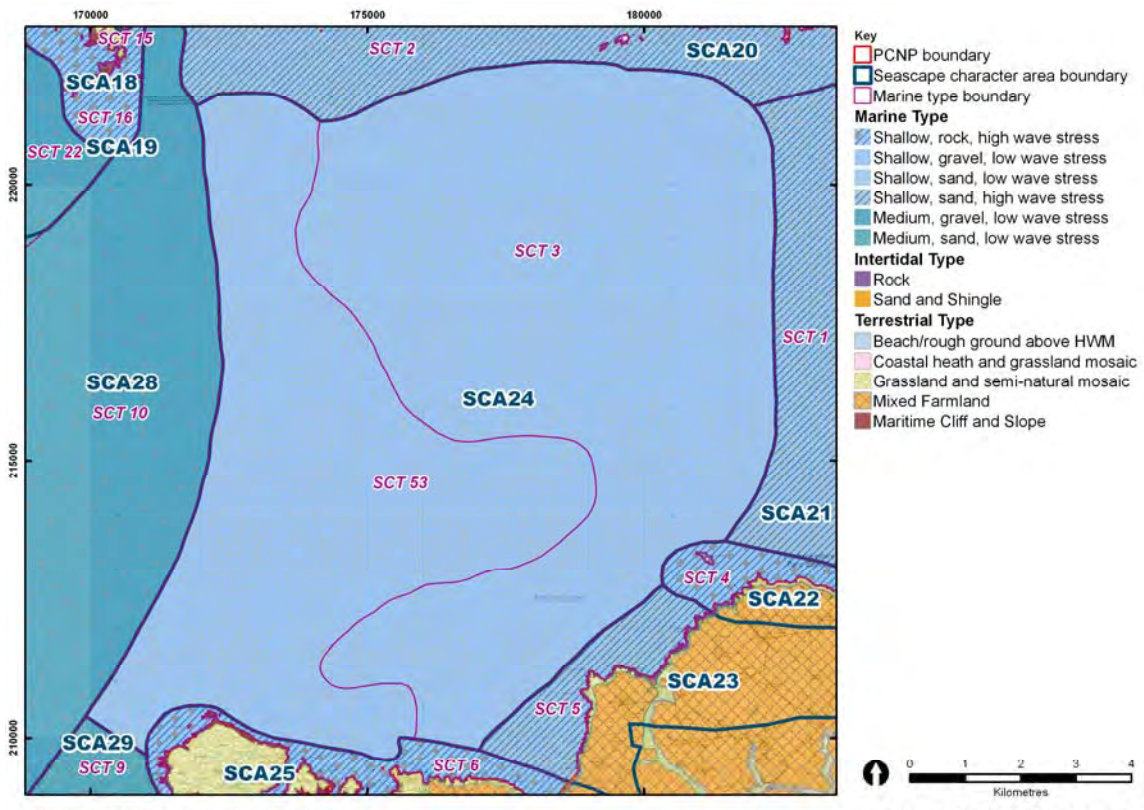
A unified stretch of jagged low cliffs and wild coastline, contrasting with the somewhat bleak and open farmed landscape of rectilinear fields and low hedgebanks. The sea edge is very exposed to northerly or westerly winds, and affords wide views north and west and over the bay from the cliff edge. The coast and sea is very tranquil and feels remote with very little settlement and light pollution apart from the prominent St Brides Castle Hotel. Anchored tankers in the bay are also apparent reducing the sense of wildness of the sea. At St Brides Haven there is a sense of a historic landscape with church, stone walls, woodland belt and country house.

Cultural benefits and services

The area contributes towards leisure and recreational services in the form of the coastal path and kayaking or diving opportunities, and to natural heritage in the form of the unspoilt and dramatic cliffs and rocky coast. The church and country house offer at St Brides Haven creates a sense of time depth and there is a strong connectedness to nature and spaciousness of the sea environment.

Forces for change								
Summary	Key forces for change							
<p>Generally low erosion of rocky cliffs. Shoreline management plan states 'do nothing'.</p> <p>Intensification of agriculture could lead to changes in field pattern and field boundaries.</p> <p>Car park at St Brides Haven may enable intensification of visitor use.</p> <p>Round 24 Oil and Gas licence area may result in exploration and subsequent extraction with associated effects.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors making the area more sensitive				Factors making the area less sensitive				
<p>Natural character and wildness of sea edge.</p> <p>Lack of light pollution.</p> <p>Historic setting at St Brides Haven.</p> <p>Open views over the bay and from the bay to the cliffs and cliff top.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>More intensive agriculture.</p>				

No: 24 Seascape Character Area Name: **St Brides Bay**



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SCA 24: St Brides Bay



St Brides Bay from Newgale



St Brides Bay from Nah Head with Skomer to the left



View from sea north of Skomer

Summary Description
The centre of St Bride's Bay away from the coast comprising muddy sand and low wave stress and limited tidal flow. The area is used as an anchorage for tankers near Milford Haven.
Key Characteristics
<ul style="list-style-type: none"> • Sea around 20m deep at the centre of St Bride's Bay with a seabed of muddy sand and low wave stress. • Part of the Pembrokeshire Marine SAC. • There are numerous wrecks in the area including planes indicative of a military past use. • The area is used by commercial ships anchoring while waiting to access Milford Haven and for fishing. • The area is used for motorised day boats, motor and sailing cruisers and dinghy sailing. • Land is always apparent in good visibility with enclosure dependent on distance with Carn Llundain on Ramsey, Skomer and various settlements being key landmarks. • Open, very wide bay with virtually unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure increasing to the west. • The area's qualities are determined significantly by the natural forces of water, through swell and waves, and wind. views • From land, the area forms an important part of the superb vistas from Ramsey and Skomer islands, and the Coast Path.
Physical Influences
<p>A shallow (<30 m), gently west sloping (<1°) sea floor grading offshore from muddy sand (<20m) into gravelly sand, exposed to low wave stress. Outside the bay tidal currents set north and south. There is little tidal flow in the bay, although a small tidal stream flows south along the coast at the height of the northerly flood. The sediments cover bedrock of sandstones and shales, mostly Upper-Carboniferous across the centre of the bay.</p> <p>The area is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>The bay has historically been challenging for mariners. The ports associated with the shipwrecks confirm routes and linkages extending to the Baltic and to the Americas.</p> <p>Shipwrecked vessels include those sailing to or from, or registered at, ports in Canada, Ireland, Virginia, Philadelphia, New York, France and Russia. Some RAF aeroplane losses from the 1960s are also recorded here, reflecting the use of the area for practice flights.</p> <p>The wreck of the Increase in 1791 and the consequent explosion was described by the incumbent of Nolton Parish, the Rev Moses Grant. Otherwise, the cultural associations are the dangers this area posed to mariners as part of Wales' story of maritime trade.</p> <p>Sea angling from boats is popular all across the Bay as is dinghy sailing, motorised day boats, motor and sailing cruisers. The Bay is often populated by up to 10 commercial vessels waiting to enter Milford Docks. These can be seen both against the skyline and closer inshore dependant on the weather conditions.</p> <p>Fishing in the area comprises of set nets, whelk, lobster and crab potting and potential for light otter trawling.</p> <p>The area is used for the mooring of tankers and has a Round 24 licence for oil and gas.</p>
Aesthetic, perceptual and experiential qualities
The southern waters of this area have been visited. These are influenced by Skomer and Marloes Peninsula to the south with the northern and eastern coast feeling distant. The bay feels very large in scale and open and exposed. The coast is apparent in good visibility with the amount of detail dependent on the direction of the sun. Carn Llundain on Ramsey Island is the main

landmark to the north whilst settlements such as Broad Haven and upper Solva are apparent on coastal slopes. At a distance the landform appears as a single dimensional line on the horizon with simple colours. Closer in, detail and separation of the land masses will be apparent.

The bay has a simple, consistent and unified character at a vast scale and a sense of openness, isolation and exposure. The qualities are significantly determined by the natural forces of water, through swell and waves, and wind, and visibility determines the effect of the land. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this area. Wildlife enhances the richness of experience of the seascape.

There will be views of commercial vessels at most times of the year and leisure craft in season. This will reduce the sense of remoteness and tranquillity within the area.

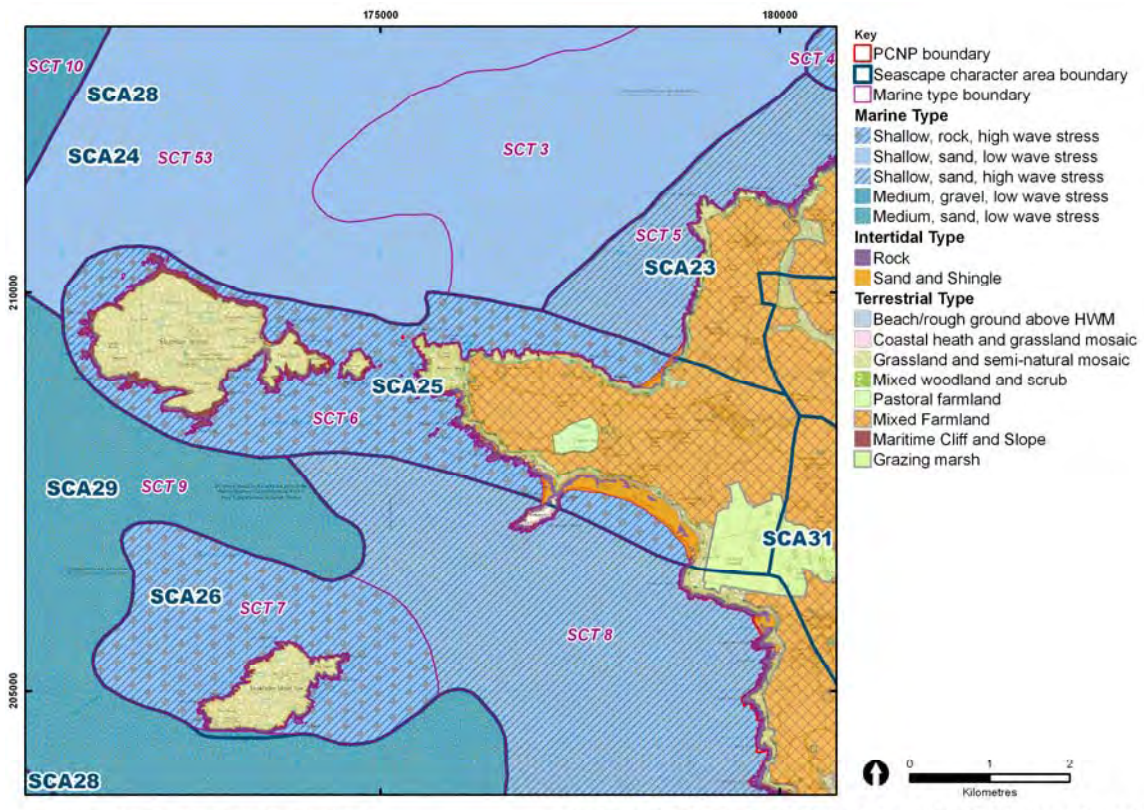
From land, the area forms an important part of the superb vistas from Ramsey and Skomer islands, and the Coast Path.

Cultural benefits and services

The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of a relatively unspoilt marine area of sea and seabed, and to spiritual services in respect of a sense of wildness and connectedness with nature.

Forces for change								
Summary	Key forces for change							
<p>Limited forces for change in relatively sheltered large bay.</p> <p>The area has a Round 24 licence for oil and gas and this would change the character of the area if exploited.</p> <p>The use by tankers has potentially adverse effects which could increase with increased traffic eg LNG.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity				
<p>Simple, open, wild and remote character with views of the western coast and islands.</p> <p>Forms part of the open setting for of the western coast and islands overlooked by the Pembrokeshire Coast National Park contributing to the sense of remoteness and wildness in these areas.</p> <p>Marine nature conservation value.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p>				<p>Presence of ships at anchor.</p>				

No: 25 Seascape Character Area Name: Skomer Island and Marloes peninsula



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SCA 25: Skomer Island and Marloes Peninsula



Looking to Skomer (left) from Haven Point CG lookout, with Ramsey Island visible across St Brides Bay to north (right)



Marloes peninsula looking east



Marloes Sands looking south east



Looking to Skomer from the sea, approximately 500m to the north

Summary Description

Skomer Island and the Marloes peninsula and the islands are part of a volcanic geology with dramatic exposed rock formations and high cliffs, contrasting with a bleak and exposed plateau landscape. Skomer is an important bird colony and a popular destination for bird watching. Marloes Sands is a long sandy beach contained by high cliffs. The sea area is a Marine Nature Reserve and there are numerous shipping hazards.

Key Characteristics

- Volcanic rock island of Skomer and associated islets, and domed Marloes peninsula with jagged cliffs and rocky shores, stacks, arches and caves and small coves.
- Long south facing beach at Marloes Sands.
- The sea is highly disturbed and exposed with tidal rips and many rocks and other hazards.
- High biodiverse sea as a marine nature reserve and SAC with seabirds, cetaceans and seals.
- Highly biodiverse coast and island as NNR, SPA and SSI with many bird species such as puffins and semi-natural vegetation of bracken, and bluebells.
- Historic landscape on Skomer with many remains dating from prehistoric times.
- Inland landcover is predominantly arable with a rectilinear field pattern and the isolated, stark settlement of Marloes but includes an area of raised mere which is managed for nature conservation.
- Recreation/sea use includes sailing, boat trips to Skomer, diving with many wrecks and wildlife, sea angling from the rocks and boats, kayaks and inshore potting.
- On land/coast the attractions are Marloes Beach, the Coast path and 'Deer Park'.
- Exposed and wild coast with exhilarating, wide and panoramic views from many locations.

Physical Influences

Skomer Island (75m aod), The Neck (59m aod) and Midland Isle (45m aod) are formed of resistant, east-west striking Silurian Skomer Volcanic Group lavas, intrusives and sandstones, which continue eastwards across the gently domed Marloes Peninsula rising to 72m AOD (and westwards to Grassholm and the Smalls- SCA27). These rocks, and steeply dipping grey sandstones, dominate the rugged southern coastal cliffs with stacks, arches and caves. Rocks are both submerged and tidally exposed around islands. The intertidal areas are predominantly rocky shores, with sandy shores in bays, particularly Marloes Sands. Wind and wave erosion act through abrasion, attrition and hydraulic action, with depositional processes in bays transport sediment through traction, saltation and suspension. Sediment transport is generally swash aligned, with limited longshore drift.

The submerged bedrock in shallow (<30m) seas towards both north and south is covered by gravelly sand. Around the islands the sea floor slopes steeply away from high, deeply indented cliffs. Across Marloes Bay the very shallow sea floor (<10m) slopes gently (<1°). The seas are exposed to high wave stress from the south west and tidal currents. Tidal currents set north and south through Jack Sound and to the west of Skomer. Tidal flow is <6 knots in Jack Sound, where there are rough waters and tidal rips. West of Skomer, tidal flow is <4 knots, and waters

are rough to the west and north (Garland Stones) of the island. The tidal range at Martin's Haven is 6.9m.

Skomer Island and its surrounding seas are a Marine Nature Reserve with a rich biodiversity and several species at their northern or southern-most limits. The wildlife is abundant including puffins, auks, manx shearwaters, storm petrels, seals, dolphins and porpoises. Skomer is a national nature reserve, an SPA, SSSI, an important bird area and the waters lie within Pembrokeshire Marine SAC, and much research takes place on and around the island. The interior of Skomer Island the island is covered with extensive areas of bracken with bluebells and red campion giving way to thrift and sea campion on the coastal slopes.

There is a HPMCZ proposed which roughly follows the MNR boundary but extends further east to include Gateholm and Marloes Sands. The important habitats include sponge and anthozoan communities on sub tidal rocks, Ross 'coral' and seagrass beds.

The peninsula is predominantly arable in a rectilinear field pattern. An area of raised wetland mere is managed for waterfowl. The Deer Park is an area of semi-natural heathland.

Cultural influences

Skomer Island is an island on the western seaways whose Norse name makes clear its connections with the Viking polity of Scandinavia, Britain and Ireland. Lying just off the south Pembrokeshire coast, it shows human activity in a closed microcosm, with extensive, well-preserved, relict remains of prehistoric settlements, field systems and recent farming activity- the farmhouse was inhabited until 1948. The island was used for pasturage in recent centuries, possibly reflected in the ramp near the Lantern natural arch. There are two large 19th century lime-kilns on the island. Skomer Island ranks among the finest archaeological landscapes in Britain.

SAMs include:

- PE180 (hut circle settlement): community: Marloes and Brides (partly in SCA26)
- PE181 (hut groups, cairns and cliff castle): community: Marloes and Brides
- PE194 (promontory fort): community: Marloes and Brides
- PE323 (promontory fort): community: Marloes and Brides
- PE566 (airfield): community: Marloes and Brides (partly in SCA26 and SCA31)

There are a number of wrecks especially clustered around Jack Sound which indicate the potentially treacherous nature of the waters and are dangerous themselves. Some, like the Lonsdale and Molesey have been sighted by divers.

This area lies within the Skomer Island Landscape of Outstanding Historic Interest.

The Norse name 'Skomer', as with Ramsey and Skokholm, indicates its Norse links- it refers to the cloven shape of the island. The Prehistoric 'Harold Stone' is said by Giraldus Cambrensis to have been erected by Earl Harold to commemorate his victory over the Welsh in 1063. The Deer Park on the tip of the peninsula takes its name from a failed attempt to establish a deer park at the turn of the 20th century.

Motor and sailing cruisers, along with motorised day boats come out from the Milford Haven Waterway to visit the Skomer Island and anchor. It forms part of a heavily used coastal cruising route linking Milford north across St Brides Bay and west to Ireland. Navigation through the channel between Skomer and the Deer Park, The Jack Sounds, is particularly hazardous. Diving is popular in this area as there are many wrecks and the waters are rich in wildlife and other fauna. Sea angling from the rocks on Marloes headland and from boats is popular as is inshore potting. Kayaks and day boats launch from Martins Haven which also offers swinging moorings for inshore fishing boats, research vessels and private craft. A temporary anchorage at South Haven is good in northerly winds.

Skomer Island is extremely popular with tourists who take the boat from the landing stage at Martin's Haven out to the island. The boat runs from 10am and starts bringing visitors back from 3pm - total number of visitors allowed on the island at any one time is 250 for conservation reasons. Fishing in the area is restricted by the MNR but could include set nets and lobster and crab potting.

A minor road runs along the spine of Marloes peninsula through the isolated settlement of Marloes as far as a car park close the St Martin's Haven where boat trips depart for Skomer. On

the peninsula, overlooking Skomer, is the Deer Park which is popular for walking and wildlife watching as is the Pembrokeshire Coast Path. There is a coastguard lookout here. Climbing takes place on the cliffs of the Deer Park, especially at Wooltack Point. Marloes is a good beach with associated beach activities, especially popular when the wind is from the north. The beach is also used for fossil hunting. Marloes Mere is a birdwatching hotspot attracting a large number of waterfowl in winter.

There are several camp and caravan sites in the area but these tend to avoid permanent caravans. A disused airfield lies south of Marloes.

The Deer Park and some land in the peninsula is owned and managed by the National Trust and Skomer is managed by the Wildlife Trust of South and West Wales.

Passing ferries to Ireland from Pembroke Dock and oil tankers and other freight ships for the terminals and the power station in Milford Haven can be viewed at a distance.

Aesthetic, perceptual and experiential qualities

The island and end of the peninsula have a highly exposed and wild character and feel very large scale and open. The cliffs and rock shores, islets and rocks are dramatic, jagged and angular. At sea the character is dominated by the disturbed water and tidal races and the rocky shores and cliffs adjacent with associated seabirds. There are wide views to the sea and islands from the peninsula. There are strong sea smells and wind exposure in most places, with crashing noise of waves in rough seas. Marloes Sands is a popular beach and can feel sheltered. Tranquillity can be reduced in summer. However, overall there is a high degree of naturalness, remoteness and tranquillity along the coast and the islands.

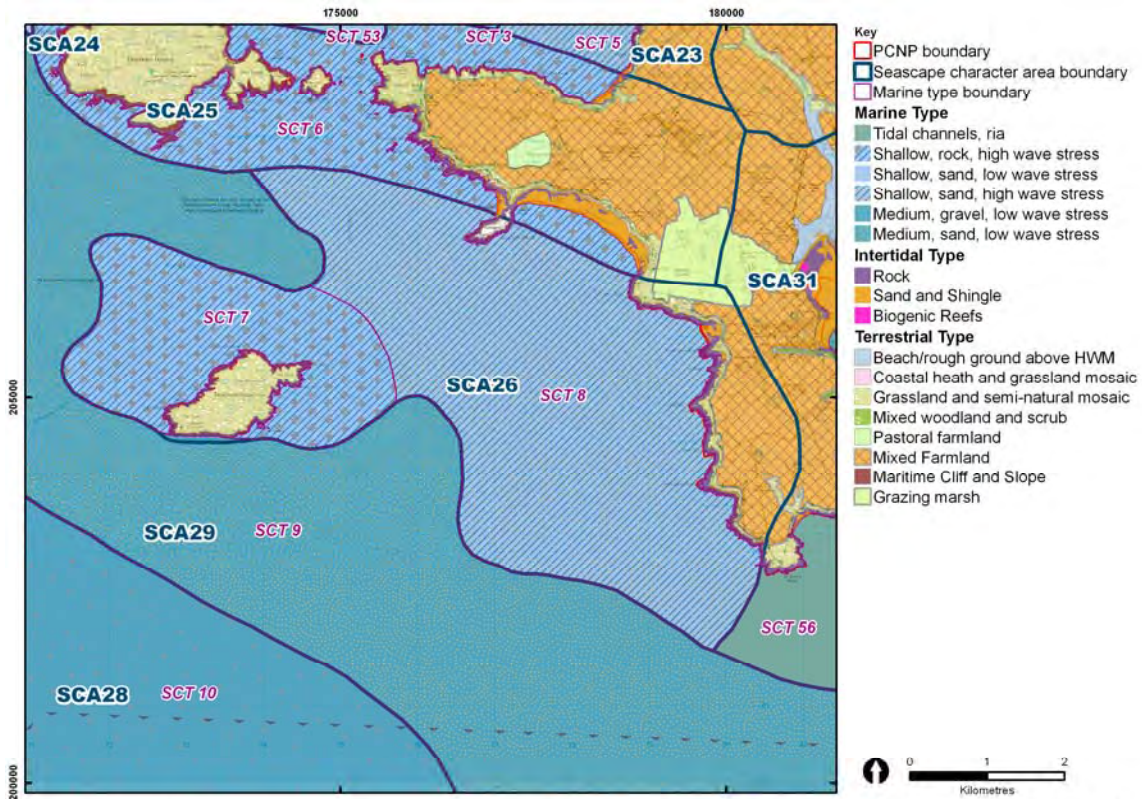
The peninsula hinterland is smooth and bleak with no trees and low hedgerows or walls. The settlement of Marloes feels isolated and exposed.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of wildlife watching, walking and beaches, to natural heritage in the form of the unspoilt coast, marine and national nature reserves, geological and nature conservation importance, and to cultural and spiritual services in respect of the diverse history and a strong sense of space and escape.

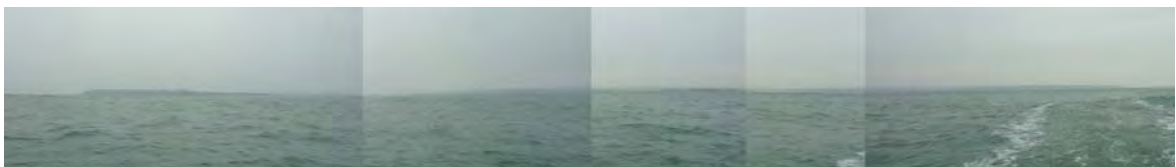
Forces for change								
Summary	Key forces for change							
<p>Generally low erosion of coastal cliffs. Shoreline management plan states 'do nothing'.</p> <p>Skomer MNR may be designated as an HPM CZ (or version of this which is under discussion) which may increase no take areas and may restrict boating and other activities in some areas.</p> <p>Visitor pressure on peninsula attractions eg Marloes Beach and access, Martins Haven and associated car parks.</p> <p>Fossil hunting on Marloes Beach.</p> <p>Coast path compaction and erosion in places.</p> <p>Any development pressure in Marloes would be likely to be prominent in open treeless landscape.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Remote, unspoilt, and open rural coastline and islands of nature conservation and geological importance.</p> <p>Historic character of the area.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Visitor activity and car parks.</p> <p>Presence of established recreational use.</p> <p>Large ships passing on way to Milford Haven or anchored in St Brides Bay.</p>				

No: 26 Seascape Character Area Name: Skokholm and Gateholm coastal waters



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SCA 26: Skokholm and Gateholm coastal waters



Looking north to Skokholm (left) and St Ann's Head (right) from 2km SE of Skokholm, 3.5 km from shore



Looking east to Skokholm (left) and Marloes peninsula



Skokholm from the air (@Sid Howells)

Summary Description
<p>This area comprises the remote island of Skokholm, the coastal island of Gateholm, and the south west facing, rocky, indented eroding coast and western half of the Dale peninsula. The near vertical bedding of sandstone produces distinctive cliffs and rock formations with cliffs reaching around 50m high. The sea has strong tidal streams and races and is often subject to strong ocean swell particularly around St Ann's Head. The Dale peninsula is an exposed plateau headland with both pasture and arable with rectilinear field pattern.</p>
Key Characteristics
<ul style="list-style-type: none"> • Skokholm is a wild, remote island with a flat top and sandstone cliffs. It is an important bird sanctuary and nature conservation site. • Rough and jagged rock exposures and high sandstone cliffs, and rocky foreshores. • The sea is highly disturbed and exposed with many rocks and other hazards, and strong tidal streams, races and eddies. • The sea is heavily used by sailing cruising boats and day trippers, with some sea angling and diving and occasional wildlife trips to Skokholm. • Due to the proximity to Milford Haven there is a lighthouse on Skokholm and at St Ann's Head. • Landcover on the western side of Dale is predominantly arable with a rectilinear field pattern. A disused airfield lies between Dale and the Marloes area. • The Coast Path runs around the mainland cliff edge. • The area is open and exposed and there are wide and panoramic views from many locations such as Little Castle Point and St Ann's Head on the mainland.
Physical Influences
<p>The islands of Skokholm (49m aod) and Gateholm (37m aod) form part of the east-west striking Old Red Sandstone that makes up the red cliffs from Red Cliff to Milford Haven. Submerged and tidally exposed rocks fringe the islands. The intertidal areas are predominantly rocky shores (94%), with minor sandy coves. Wind and wave erosion act through abrasion, attrition and hydraulic action. The mainland is a very gently undulating plateau, rising to 70m AOD, contained by high cliffs to 50m. Skokholm, is flat topped. Gateholm, with craggy cliffs and rough grazing above, is a sandstone peninsula at low water.</p> <p>Old Red Sandstone underlies the sea floor sediment of gravelly sand. The shallow (<30m) sea floor shelves moderately (1-10°) away from the high rocky cliffs of Skokholm, and low to moderately (<10°) away from the peninsula cliffs. Shallowly submerged and tidally exposed rocks fringe the coasts. The seas are exposed to high wave stress and tidal currents. Tidal currents set northwest and southeast. To the west of Skokholm there are fast tidal streams and tidal races (Wildgoose Race), and eddies off Gateholm either side of shallows above the east-west submarine ridge of Old Red Sandstone. The sea can suffer rough conditions, especially with wind over tide. Tidal flow is around 4 knots but can reach 6.5knots. The tidal range is ~6m.</p> <p>Skokholm is a national nature reserve, an SPA, SSSI, an important bird area and the waters lie within Pembrokeshire Marine SAC. The southern fringes of the Skomer Marine Nature reserve lie on the northern edge of the area. Skokholm is well known as a bird sanctuary with important breeding colonies of shearwater, storm petrel, auks, peregrine falcon, grey seal, chough and with rare lichens. The marine environment is rich in habitats both sub-tidal and intertidal. The island's flat plateau and coastal grassland includes pink thrift and white sea campion.</p> <p>The mainland coast landcover predominates with rectilinear arable fields running close to the cliff edge. Semi-natural vegetation is found on the edges of cliffs, headlands and islands. The cliff edge and Gateholm form part of the Dale and South Marloes Coast SSSI.</p>
Cultural influences
<p>An island on the western sea-ways whose Norse name makes clear its connections with the Viking polity of Scandinavia, Britain and Ireland.</p> <p>Skokholm Island shows traces of at least two periods of settlement - probably from the Medieval</p>

period, evident in the form of earthworks of field systems and plough ridges, and probably from the 18th century, evident in the farmhouse. There is also a modern lighthouse at the western end of the island, and a quarry.

Gateholm Island shows traces of a hut circle settlement which is now difficult to access due to separation from the nearby mainland.

Scheduled monuments include:

- PE180 (hut circle settlement): community: Marloes and Brides (partly also in SCA 25)
- PE195 (promontory fort): community: Marloes and Brides
- PE322 (promontory fort): community: Dale
- PE335 (fort): community: Dale
- PE536 (promontory fort): community: Dale
- PE566 (airfield): community: Marloes and Brides (partly also in SCA 25 and SCA 31)

There are a number of wrecks with three around Skokholm and one on the mainland which indicate the potentially treacherous nature of the waters and are dangerous themselves. The Angelica, Burry and Queen on Skokholm's shores have been sighted by divers.

The Norse name for the island indicates its Viking links. Skokholm was made famous by the naturalist Ronald Lockley, who arrived in 1927 to take up a 21-year lease. Lockley was one of the first people to study the breeding biology of storm petrels, Manx shearwaters, puffins and rabbits. His rabbit research formed the basis for Richard Adams' novel *Watership Down*.

Key landmark features include Skokholm's Trinity House Lighthouse, which is visible from the south west well before St Anns Head, which has a lighthouse, towers and a coastguard lookout point.

The sea is heavily used as a coastal cruising route linking Milford with Skomer and points north across St Brides Bay and west to Ireland and the area is visited on a 'day trip' basis by both sailing and motor craft. Skokholm Island is further offshore and, consequently, does not attract as much marine traffic as its neighbour Skomer Island. Wildlife boat trips do visit Skokholm but not as regularly or as often as Skomer. Sea angling from boats is popular around Skokholm. Diving is present along the south and west coasts of Skokholm and to the north of Gateholm. There is kayak activity around Gateholm Island. Sea conditions to the west of Skokholm can be challenging at certain states of tide and wind conditions due to the Wildgoose Race.

On Skokholm Island there is a small inlet with jetty on the island to receive goods and visitors who can stay on the island controlled by the local Wildlife Trust. Westdale beach is small but popular for beach activities and especially for surfing.

Fishing in the area comprises of set nets, whelk, lobster and crab potting [especially around Skokholm] and potential for light otter trawling.

Passing ferries to Ireland from Pembroke Dock are visible as are oil tankers and other freight ships for the terminals and the power station in Milford Haven.

Aesthetic, perceptual and experiential qualities

Skokholm Island is an isolated, wild and highly exposed island in open waters. The cliffs and rock shores, islets and rocks are dramatic, red and layered. At sea, the character is dominated by the disturbed water and tidal races and the rocky shores and cliffs can feel distant. There are wide views of the mainland and Skomer to the north. There are strong sea smells and wind exposure in most places.

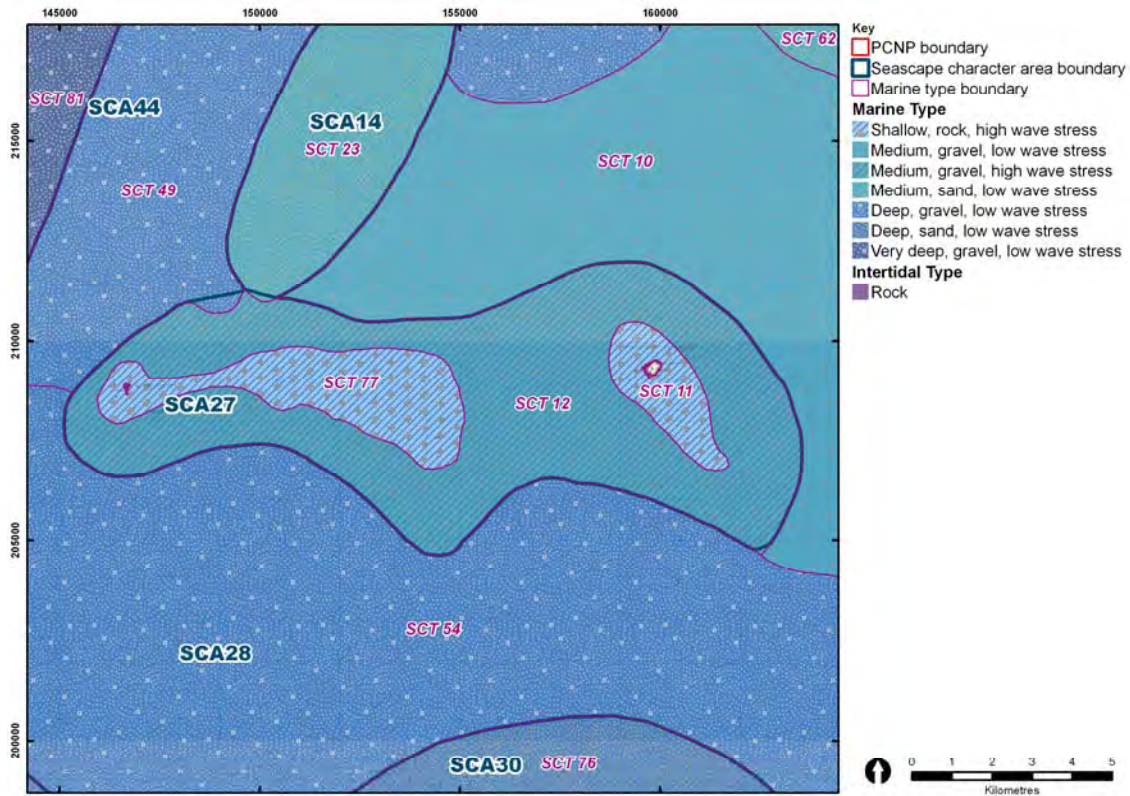
The peninsula hinterland is smooth and bleak with trees limited to valleys. The red sandstone cliffs dominate the west facing coast with its exposed character and the crashing noise of waves in rough seas. Westdale is the only small beach and only access.

Overall, there is a high degree of naturalness, remoteness and tranquillity in many sea edges and the islands although ships entering Milford Haven to the south and east are apparent.

Cultural benefits and services
The area contributes significantly towards leisure and recreational services in the form of wildlife watching and marine recreation, to natural heritage in the form of the unspoilt coast, marine reserve, geological and nature conservation importance, and to cultural and spiritual services in respect of the diverse history and the sense of space and interaction with wild landscapes and seascapes.

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky cliffs. Shoreline management plan: Do Nothing.</p> <p>Visitor activity and use of coastal path must be monitored.</p> <p>Intensification of arable farming.</p> <p>Commercial shipping movements.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key	Change occurring in the area affecting the selected special quality						
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Remote, unspoilt rural coastline and island of importance for marine and island nature conservation and geological interest.</p> <p>Historic character of the area and openness of the terrestrial landscape.</p> <p>Focal points of headlands and islands.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>More intense agricultural use.</p> <p>Large scale of views.</p>				

No: 27 Seascape Character Area Name: **Grassholm and the Smalls**



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SCA 27: Grassholm and the Smalls

Summary Description
<p>This exposed marine area is located west of Skomer as a continuation of a volcanic bedrock ridge. Grassholm is the nearest landform to shore and is known for its large gannetry. The other rocks are small or submerged as reefs and are dangerous for navigation but visited by divers and for wildlife. A tall lighthouse is located on the Smalls.</p>
Key Characteristics
<ul style="list-style-type: none"> • Sea overlaying an offshore east-west striking volcanic bedrock ridge extending west of Skomer. • Grassholm is an isolated rugged island animated by a large gannetry, and appearing as white on one side. • The Smalls and other rocks form a series of rock islets and reefs along the submarine ridge interspersed with moderately deep channels. • Exposed seascape area with high wave stress, strong tidal currents and tidal rips and overfalls around rocks. • Wildlife especially around rocks including whales and dolphins. • Many wrecks especially around the Smalls and Grassholm. • The Smalls lighthouse marks the western edge and emphasises the hazardous nature of the waters. • Some recreation including wildlife trips, sailing and diving. • Strong sense of remoteness, wildness and tranquillity with distant views to and from

mainland and Skomer Island and feeling of drama and threat around rocky islets.
Physical Influences
<p>Grassholm (<45m aod) and the more westerly islets comprising the Smalls are formed of resistant Silurian Skomer Volcanic Group lavas, tuffs and sandstones, and represent exposed parts of an offshore east-west striking bedrock ridge. These same rocks are exposed along strike on Skomer and the Marloes peninsula. The intertidal areas comprise high energy rocky shores, and boulders are strewn at the foot of indented cliffs of sandstone and volcanics. Wind and wave erosion act through abrasion, attrition and hydraulic action.</p> <p>The islets are surrounded by a shallow (<30m), low to moderately sloping (1-10°) rock and sandy gravel sea floor, shelving into sandy gravel of moderate depth waters (30-60m). The sea is exposed to high wave stress and tidal currents, especially on the south western side of islets. Some rocks/small islets are exposed tidally, other rocks remain permanently but shallowly submerged. Tidal currents set north and south, tidal flow <3 knots. The tidal range is ~6m.</p> <p>The area is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>Historically part of the Western trade routes from prehistory to the present day with a possible Viking, or Early Christian role. For ships sailing south through the Irish Sea, the Smalls and the adjacent Hats and Barrels, along with the vicious tidal rips, were a deadly threat and claimed many wrecks.</p> <p>Grassholm has been inhabited since Prehistory; structures have been revealed by the caustic effect of seabird guano. Rectangular structures may date from Viking, or Early Christian times. A Viking sword hilt of the 11th century was discovered in the Smalls reef, from either having fallen overboard or from a Viking shipwreck of which no other trace has so far been discovered. The recorded wrecks are mostly around The Smalls including Clan Macduff, a passenger steam ship lost in a storm (1881), the Rowena (1893), Cambro (1913), and Ribicia (1929). Some lie around Grassholm including Mersey (1876), Dalserf, a steam collier (1910) and the Walter L Russ (1943). The island was used as a target for bombing practice by the United States Air Force during the Second World War, leaving bomb craters and fragments.</p> <p>Little remains of the piled 18th century lighthouse; the present tower was built in 1861 and is listed. There are no scheduled monuments.</p> <p>The place names 'hats and barrels', 'tump' and 'gut' are of interest. The Smalls is associated with the Quaker, John Phillips, master of St. George's Dock, Liverpool, who in 1773 obtained a lease and built the first lighthouse.</p> <p>Diving on and around both Grassholm Island and The Smalls is popular but requires the more substantial dive boats that come out of Milford and St Bride's Bay. Wildlife boat trips visit these outcrops, Grassholm for its large Gannetry, although access is controlled, and The Smalls for the chance to see whales and other cetaceans. A heavily used coastal cruising route passes through the area linking Milford with Skomer and points north across St Brides Bay and west to Ireland and motor boats will also pass in transit.</p> <p>Fishing in the area comprises of set nets avoiding the rocky islets and lobster and crab potting. The lighthouse on The Smalls has a navigation light, radar beacon and foghorn. The area has a Round 24 licence for oil and gas, is an explosives dumping ground [currently not in use].</p>
Aesthetic, perceptual and experiential qualities
<p>The area has not been visited, although waters to the east around Skomer have. It would be expected that the whole area would feel isolated running from 7km to 26km west of Skomer. Parts of the coast would be apparent in good visibility such as Carn Llundain or Skomer from closer points and will appear as a single dimensional line on the horizon with simple colours.</p> <p>The area has a simple, consistent and unified character at a vast scale and a sense of openness, isolation and exposure. Grassholm is the only identifiable island with its large colony of (c.60,000) gannets which create a white mass (through plumage and droppings) on the northern side of the island. This is an awe inspiring wildlife spectacle and it would be expected to have a highly dynamic sense of movement from the birds and a strong aroma closer to. The remote tall, white, striking lighthouse on The Smalls rocks is a reminder of these dangers and is the main light source in the area and the only mark of man, heightening the sense of place. The</p>

Barrels Rocks are just apparent on the surface as a threatening reef.

The qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind, although the island and rocks bring drama to the seascape with crashing waves and spray in some conditions. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel highly threatening, particularly close to the island and rocks. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this area. Wildlife, particularly around the island and rocks enhance the richness of experience of the seascape.

Leisure craft used for wildlife watching, sailing and diving will be apparent and will reduce the sense of remoteness and tranquillity in season. There may be occasional views of commercial vessels at a sensible distance.

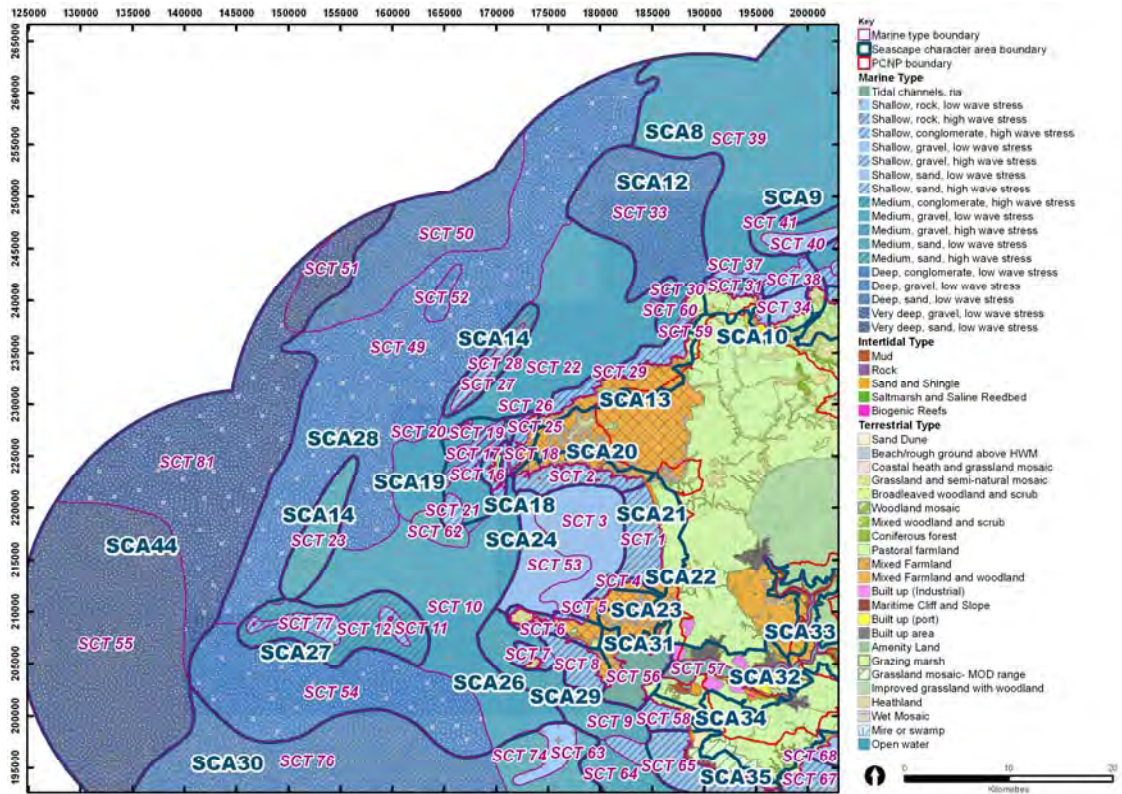
From the mainland, the area forms part of the superb unspoilt vistas from Skomer and north St Bride's Bay coast and the Coast Path.

Cultural benefits and services

The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of wildlife in and around the islands and islets and an unspoilt marine area of sea visible from the sensitive coasts the National Park, and to cultural and spiritual services in respect of a sense of wildness and connectedness with nature and the interest of wreck sites.

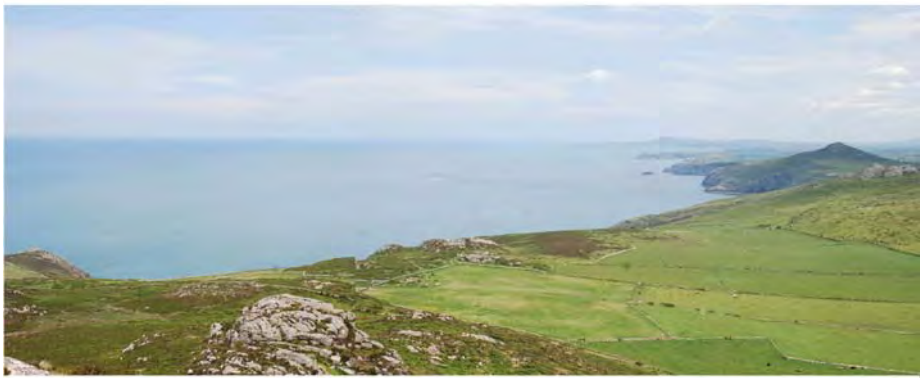
Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky coasts. The shoreline management plan states 'do nothing'.</p> <p>Increase in commercial shipping traffic into Milford may reduce tranquillity.</p> <p>Increase in leisure craft including tours may reduce tranquillity.</p> <p>Round 24 gas and oil licence.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity	Factors that detract from sensitivity							
<p>Simple, open, wild and remote character with views of the western coast and islands.</p> <p>Forms part of the open setting for of the western coast and islands overlooked by the Pembrokeshire Coast National Park contributing to the sense of remoteness and wildness in these areas.</p> <p>Marine and Grassholm nature conservation value.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p>	<p>Presence of diving and other leisure boats.</p> <p>The area has a Round 24 licence for oil and gas, is an explosives dumping ground [currently not in use].</p>							

No: 28 Seascape Character Area Name: West open sea



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SCA 28: West open sea



View of northern component of area from Carn Llidi with SCA 13 in middle ground



View of area at Sea north east of Skomer

Summary Description
<p>This large marine area is located west of Strumble Head stretching south to west of St Anne's Head. It has a sandy gravel sea floor 30-100m deep with low wave stress, exposed to the south westerlies. It is open sea used by commercial vessels, ferries and a few cruising leisure boats.</p>
Key Characteristics
<ul style="list-style-type: none"> • Very large area of sea, 30-100m deep on gravelly sand seabed with low wave stress. • There are numerous wrecks in the area. • Part in the Pembrokeshire Marine SAC. • The area is used for fishing, ferries and commercial shipping. • Land would be apparent to the east and forms part of the unspoilt view from the western coast, including from the Pembrokeshire Coast Path. • Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure. • The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.
Physical Influences
<p>Medium to deep water (30-100m), gently (<1°) west sloping sandy gravel to gravel sea floor, with seas exposed to low wave stress. West of the very shallow sandy gravel bar of SCA 14 (ID27, 28), the gravel sea floor has a coarse tongue of conglomerate (ID52). Sea floor sediments overlie east-west striking Lower and Upper Palaeozoic bedrock as exposed along the coast, replaced offshore towards the northwest by younger, north east-south west striking Mesozoic to Cenozoic bedrock. Tidal currents are set parallel to the coast.</p> <p>The southern part of the area is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>Historically this area was part of the Western trade routes from prehistory to the present day. The principal cultural associations are with Wales' long history of trade and maritime endeavour. Any shipwrecks are at a considerable depth and their location is in many cases uncertain. However, they include a number of vessels sunk as a result of enemy action in the more open waters, as distinct from those wrecked by bad weather or difficult sea conditions nearer the shore. Among them may be mentioned the Emily Millington, scuttled by German submariners, HMS Arbutus, a flower class sloop from 1917, and the Boston City, both torpedoed by u-boats, two liberty ships from World War 2, the Dan Beard and the Jonas Lie, and the Kingstown, attacked by German aircraft in 1941. A more recent loss is the Concha in 1958, a ship registered in Costa Rica.</p> <p>The ferry routes between Fishguard and Pembroke Dock to Rosslare cross the area. Recreational cruising routes for sailing craft also sail through its waters linking South Wales with North Wales, such as Holyhead, and Ireland. Inshore there is the heavily used coastal cruising route linking Milford and points east to Cardigan Bay. The body of water is also crossed by wildlife appreciation and dive boats out of Milford and St Justinians visiting Grassholm Island and The Smalls.</p> <p>Fishing in the area comprises of set nets inshore, whelk, lobster and crab potting, drift lining to south, and potential for light otter trawling inshore and heavy beam and rockhopper trawling offshore.</p> <p>There is a caution area between the Smalls and Skomer. The area has a Round 24 licence for oil and gas and is part of the Aberporth firing range and military practice area to the north east and is part of the Castlemartin firing range and military practice area to the south. There is also a disused explosives dumping ground the south.</p>
Aesthetic, perceptual and experiential qualities
<p>This area has not been visited. The area lies between 1km from the coast out to around 22km. It would be expected that there would be a range of influence of the coast. Higher hills such as Carn Llidi and cliffs would be apparent as strong elements dominating the view at points</p>

decreasing to small elements or a very thin line on the horizon only visible in good visibility. The feeling in the majority of the area would be open sea away from the influence of land, other than this visual connection.

The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The areas are exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea.

The number of leisure craft will be limited away from the coast but there will be occasional views of ferries, and commercial vessels using the shipping ways or at anchor around St Bride's Bay.

Cultural benefits and services

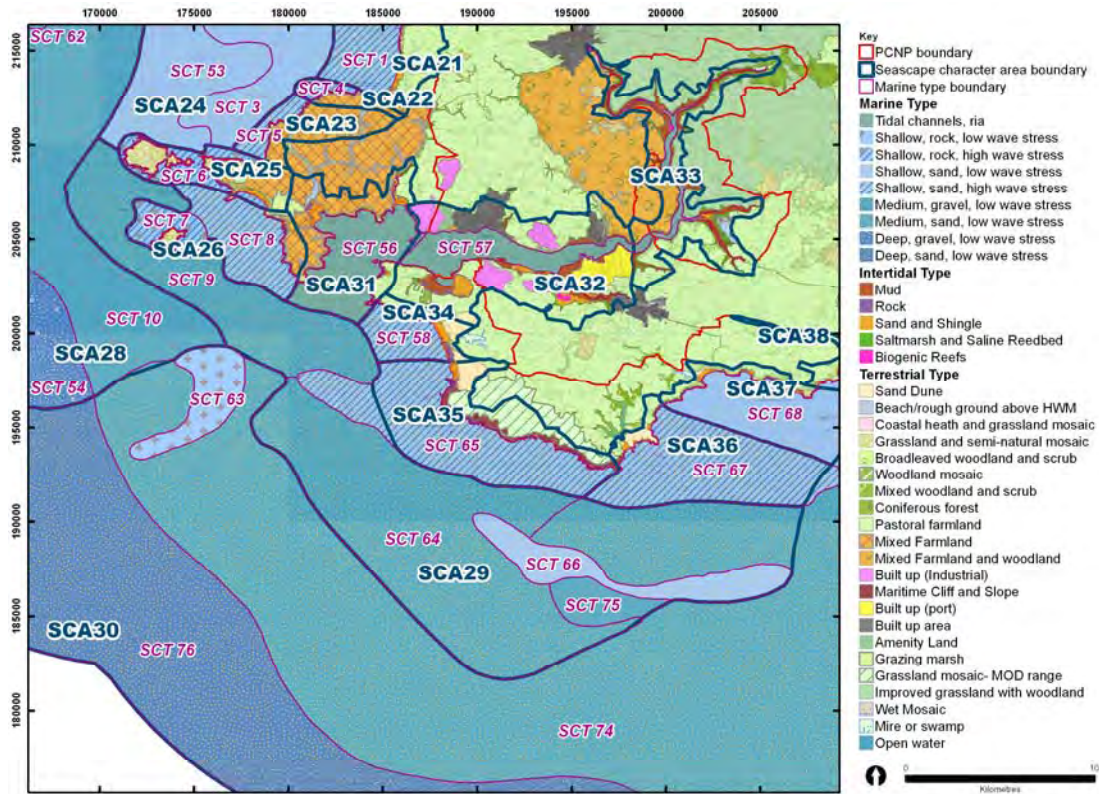
The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of an unspoilt marine area of sea visible from the sensitive coasts of the National Park, and to spiritual services in respect of a sense of wildness and connectedness with nature.

Forces for change									
Summary	Key forces for change								
<p>Limited forces for change in deeper marine settings.</p> <p>The waters around Skomer Island will probably be designated as one of the new Marine Conservation Zones - to what level of protection is still under discussion. These waters may well extend into this area.</p> <p>The use by tankers has potentially adverse effects which could increase with increased traffic eg LNG.</p> <p>The area has a Round 24 licence for oil and gas and this would change the character of the area if exploited.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						
	Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity					
<p>Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, tranquillity and remoteness.</p> <p>Forming part of the unspoilt view from the western coast with Pembrokeshire Coast Path as a sensitive receptor.</p> <p>Part in the Pembrokeshire Marine SAC.</p>				<p>Presence of ferries and commercial shipping.</p>					

No: 29

Seascape Character Area Name:

Southern inshore waters



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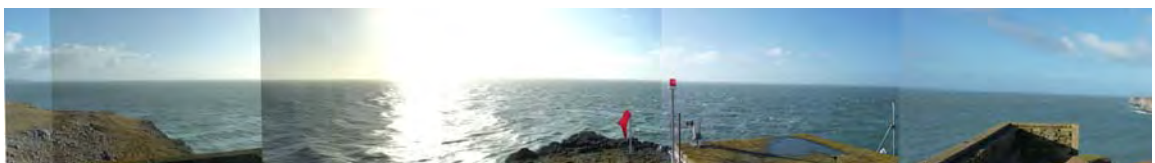
SCA 29: Southern inshore waters



Area viewed between Skokholm and Skomer at sea



Area out to sea from Freshwater West (in SCA34)



Area out to sea from St Govan's Head (in SCA35)

Summary Description
<p>This area stretches off the south coast from Skomer to south of Lydstep Point, wrapping around the coastal seascape areas. It is mainly moderately deep except for St Gowan's Shoal to the east. The west forms the setting to the islands and also is busy as part of the approaches to Milford Haven. The east is used as part of the Castlemartin MOD range.</p>
Key Characteristics
<ul style="list-style-type: none"> • Large area of sea, mainly 30-60m deep on gravelly sand bed with shallower waters over sand on St Gowan Shoals to east [10-30m deep]. • Generally low wave stress although potential for steep seas south of St Anne's Head. • The majority of the area is within the Pembrokeshire Marine SAC. • There are numerous wrecks in the area, many focussed on the approaches to Milford Haven. • The area is used for ferries, commercial shipping and fishing, as well as a MOD practice range. • The area wraps around Skomer and Skokholm to the west forming an important part of their setting and the islands are strong features in this area's character. • The area forms part of the unspoilt view from the western and southern coast, including from the Pembrokeshire Coast Path. • Land would be less apparent to the east but still a feature. • Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure. • The area's qualities are determined primarily by the natural forces of water, through swell and waves, and wind.
Physical Influences
<p>Medium depth (30-60m), gently southwest sloping (<1°) sea floor of gravelly sand grading offshore into sand. A very shallow water (<10-30m) east-west sand bar (ID66; St Gowan Shoals), flanked on its south edge by gravel (ID75), produces tidal rips. Tidal currents set north east and south west round St Gowan's Head turn further west towards east and west. Generally seas are exposed to low wave stress. Sediments in the shoal waters are exposed to storm turbulence and transport. Sea floor sediments cover east-west striking Carboniferous bedrock.</p> <p>The majority of the area is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>The area is the inshore waters of the Bristol Channel that provides the sea-way to South Wales and to Cornwall and Devon, and as such with strong linkages with the maritime trade-routes of western Britain since Prehistory. The inundated palaeolandscapes of the Bristol Channel may yield evidence for the change from hunter-gatherer societies to communities of settled farmers.</p> <p>There are numerous wrecks including on the approaches to Milford Haven. These include the Meg Merrilies (sunk by air attack in 1941), Antonio (1945), Concha (sunk in 1958), the Boy Toby (1980) and Andraxia IV sailing boat, close to Skokholm (1995). LCG no.16 (1943) was a landing craft which, after sinking in heavy seas off St Annes Head leading to significant loss of life, caused a change in design for future craft.</p> <p>The waters that run outside of Skokholm and inside Grassholm Islands are used by yachtsmen both out on a day-sail or in transit as well as coastal commercial fishing vessels. Fishing comprises of set nets inshore, whelk, lobster and crab potting, drift lining to south and potential for light otter trawling inshore.</p> <p>The ferry route between Pembroke Dock and Rosslare crosses the western parts of the area. The St Gowan buoy is located in the area as an important navigational aid to shipping. The area is major part of the Castlemartin firing range and military practice area. There is also a large disused explosives dumping ground parallel to the coast. The area has a Round 24 licence for oil and gas to the west of St Annes Head.</p>

Aesthetic, perceptual and experiential qualities

The western fringes of this area have been visited. The area lies between 1km from the coast out to around 12km. The area skirts Skomer and Skokholm close by. It would be expected that there would be a range of influence of landforms. The cliffs and adjacent landform would be apparent as strong elements dominating the view to the west at points decreasing to small elements or a thin line on the horizon only visible in good visibility to the south. The feeling to the west would be engaged with the coast, and with navigational aids around Milford Haven including on St Anne's Head and with the vessels which travel through the area. To the south and east the area would feel more like be open sea away from the influence of land, other than this visual connection.

The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure. Its qualities are determined significantly by the natural forces of water, through swell and waves, and wind. The areas are exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a likelihood of tranquillity and sense of wildness and remoteness in this open sea but this tranquillity will be modified to an extent by frequent views of ferries, commercial vessels and leisure craft to the west and by the MOD range to the east.

Cultural benefits and services

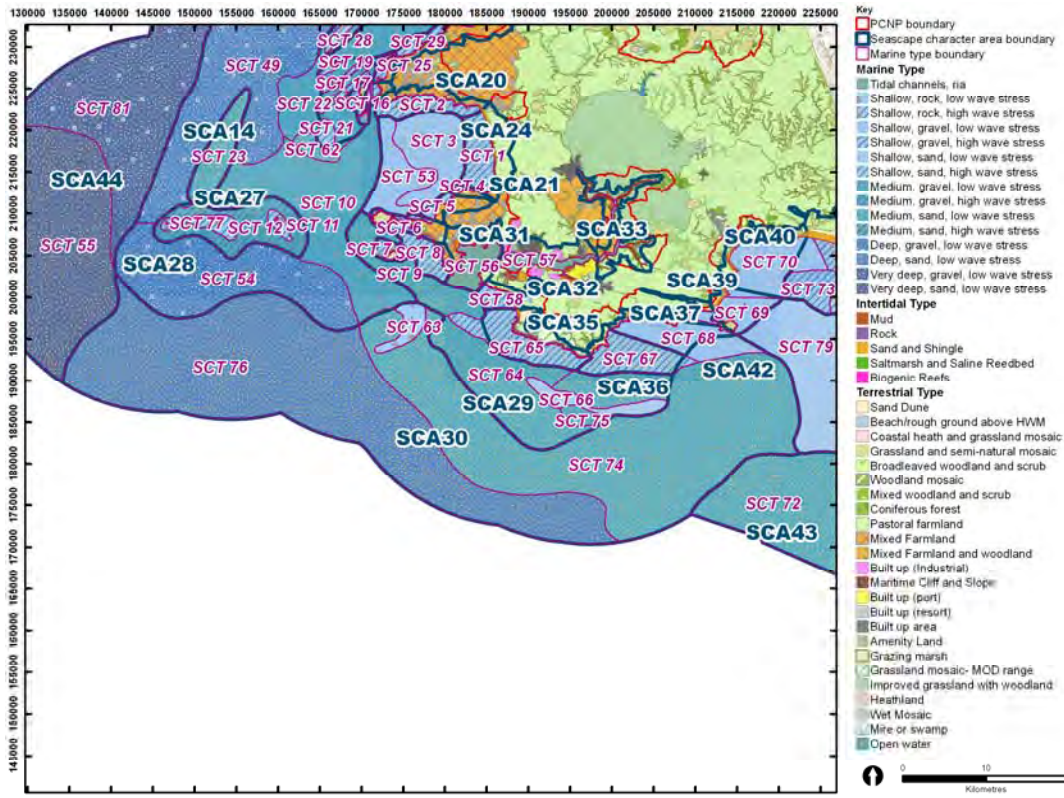
The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of an unspoilt marine area of sea visible from the sensitive coasts of the National Park, and to cultural and spiritual services in respect of a sense of wildness and connectedness with nature, and to the wrecks which are of historical interest within the area.

Forces for change

Summary		Key forces for change						
Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
								Summary
<p>The shallow sandy gravel to gravel bar may accrete or migrate through sediment drift.</p> <p>The waters around Skomer Island will probably be designated as one of the new Marine Conservation Zones - to what level of protection is still under discussion. These waters may well extend into this area.</p> <p>The use by tankers has potentially adverse effects which could increase with increased traffic eg LNG.</p> <p>The area has a Round 24 licence for oil and gas and this would change the character of the area if exploited.</p> <p>Use by MOD range.</p> <p>The proposed Atlantic Array offshore windfarm to the south east could change the area's character and views.</p>	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					

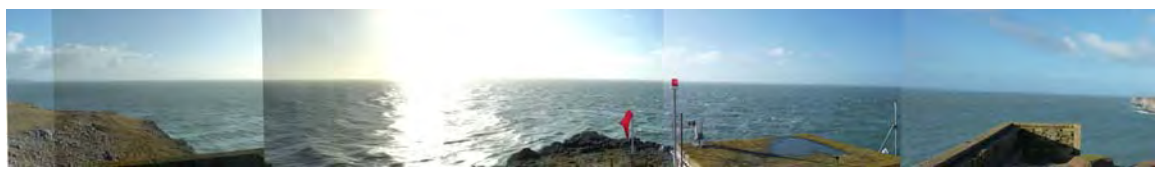
Key sensitivities	
Factors that contribute to sensitivity	Factors that detract from sensitivity
<p>The majority of the area is within the Pembrokeshire Marine SAC.</p> <p>The area wraps around Skomer and Skokholm to the west forming an important part of their setting.</p> <p>The area forms part of the unspoilt view from the western and southern coast, including from the Pembrokeshire Coast Path.</p> <p>Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness and remoteness.</p>	<p>Presence of ferries and commercial shipping.</p> <p>Presence of MOD practice range.</p>

No: 30 Seascape Character Area Name: Southern offshore waters

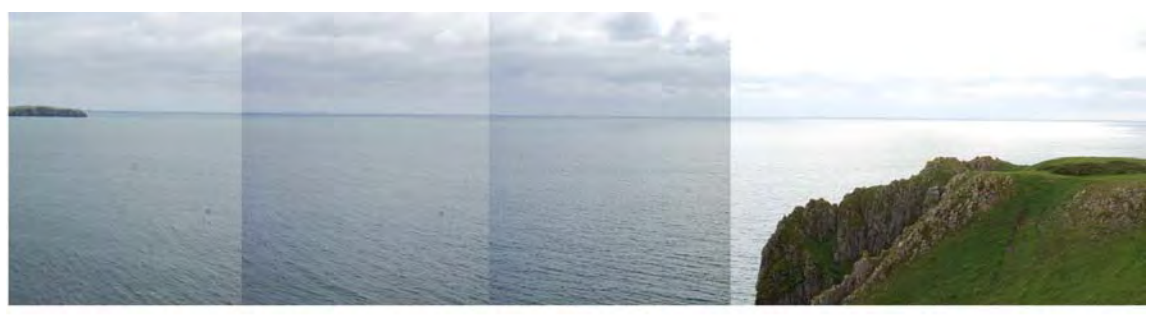


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SCA 30: Southern offshore waters



Area out to sea on horizon viewed from St Govan's Head (in SCA35) beyond SCA29



Area out to sea on horizon viewed from Lydstep Point beyond SCA37

Summary Description

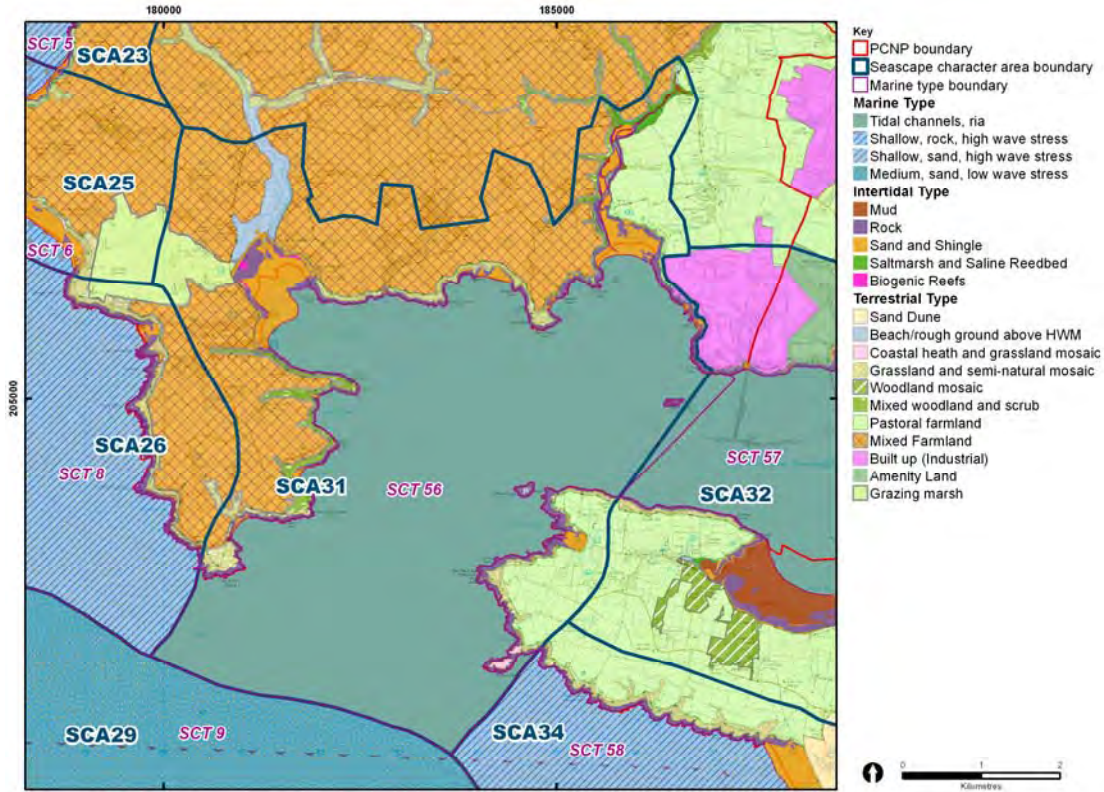
This very large area stretches off the south coast from Caldey Island in the east, running south and west to 42km offshore. It is mainly moderately deep. The east forms the setting to Caldey Island and the area is busier as part of the approaches to Milford Haven to the west as well as around Caldey, used by leisure sailors. The area is used as the outer part of the Castlemartin MOD range.

Key Characteristics
<ul style="list-style-type: none"> • Very large area of sea, 30-100m deep on gravelly sand seabed with low wave stress. • There are numerous wrecks in the area. • Small part in the Pembrokeshire Marine SAC. • The area is used for fishing, ferries and commercial shipping. • Land would be apparent to the east and forms part of the unspoilt view from the southern coast, including from the Pembrokeshire Coast Path. • Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure. • The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.
Physical Influences
<p>The area has medium to deep water (30-100m), gently southwest sloping (<1°) sand to slightly gravelly sand sea floor. Seas are exposed to low wave stress. Tidal currents set east and west. Sea floor sediments cover bedrock of east-west striking Upper Paleozoic sandstones and mudstones overlain by Triassic and Jurassic mudstones, halite and limestone, cut by many east-west faults.</p> <p>The Pembrokeshire Marine and Carmarthen Bay and Estuaries SACs extend into some of the northern fringes of the area.</p>
Cultural influences
<p>The area forms part of the sea-way of the Bristol Channel and as such part of the sea-routes of south Wales, Cornwall and Devon and of the English West Midlands. There are numerous recorded wrecks in the area which is an indication of its historical and naval use. Wrecks include many sunk in war years on the approaches to Milford Haven including the Lord Derby and Renfrew (sunk by torpedo in 1917 and 1918 respectively), Agnes (1916), Georgious Markettos (1917), Wiley Sike (1918), HMS Select (1918). The Clapham (1943) and Maplefield (1945) sunk after separate collisions. The Seafarer (1983) is an example of a more recent sinking.</p> <p>Commercial shipping uses these waters with the level of activity increasing significantly closer to the approaches to the Milford Haven Waterway. Motor and sailing cruisers also venture into the area for day sails and there are heavily used recreational cruising routes for sailing craft across the area linking Milford with points east, such as Tenby and the north coast of Devon and Cornwall.</p> <p>Fishing comprises of set nets inshore to the east, drift lining over most of the area, light otter trawling and heavy beam and rockhopper trawling offshore. The area is a major offshore part of the Castlemartin and Manorbier firing ranges/military practice areas.</p>
Aesthetic, perceptual and experiential qualities
<p>This area has not been visited. The area lies less than 1km from the coast south of Caldey out to around 42km. It would be expected that there would be a range of influence of the coast. Higher ridges west of Tenby and cliffs would be apparent as strong elements dominating the view at points to the north east decreasing to a thin line on the horizon only visible in good visibility to no views of land at all at 42km due to the height of the nearest cliffs and landforms. The feeling in the majority of the area would be open sea away from the influence of land, other than this visual connection.</p> <p>The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The areas are exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea.</p> <p>The number of leisure craft will be limited away from the coast but there will be occasional views of ferries, and commercial vessels using the shipping ways.</p>

Cultural benefits and services
The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of an unspoilt marine area of sea visible from the sensitive coasts of the National Park, and to spiritual services in respect of a sense of wildness and connectedness with nature.

Forces for change								
Summary	Key forces for change							
<p>Limited forces for change in deeper marine settings.</p> <p>The use by tankers has potentially adverse effects which could increase with increased traffic eg LNG.</p> <p>The proposed Atlantic Array offshore windfarm to the east could change the area's character and views.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity	Factors that detract from sensitivity							
<p>Small part in the Pembrokeshire Marine SAC.</p> <p>Land would be apparent to the east and forms part of the unspoilt view from the southern coast, including from the Pembrokeshire Coast Path.</p> <p>Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, tranquillity and remoteness.</p>	<p>Presence of commercial shipping</p> <p>Use by MOD.</p>							

No: **31** Seascape Character Area Name: **Outer Milford Haven**



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SCA 31: Outer Milford Haven



Panorama looking north over Angle Bay, refinery visible on right



Mouth of Milford Sound from near Rat Island, with ferry off St Ann's Head



In the mouth of the Sound approx 500m from shore



Sandyhaven Pill (©John Briggs)



Dale Roads with refinery in distance

Summary Description

The area forms the outer part of Milford Haven which is a large sheltered drowned ria. The mouth of the Sound has an exposed open sea aspect with strong tides and currents contrasting with the sheltered bay of Dale, small beach at West Angle Bay, and creeks such as Sandyhaven Pill. There is nature conservation interest especially around Dale and coastal forts relating to the Haven's historic strategic value. The sea area is busy with ferry and commercial shipping, with the refinery and other energy and port infrastructure in background views and the area is popular for recreation and sailing, especially around Dale.

aspectKey Characteristics

- Large sheltered drowned ria with red steep sandstone cliffs and sheltered bays and shallow creeks.
- Mouth of the Haven has an open sea character with strong currents and swell.
- Rolling inland landcover comprises open arable and pasture with low hedgebanks, with deciduous woodland in incised valleys.
- Traditional and medieval settlements.
- Historical military features and associations including forts.
- Busy natural harbour mouth with large vessels including tankers and ferries using the waters.
- Popular for sailing and other recreation especially around Dale.
- The coastal path runs around the entire sea edge.
- Wide and contained views.

Physical Influences

Milford Haven is a classic example of a ria (coastal inlet formed by drowning of a river valley). The outer zone of the southward opening Haven is incised through east-west striking Silurian (Grey Sandstone Formation), Devonian Old Red Sandstone (Raglan Mudstone Formation, Ridgway Conglomerate Formation) and Carboniferous Limestone. Red cliffs bound the wide mouth to the Haven to both west (St Ann's Head) and east (East Blockhouse Point; Rat Island 23m aod, Sheep Island 36m aod). Fallen rocks fringe the coasts. The western headland is indented by shallow bays, whilst to the east, West Angle Bay is deeply incised. On the north side of the Haven, where the headland is 50-60m aod, the land slopes down to a coast indented by bays, the river valley at Monk Haven, the sinuous sandy estuary at Sandyhaven Pill and the broad estuary at Dale. Intertidal areas are rocky or shingle around the headlands (52%) and sandy in bays (43%). Salt marsh forms locally (4%). Wind and wave erosion are reduced in the estuary mouth. The tidal estuary is a depositional area with sediment transported through traction, saltation and suspension.

The shallow (<30m) sandy sea floor slopes gently (<1°) in the estuary but has a low to moderate slope (1010o) across the channel mouth (<25m). Areas of rocks form local shallows across the channel. The seas of the Haven are sheltered from wave stress, and are strongly tidal. Tidal

currents west of St Ann's Head set northwest and southeast, with tidal flow <3 knots. In the mouth of the Haven tidal currents set northeast southwest, with tidal flow <2 knots. The tidal range is 6.1m.

The landcover is mixed farmland of arable and pasture with low cut hedgebanks and fencing in medium-sized semi-regular fields to the north and west in the Dale peninsula and around St Ishmaels and in small fields including linear burgage plots associated with the village of Angle to the east. Small, steep sided wooded valleys cut through the rolling lowland plateau to the north. North of Dale the bay turns to a large marshy area with retained water.

The waters form part of the Pembrokeshire Marine SAC. The coast to the west forms part of the Dale and South Marloes Coast SSSI, the northern coast, estuaries and wetlands form part of the Milford Haven Waterway SSSI and the south east is part of the Angle Peninsula Coast SSSI. Semi-natural habitats range from sheltered inter-tidal mud flats in the shallow embayment of Angle Bay, to lowland mixed deciduous woodland. Cliff areas comprise a mosaic of rough pasture and scrub, with species including chough and peregrine falcon. The small tributary estuary of Sandy Haven supports several species of birds during the winter. There is a HPM CZ proposed which runs from the shore at Dale [Gann Flats] out east to Watch House Point and south and then west to Dale Point. The important habitats include sheltered muddy gravels and subtidal mixed muddy sediments.

Cultural influences

Milford Haven is the fourth busiest waterway in the British Isles, with freight tonnage expected to increase in the coming years. Milford Haven is one of the few deep water natural harbours in the British Isles capable of being entered in all weathers and at any stage of the tide. It is the entrance to a classic 'harbour of refuge', home to the Royal Navy and is now an integral part of Britain's oil and gas infrastructure.

The area is an exceptionally rich area in terms of historic seascape character. Medieval burials are confirmed in West Angle Bay. A pair of blockhouses was built by Henry VIII to guard Milford Haven. A chain of forts was later built to defend it from Napoleon III - Thorn island on the south side, South Hook on the north, Stock Rock on a mid-channel rock, and Dale Fort, set within ramparts of an earlier promontory enclosure.

Scheduled monuments include:

- PE307 (promontory fort): community: Herbrandston
- PE334 (fort): community: Herbrandston
- PE411 (promontory fort): community: Angle
- PE554 (cemetery): community: Angle
- PE566 (airfield): community: Marloes and Brides (partly in SCA25 and SCA26)

Part of this area lies within the Milford Haven Waterway Landscape of Outstanding Historic Interest. Angle is a Conservation Area extending as far as West Angle Bay.

There are over 20 wrecks in the area which is symptomatic of its intensive use. These include military craft such as HMS Leda which lies in West Angle Bay and HMS Caroline and HM MGB12 which lie near the main channel. Some wrecks are in the late 19th century while others were sunk in the 1970's.

As with seascape character area 32- Milford Haven was the landing-place of Henry Tudor, Henry VII, who marched from here to defeat and kill Richard III at Bosworth field. In *Cymbeline*, Imogen refers to Milford.

The main settlement in the area is Dale which is focussed on sailing and recreation with the fringes of the rural settlement of St Ishmaels to the north. Elsewhere the settlement is dispersed rural farmsteads and dwellings. The large scale structures of the LNG terminal, refinery and other associated infrastructure lie to the east.

Access to the Haven for large tankers is through a narrow passage, passing beneath the lighthouse on St Ann's Head, although the opposing headlands stand over two kilometres apart at their narrowest point.

Commercial shipping is focussed at the approaches to the busy Milford Haven Waterway - the The Port of Milford is the third largest port in the UK and handles 29% of the UK's seaborne trade in oil and gas. The activity passing through the outer Haven relating to the port's

operation activity includes tugs, service and pilot vessels with occasional dredging. A ferry out from Pembroke Dock regularly passes through these waters. Commercial fishing vessels come out from Milford. Recreational motor and yacht cruising activity comes out of two marinas up river as well as the many swinging moorings along the waterway. There is a lighthouse on St Ann's Head at the entrance to the Milford Haven Waterway. There are significant commercial navigational lights, marks and buoys along the approaches as well other marks for recreational navigation.

Sea angling is especially popular with small craft often anchored just off St Ann's Head as well angling from rocks and beaches, especially within Angle Bay. Kayaking, rowing and windsurfing are to be found all round this area of coast. Dinghy and yacht sailing activity, including racing, takes place throughout the year. There is a heavily used cruising route from here around the coast west to Fishguard, across the Bristol Channel and to points east such as Tenby. There are also numerous routes across to Ireland. Dale Roads offers several swinging mooring with a pontoon and slipway at the village behind. There is a sailing and surfing school with attendant students out in the bay. Windsurfing is popular off Dale and Angle. There is a slipway at West Angle. Wildlife boat trips come out from Dale or pass through these waters en route for the Islands. Beach activities take place in the secluded bays of Watwick, Dale and Sandy Haven and at West Angle Bay across the water to the south, sheltered from southerly winds.

Dale Fort Field Centre lies on a headland and is used for coastal scientific research and field studies. At the Gann in Dale are mudflats and a lagoon popular for wildlife spotting. There is a prominent island - Thorn Island - just off Angle and a Martello Tower to the north.

Fishing in the area comprises of hand gathered cockles and razor clams, beach seining and beach nets, set nets in the outer waters around the mouth, lobster and crab potting and light otter trawling.

The area has a Round 24 licence for oil and gas.

Aesthetic, perceptual and experiential qualities

There is a contrast in scale and exposure between the open and exposed sea corridor at the mouth of the Haven with more contained and sheltered bays, with their channelled views. West Angle and Dale bays feel very sheltered and safe. On boast in the mouth of the Haven there can be a large swell and currents, especially to the west, which contrast with the relative calm of the harbour.

The rough and rugged textures of red sandstone cliff edges, contrast with the open rolling arable and pastoral plateau and gentle rolling hills.

At low tide, the exposed alluvial and stony beach at Dale stretches far out, with strong seaweed smells. Dale has colourful painted houses, and is busy especially in summer with boats and holiday activity. This contrasts with the more recessive parts of the area. There is a strong sense of place at Dale village, and at the old forts in varying condition.

Views vary from open framed views out to sea past the headlands of St Ann's and Rat Island, with lighthouse and masts breaking the skyline, to areas such as Dale where contained views are set against distant view of refineries. Sometimes ships, including ferries, will provide a seaborne focus.

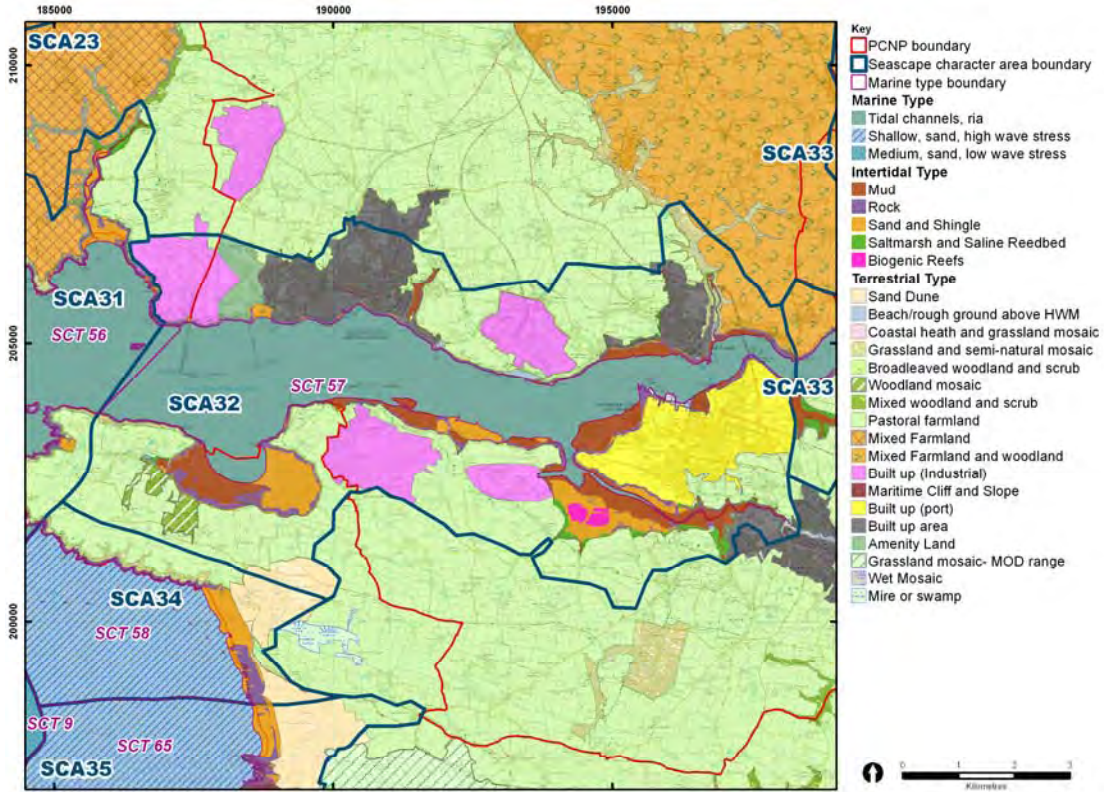
There is a strong contrast between this essentially rural, natural and tranquil area with the Inner harbours dominated by large scale energy and port facilities, settlement and associated lighting which forms a significant backdrop to many views.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and beaches, to natural heritage in the form of the rugged cliffs and bays, creeks and marshes. The cultural associations are very strong with the old villages and field patterns and association with military history and naval shipping, and the area continues to be an important focus of energy-related industry and commercial shipping activity.

Forces for change								
Summary	Key forces for change							
<p>The estuary is a sediment sink. The shoreline management plan generally states 'do nothing'. At Dale, the SMP is to 'hold the line' to protect village assets.</p> <p>Coastal erosion is causing scheduled monuments to fall into the sea eg East Blockhouse.</p> <p>The level of activity in the waters will increase as Milford Port increases traffic, especially in LNG.</p> <p>The Gann is one of the potential HPMCZ's which, if implemented, will significantly affect levels of permitted activity at Dale which is popular for sailing and recreation.</p> <p>Visitor pressure on recreational hotspots including Dale.</p> <p>Development pressure for holiday accommodation.</p> <p>Impact of industry and shipping on ecology and tranquillity.</p> <p>Possible intensification of arable farming for potatoes for example, leading to potential loss of habitat such as hedgerows.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Remote, unspoilt cliffs and sheltered bays and estuaries.</p> <p>Popular recreational destinations such as Dale.</p> <p>Nature conservation interest especially around Dale.</p> <p>Richness of military and nautical history.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>Commercial shipping and adjacent refinery and other industrial and urban land uses.</p> <p>Presence of established recreational activity.</p> <p>Contained ria enclosed by surrounding hills and plateau.</p> <p>Lighting associated with settlement, shipping and industry.</p>				

No: 32 Seascape Character Area Name: Inner Milford Haven



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SCA 32: Inner Milford Haven



Overlooking the inner Haven from near the Cleddau Bridge



Main channel with jetties in use

Summary Description
<p>This deep water ria acts as a commercial and ferry shipping channel and sheltered harbour, serving oil refinery, gas and oil storage, power station and related industrial and urban settlement with tall structures rising up above the surrounding slopes. This contrasts with indented bays and silted inlets with nature conservation interest and recreational uses, and farmed hinterland.</p>
Key Characteristics
<ul style="list-style-type: none"> • A large sheltered natural harbour of a ria with mudflats and sandy inlets, creeks and bays • Busy commercial shipping channel with tanker terminals, ferry terminal and marinas • Visually dominant refineries with gas/oil storage and power station • Gently sloping enclosing hills with pastoral landcover with arable • Historically rich area associated with the sea with the main urban settlements of Milford Haven and Pembroke Dock and historic small villages • Deciduous woodland on some sea edges, along creeks and minor valleys • Long views down the main channel and framed views from inlets and bays
Physical Influences
<p>The east-west stretch of Milford Haven is controlled by the deep seated Ritec Fault, and is incised into east-west striking Devonian Old Red Sandstone (Cosheston Group, Raglan Mudstone Formation, Ridgway Conglomerate Formation) and locally Carboniferous Limestone. The channel has deeply indented bays of incised river valleys on both sides (Angle Bay, Pennar Gut, Cosheston Pill, Cresswell and Carew rivers, Westfield Pill, Castle Pill, Hubberston Pill, Gelliswick Bay, Sandyhaven Pill). Of intertidal areas, extensive mudflats fringe the estuary along both sides (41%), and there are sandy embayments (29%), as well as areas of low energy rocky shores (23%). The tidal estuary is a depositional sediment sink, with sediment transported through traction, suspension and saltation.</p> <p>The sandy channel floor slopes moderately (1-10°) into the shipping channel (<25m), which has areas of dredging. The muddy sand to sand shallows slope only gently (<1°) into the channel. The waters are sheltered from wave stress and are strongly tidal. Tidal range is upto 6.3m.</p> <p>Surrounding hills rising to 70m AOD at Green Hill to south, and 67m at Waterston to north. The coastal plateau slopes down to the haven, steeply in places, with a variety of low cliffs, rocky or soft shores.</p> <p>Semi-natural vegetation forms a narrow strip along the shore, sometimes with deciduous woodland in more sheltered areas and steeper hillsides or narrow valleys, and silted or marshy inlets and inter-tidal mud flats in the shallow embayment of Angle Bay, and heavily silted Pembroke River, both important over-wintering grounds for waders and wildfowl. The whole of the haven is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>A great water-way, with historic links to the Atlantic, to Ireland and to other parts of the world- latterly and most evidently through the development of defensive systems, to the naval presence, to Brunel's choice of Milford as the terminus of the South Wales railway and the oil industry.</p> <p>An exceptionally dense historic seascape. The Norman period is represented by the planned village and fields at Angle. Later defensive structures reflect the establishment of Naval ship-building, at Neyland c. 1760 and at Milford Haven in 1796, relocated to Pembroke Dock in 1812. This became one of the most important naval ship-building centres in Britain. Facilities were substantially extended in 1830-32 and again in 1844. These reflect changes in sea-going vessel design. Decline set in after the introduction of the Dreadnoughts and the dockyards finally closed in 1926. The industrial settlement at Pembroke Dock was laid out from c. 1818.</p> <p>Brunel's Great Western Railway initially sponsored (1845) and eventually assumed control of (1852), the South Wales Railway, which originally intended to reach Fishguard, to tap the</p>

Atlantic and Irish traffic, but made Milford Haven its terminus; trains connected with the Atlantic steamships.

There are a number of wrecks in the waterway, two of which are aircraft. Some are dangerous to shipping.

In 1957 work began on the Herbranston refinery; oil supplies reflected shifts in global politics, such as the nationalisation of the Suez canal, which required larger tankers to make the journey around the tip of Africa viable.

Scheduled monuments include:

PE005 (Pembroke castle): community: Pembroke

PE068 (tower): community: Angle

PE069 (Angle castle - building, unclassified): community: Angle

PE186 (rath): community: Milford Haven

PE262 (enclosure): community: Hundleton

PE263 (manor): community: Hundleton (also partly in SCA 33)

PE332 (tower): community: Pembroke Dock

PE337 (fort): community: Herbranston

PE338 (fort): community: Milford Haven

PE379 (barracks): community: Pembroke Dock

PE380 (tower): community: Pembroke Dock

PE387 (observatory): community: Milford Haven

PE400 (enclosure): community: Hundleton

PE415 (dovecote): community: Pembroke

PE435 (cave): community: Pembroke

PE452 (battery): community: Neyland

This area lies within the St David's Peninsula and Ramsey Island Landscape of Outstanding Historic Interest.

Milford Haven was the landing-place of Henry Tudor, Henry VII, who marched from here to defeat and kill Richard III at Bosworth field. In *Cymbeline*, Imogen refers to Milford.

Passenger ferries run from Pembroke Dock to Ireland [Rosslare] and oil and gas tankers use the extensive large scale deep water port facilities with large jetty structures/terminals by the navigable channel. There is a coastguard station based on the haven.

The Port of Milford is the third largest port in the UK and handles 29% of the UK's seaborne trade in oil and gas. There is port operational activity including tugs, service and pilot vessels with occasional dredging. The tall refinery chimneys and structures are vertical elements and with the recently built power station stacks (75m high) are visible from long distances. These are added to by onshore wind turbines and LNG and other storage tanks situated at around 50m AOD are visible on skyline. Lighting [such as on the chimneys] is focused on Milford Haven with a degree of intensity between along transport corridors.

There are marinas at Milford marina and Neyland Yacht Haven. There is a heavily used cruising route from here around the coast west to Fishguard, across the Bristol Channel and to points east such as Tenby. There are also numerous routes across to Ireland. Angle Bay is a popular anchorage although safe anchorage. There is a slipway at Angle Point. There is a lifeboat station at Angle.

Fishing in the area comprises of hand gathered cockles and mussels and periwinkles on southern shores, beach seining and beach nets, set nets and limited areas of lobster and crab potting.

Aesthetic, perceptual and experiential qualities

This is a medium scale seascape dominated by the linear form of the main channel and industrial plant and tall chimneys. This main channel is rough textured due to man-made elements imposed on form of the natural landscape, and these highly prominent structures are only tempered by the natural form and scale of the wide ria and surrounding green hills.

The intensity of commercial shipping and scale of tankers and jetties creates an uncomfortable experience for the small boat user in the main channel.

Contrasting with the main channel, Angle Bay is a semi enclosed bay which dries, with a containing woodland belt and adjacent historic village and church, creating a much more tranquil location with a high degree of naturalness despite longer views to refineries.

The narrow pills are highly contained and natural with wooded valley sides and marshy edges, within which one can feel highly remote despite the closeness of the urban context.

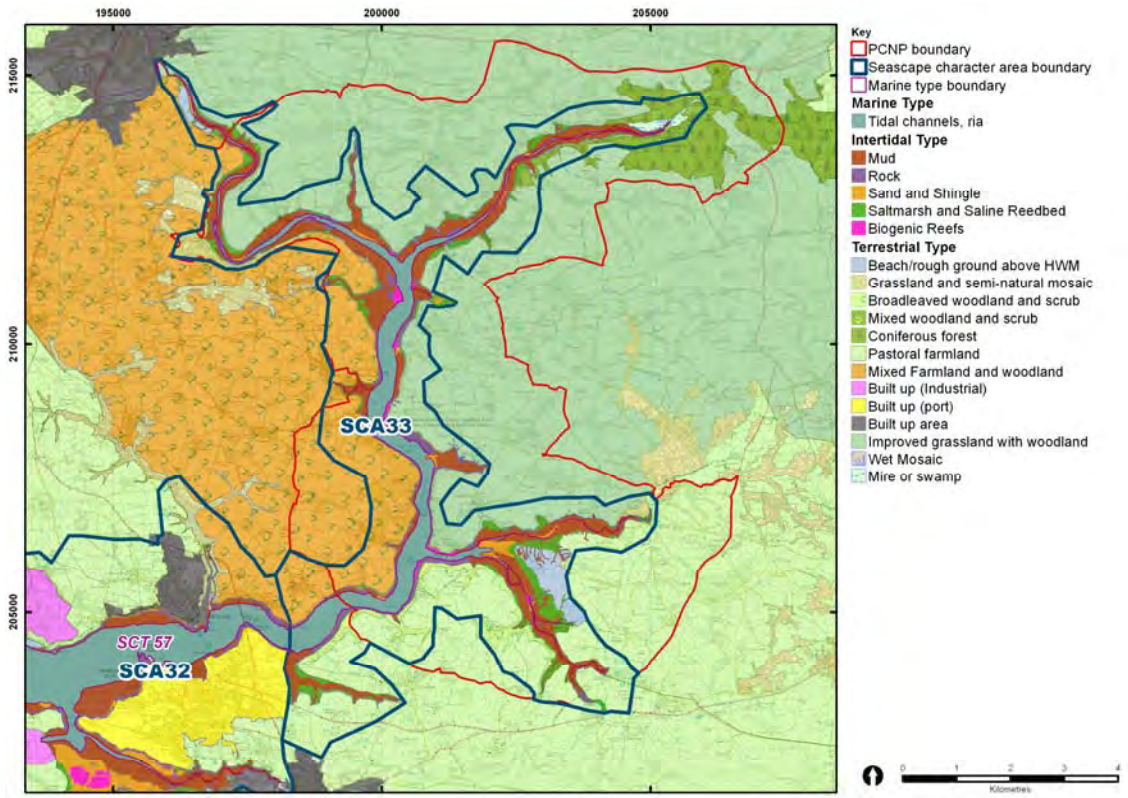
Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine facilities and urban centres, to natural heritage in the form of the scale and character of the Sound and bays and inlets, and to cultural and spiritual services in respect of the richness of historical and current uses relating to shipping, energy and military purposes.

Forces for change									
Summary	Key forces for change								
<p>The estuary is a dynamic sediment environment and will evolve with time. The Shoreline management plan states 'do nothing' along the southern coast except Angle Bay where it advises 'hold the line' to protect village assets which otherwise may be subject to landward migration of foreshore. Possible retreat of the line at Pembroke River and changes to silted areas. SMP advises 'hold the line' on the northern coast.</p> <p>Potential expansion of energy related facilities and infrastructure related to port use.</p> <p>Wind energy onshore creating clutter with existing vertical elements.</p> <p>Potential impact of industrial plant on ecology of waterway, especially on water temperatures and pollution.</p> <p>Pollution threat by tankers.</p> <p>Continuity of use of ferry terminal.</p> <p>Demand for more marina space or moorings for recreational boats.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key			Change occurring in the area affecting the selected special quality					
	Key sensitivities								
Factors which contribute to sensitivity				Factors which detract from sensitivity					
Historic character of older urban settlements and villages, historical features and key views such as to and from Pembroke				Existing impacts of towers, wind turbines, tanks and associated industrial features may appear to justify further development.					

<p>Castle.</p> <p>Use by recreational boats who can be sensitive receptors.</p> <p>Close association with Daugleddau river system, of nature conservation and recreational importance.</p> <p>Nature conservation importance of wetlands and mudflats.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p> <p>Large numbers of urban receptors and passing traffic for example on Cleddau Bridge.</p>	<p>Urban centres close to and visible from the water.</p> <p>Limited tranquillity except in sheltered bays.</p> <p>Main roads such as A477 further reducing tranquillity.</p> <p>Presence of established recreational use of waterways.</p> <p>Use by recreational motor boats.</p>
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No: **33** Seascape Character Area Name: **Daugleddau**



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SCA 33: Daugleddau



Near Picton Point on Daugleddau



Ancient oaks at water's edge



Looking east from Cleddau Bridge

Summary Description
<p>The reaches of the Daugleddau and Western and Eastern Cleddau east of Pembroke Dock comprise a unique area of upper tidal river estuary, with branched side channels, often with mud exposed and remnant quays with associated small scale commercial enterprises. The surrounding land is rolling rural lowland which is sometimes steeper at water's edge, with parkland, mixed woodland to the water's edge and mixed agriculture. This is a peaceful, enclosed and intimate landscape with channelled vistas.</p>
Key Characteristics
<ul style="list-style-type: none"> • Sheltered inland branched and sinuous tidal estuary with mudflats and marshes and no bridges. • Rolling and occasionally steep sided hills with distinctive woodland down to the water's edge. • Historic quays which contribute to the historic character and sense of place. • Historic interest including Carew Castle and tidal Mill, a promontory fort at Picton Point and Parks and Gardens. • Very dispersed and single dwellings and some small villages. • Low key recreation including small boat moorings. • Contained and channelled views and vistas. • High level of tranquillity.
Physical Influences
<p>The area comprises the tidal river of the Cleddau [the Daugleddau] with branches to Creswell and Carew Rivers, and splitting into the Western and Eastern Cleddau, with other minor pills and small inlets. The north-south stretch of the Cleddau valley is incised through east-west striking bedrock of Devonian-Carboniferous age (Old Red Sandstone (Cosheston Group), Carboniferous Limestone, Millstone Grit, Lower Coal Measures). Land either side of the river valley rises to 95m aod on western side and around 50m aod on the eastern side. The channel is joined by valleys from both sides (e.g. Cresswell and Carew rivers). Of intertidal areas, mudflats form across subsidiary valleys (59%), while river banks comprise saltmarsh (18%) and areas of sand and rock (22%). The tidal estuary is a depositional sediment sink, with sediment transported through traction, suspension and saltation.</p> <p>The inner, north-south part of the tidal estuary north of Pembroke Ferry is cut into east-west striking sandstones and limestones. The sandy river floor slopes moderately (1-10°) into the channel (<15m), bounded by areas of sand, gravel and rocks, saltmarsh and by mudflats in tributary valleys. The waters are tidal but sheltered from wave stress. The tidal range in the estuary is 6.1m.</p> <p>The waters are covered by the Pembrokeshire Marine SAC and the estuary edges by the Milford Haven Waterway SSSI. Estuarine habitats include saltmarsh, extensive inter-tidal mudflats and reed beds. The wide mudflats off Sprinkle Pill/Fowborough Point are cockle grounds. Woodland is an important feature with both coniferous and semi-natural oak woodlands, together with small areas of wet woodland especially in the upper reaches associated with the reed beds. The hinterland is both pasture, associated with smaller fields and larger hedgerows, and arable with often a more rectilinear field pattern.</p>
Cultural influences
<p>The Daugleddau forms part of the great river-system that dominates this part of Pembrokeshire, with its links to the town of Haverfordwest, the gentry landscape of the immediate area, and the industrial and military complex of the lower river.</p> <p>This seascape has evolved around riparian high-status castles and houses. Carew Castle is a ruined palatial stronghold that was the centre of a great medieval lordship on the site of earlier settlements still, one of the main power centres in west Wales. It remained a military function into the 17th century. Lawrenny Castle is a large towered and turreted 19th century mansion, now demolished. Benton Castle is a 13th century castle in re-use as a house. The grounds of</p>

Picton Castle (itself outside the SCA) come down to the eastern Cleddau.

Industrial uses of the Daugleddau are evident at the Carew tide mill, a particularly noble 19th century corn mill set on a causeway or dam across a tidal creek below Carew Castle. It formed part of the contrived garden landscape about the castle. Cresswell Quay is the site of former coal wharfs and other structures relating to its maritime and industrial past.

Scheduled monuments include:

- PE009 (cross): community: Carew
- PE263 (manor): community: Hundleton (partly in SCA32)
- PE275 (church): community: Slebech
- PE278 (promontory fort): community: Slebech
- PE280 (Socket's rath promontory fort): community: Slebech
- PE302 (building , unclassified): community: Martletwy
- PE333 (fort): community: Angle
- PE396 (house, domestic): community: Martletwy
- PE408 (promontory fort): community: St Ishmael's
- PE455 (garden): community: Martletwy
- PE529 (quay): community: Llangwm
- PE531 (hard): community: Burton
- PE546 (enclosure, defended): community: Cosheston
- 30236 Sisters' (Systerne) House (building complex/hospice): community: Martletwy

This area lies within the Milford Haven Waterway Landscape of Outstanding Historic Interest.

Cultural associations vary from the great tournament and entertainments at Carew Castle to the work of the Lawrenny-born novelist Dick Francis.

Kayaking, day boats, water skiing and jet ski activity takes place upriver from the Cleddau Bridge. Dinghy sailing can be found all along this stretch especially out of Cosheston Pill. There are several areas of swinging moorings along the whole of this stretch especially around Lawrenny and Black Tar. There is a yacht station at Lawrenny with boatyard and pontoon. A boatyard with pontoon and swinging moorings is located on the north bank at Burton. There are slipways on both banks just upriver of the bridge and at Llangwm. Angling from both the shore and boats is popular although some restrictions exist. Wildlife watching from both boats and the shore is popular.

There is a large outdoor pursuit centre up the Cosheston Pill. Coastal and inland walking is popular including on the Landsker Borderlands Trail to the east. A caravan park at Lawrenny is hidden within woodland.

Fishing in the area comprises of set nets and hand gathered cockles and mussels.

Aesthetic, perceptual and experiential qualities

The sense of scale varies from medium at locations with long framed views, through to other areas where the river is narrow and highly enclosed by wooded valley sides and the sense of containment is very high. It is a highly unified and harmonious landscape, with sinuous curves of the estuary river and its mud flats and strong horizontals in the water environment, contained and with a feeling of safety from the surrounding wooded hills.

There is a prevailing sense of a sheltered, well cared-for wooded farmland and parkland landscape of long-established private estates and secluded houses, contrasting with the more open shoreline villages and hamlets. This rural landscape is interspersed with wharves and other early industrial features which contribute to a strong sense of place.

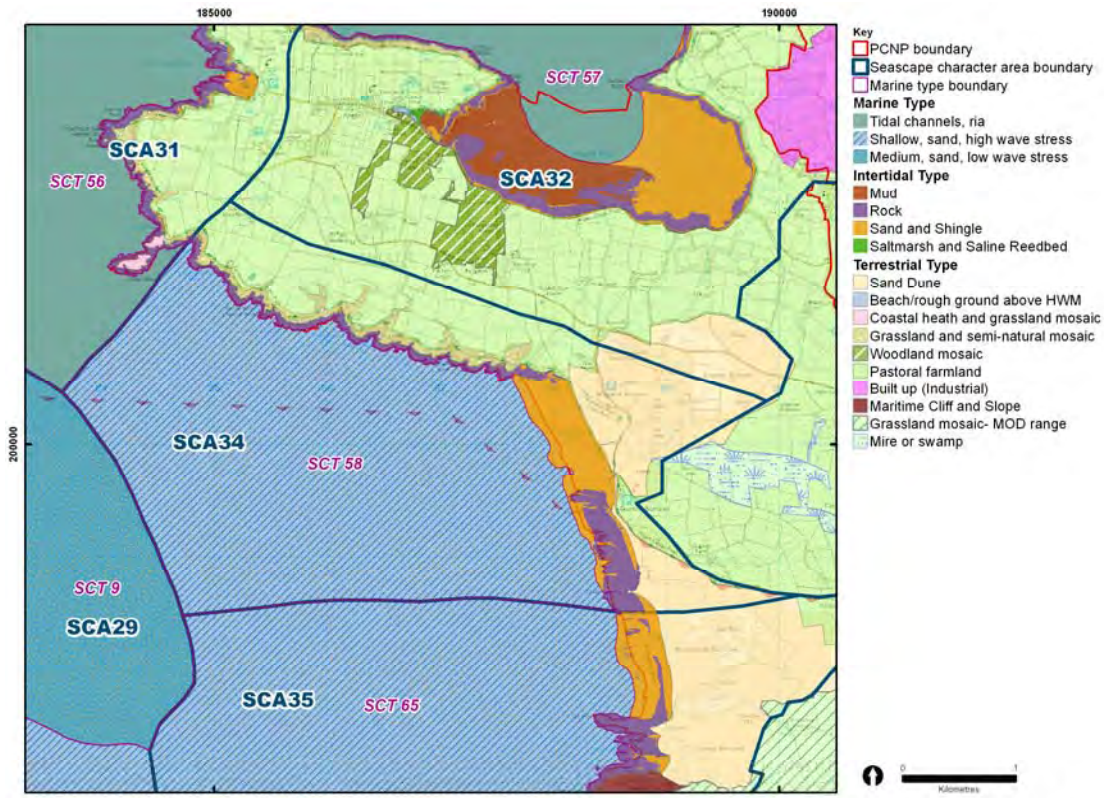
Other senses are strongly stimulated, with seaweed and salty smells, the calls of wading birds, and reflections of sunlight on the still water.

There is a strong sense of naturalness and tranquillity, only tempered by the recreational activity in good weather.

Cultural benefits and services
The area contributes significantly towards leisure and recreational services in the form of river - based recreation and walking or interaction with the natural estuarine environment, to natural heritage in the form of the unspoilt wooded estuary, and to cultural and spiritual services in respect of the richness of historical parks and gardens and associations with nautical history and connectedness with nature.

Forces for change								
Summary	Key forces for change							
<p>The river valley and estuary are dynamic sediment environments that will evolve with time.</p> <p>This area is considered underdeveloped for recreational activity and is targeted for increased promotion subject to conservation goals and preserving tranquillity/remoteness</p> <p>Demand for holiday accommodation and other visitor facilities.</p> <p>Potential conflicts between recreational activity, especially power boats, and nature conservation objectives and tranquillity.</p> <p>Pollution and other effects such as water temperature change from downstream energy facilities.</p> <p>Sensitivity of estuary and adjacent property to flooding.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors contributing to sensitivity				Factors detracting from sensitivity				
<p>Remote, unspoilt and tranquil nature of the tidal river system and landscape mosaic.</p> <p>Long channelled rural views.</p> <p>Historic features and character of castles, mills, wharves, forts and parks, gardens, and cultural associations.</p> <p>Nature conservation value of estuary and shoreline.</p> <p>Extensive and distinctive woodland cover.</p> <p>Designation of Milford Haven Waterway Registered Landscape of Outstanding Historic Interest in Wales.</p> <p>Footpaths such as Landsker Borderlands Trail as sensitive receptor.</p>				<p>Marine recreational use.</p>				

No: **34** Seascape Character Area Name: **Freshwater West**



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SCA 34: Freshwater West



looking south from Little Furznip



looking north east from Little Furznip

Summary Description
A large, exposed south and west facing coast with a beach at Freshwater West, backed by dunes and enclosed by the limestone cliffs at Linney Head to the south, with low jagged sandstone cliffs backed by semi natural vegetation on the south coast of the Angle peninsula.
Key Characteristics
<ul style="list-style-type: none"> • A large, west facing sandy beach with rocky outcrops, Freshwater West is known for large waves and strong dangerous currents with a wild character. • Behind the beach is a large dune system • Sandstone cliffs and wavecut platforms. • The coastal path rejoins the coast at this point on the east side, and continues westwards along the cliff edge • No settlement and a disused airfield. • Broad views westwards to Dale peninsula and south to Linney Head • Low key, recreational use of beaches, with car park and informal paths through the dunes • Some leisure boating and ship anchorage but restricted by use of sea by the Castlemartin MOD firing range.
Physical Influences
<p>The headland from Sheep Island (36m aod) around west-facing Freshwater West Bay towards Linney Head (40-50m aod) is predominantly in red sandstones that form irregular, steep cliffs with fallen rocks at the back of beaches. Freshwater West bay exposes older, Lower Palaeozoic mudstones and siltstones in its core, overlain to both north and to the south in Frainslake Bay by Old Red Sandstone sandstones, in east-west striking, long rocky intertidal foreshore outcrops. A submerged fossil forest is partially exposed on the beach. Extensive dune fields lie behind the bays (Broomhill Burrows, Gupton Burrows), incised by a river valley. The south facing coast of jagged, low cliffs on peninsula reaches 55m aod with gently rising ground behind to 63m AOD.</p> <p>Intertidal areas are dominated by sand in the core of the bay (53%) and between rocky cuestas, particularly extensive south of Great Furzenip in northern Frainslake Bay. Wind and wave erosion act through abrasion, attrition and hydraulic action, while sediment is transported though traction, saltation and suspension. Tidal and longshore sediment movement covers or exposes the fossil forest periodically.</p> <p>The shallow (<30m), gently to moderately westwards shelving (<1⁰-10⁰) sandy sea floor overlies an east-west striking Lower Palaeozoic - Old Red Sandstone succession of sandstones and shales. The seas are exposed to high wave stress. Tidal currents are set northwest and southeast. The tidal range is 6.5m. The beach at Freshwater West is known for its exposed character, strong waves and currents.</p> <p>The waters form part of the Pembrokeshire Marine SAC. The coast forms part of the Angle Peninsula Coast SSSI. Land habitats include coastal sand dunes, fens, reedbeds, purple moor grass and rush pastures, grassland, and maritime cliffs. The area supports numerous important species include chough, over-wintering lapwings, waders and grey seal.</p>
Cultural influences
<p>This area includes the medieval field system which extends over the Angle peninsula. The small wooden shelter at Furzenip is all that remains of a group of approximately four shelters used for the collection of seaweed and for the production of laverbread. The name 'Parsonsquarry' indicates that stone was extracted in the sea-cliff here.</p> <p>Scheduled monuments include:</p> <ul style="list-style-type: none"> • PE167 (promontory fort): community: Angle • PE264 (promontory fort): community: Hundleton • PE446 (fort): community: Angle • PE494 (battery): community: Angle • PE541 (enclosure, defended): community: Milford

The area has been used in the making of the film *Robin Hood* (2010) and the *Harry Potter* films. Two wrecks are noted in this area. One is LCG15 which was a landing craft which was lost in heavy seas with large loss of life in 1943. This led to modifications for subsequent craft used in the latter stages of the Second World War.

Motor and sail cruising takes place although navigation is dangerous close inshore due to firing range at Castlemartin MOD establishment- a wide berth is required around range. Surfing and windsurfing popular off Freshwater West beach. Kayaking takes place along the whole of this coast as does sea angling from both the shore and boat. Diving takes place off Castle Bay. Ships occasionally anchor in this bay.

There is a wide beach at Freshwater West with general beach activities. Cliff top walking around the rugged coastline is popular along the Coast Path although restrictions exist around Castlemartin MOD range. Important dunes exist behind Freshwater West beach for wildlife. There are local signs of erosion along informal footpaths through the dunes. Climbing is a popular sport around the whole of the area's cliffs.

Fishing in the area comprises of hand gathered periwinkles, set nets, lobster and crab potting and potential for light otter trawling.

The north western part of the area has a Round 24 licence for oil and gas. The public road where passing through the dune system, is recessed and largely hidden.

Aesthetic, perceptual and experiential qualities

This is an exposed south and west facing seascape feeling large scale with the wide, low sweep of the bay and extensive beaches, large waves and strong winds and currents. This gives a feeling of wildness. The relatively smooth texture of the beaches contrast with the jagged and angular form of the cliffs and the wave cut platform at Furzenip.

The dunes have a unique quality of containment at a micro scale with sheltering dips and pockets, including some sections of the road, set against the open views and exposure on higher ground and dune tops.

When the wind creates a strong surf there is a powerful auditory and sensory effect.

Views are wide and partially framed by the north and east edges of the bay, but with long views to St Anns Head and beyond to Skokhlom.

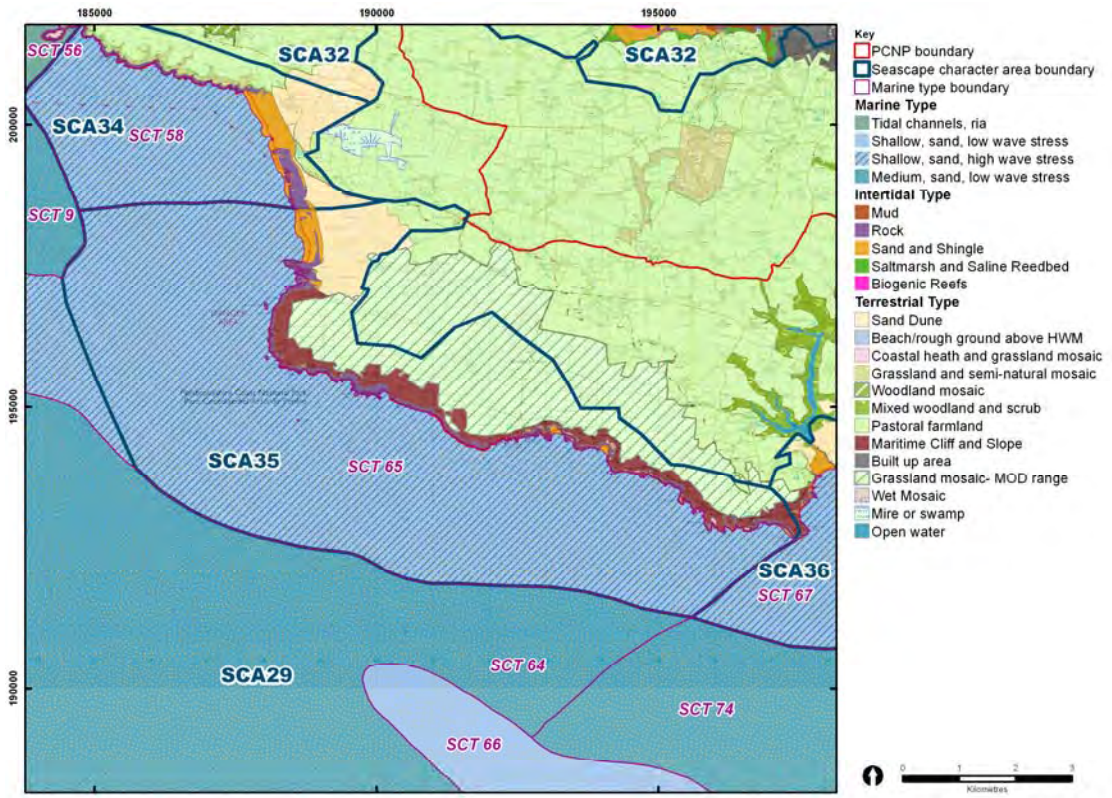
There is a sense of remoteness and tranquillity in the landscape is marred by noises from the firing ranges, with its accompanying sense of threat, and road traffic and visitor access.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of beach activities and walking, to natural heritage and spiritual services in the form of the wide beaches, sense of spaciousness at sea edge and remoteness in dunes, and connection with nature and the power of the surf.

Forces for change									
Summary	Key forces for change								
<p>The shoreline management plan recommends managed realignment in Freshwater West to allow the dune systems to function naturally.</p> <p>Visitor pressure, and natural forces from wind on dune system.</p> <p>Effect of activity on firing ranges.</p> <p>Management of the coastal landscape for nature conservation purposes.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						
	Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity					
<p>Remote, unspoilt sweep of beaches and dune system with craggy cliffs.</p> <p>Wide views across bay and to focal points such as St Ann's Head.</p> <p>Tranquillity when no firing on ranges.</p> <p>Important recreational destination.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>				<p>MOD firing ranges nearby.</p> <p>Presence of established recreational use.</p> <p>Large boat anchorage.</p>					

No: **35** Seascape Character Area Name: **Castlemartin coastal waters**



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SCA 35: Castlemartin coastal waters



St Govan's Head from the west



Looking west from St Govan's Head



St Govan's Chapel with channelled views out to sea



Rocks and arches under limestone cliffs

Summary Description

A remote, rugged coast of vertical limestone cliffs with arches and stacks, highly exposed and with shallow waters. The land area and sea are used as a military practice firing range which reduces tranquillity when in operation and restricts access to the coastal path which has panoramic sea views. The hinterland landform is a gently undulating coastal plateau around 50m AOD with large areas of semi-natural grassland.

Key Characteristics

- A rugged, rocky section of the limestone coast with steep cliffs, arches and stacks and shallow, sometimes treacherous waters.
- Gently undulating coastal plateau around 50m AOD with grassland on an exposed coastal plateau with military firing range
- No settlement
- Panoramic views from St Govans Head; very wide sea views from other areas
- Access to coastal path and navigation limited by military activity
- Remote, dark, wild coast and tranquil when military range not functioning.
- Sailing and boating is restricted by MOD activity but there are views of tankers to the west

Physical Influences

Rocky headlands (40-50m aod) in east-west striking Carboniferous Limestone, with steep to vertical cliffs 30-40 m high. The south facing, moderately straight rugged coast in well-bedded limestones is indented by small coves (Flimston, Bullslaughter bays) between minor headlands. Spectacular erosional features, such as arches and sea stacks (e.g. Elegug), fringe the coast, and fallen rocks fringe the base of cliffs. The Limestone shows karstic weathering features such as kettle holes and fissures, e.g. at Linney Head. St Govan's Head is a distinctive protruding rectangular point at the southeast headland. Extensive dune fields overlie the Limestone inland of the west coast (Brownslade Burrows, Lipton Burrows). Intertidal areas are dominated by high energy rocky shores beneath limestone cliffs (71%), while inlets have sandy bays (29%). Wind and wave erosion act through corrasion, solution, attrition and hydraulic action.

Sea floor sediment of gravelly sand covers the Limestone, shelving gently to moderately (<10°) offshore in shallow (<30m) waters. Hazardous shallows surround small islets or submerged rocks in the zone <10m depth (e.g. the Toes). The seas are exposed to high wind and wave stress. The tidal stream set west and east can be strong (<4 knots), with rough waters off Crow Rock. The tidal range is 6.6m.

The Pembrokeshire Marine SAC covers the whole marine element of this area. The coastal edge itself is covered by the Limestone Coast of South West Wales SAC, the Castlemartin Coast SPA and Castlemartin Cliffs and Dunes SSSI. Semi-natural habitats include dry heathland, sea cliff grassland, neutral grassland, lowland heathland, cliffs, rocky and sandy shores. The area

supports numerous birds including peregrine falcon, chough and skylark. Other important species include grey seal, greater horseshoe bat, marsh fritillary, butterfly, and other rare invertebrates.

Management of the area as firing ranges has meant that it has never been subjected to intensive agriculture or development with lack of public access and so supports diverse species.

Cultural influences

A seascape that indicates historic links between early Christianity and the sea but which is also a landscape of military defence, from the promontory forts of the Iron Age to modern times.

Flimston Bay Camp is one of the most spectacular promontory forts of Pembrokeshire, with three lines of curving landward defence, 120m in length, cutting off the eroding and collapsing limestone headland of Flimston Castles. St Govan's chapel is a medieval rebuilding of an early Christian hermit's cell spectacularly located in a cleft between high coastal cliffs. In later medieval times this seascape area fell within the Marcher earldom of Pembroke; remnants of the farms and hamlets settled by French, English and Flemings are evident at Flimston and Pricaston.

Later defensive purposes are evident in the Castlemartin Range, an Army Training Estate established in 1938 and used until 1945 for tank training by the Royal Armoured Corps. It was re-acquired by the War Department in 1948 and pressed back into service due to the Korean War (1950-3). This use has aided archaeological conservation due to the lack of ploughing.

Scheduled monuments include:

PE166 (enclosure): community: Castlemartin

PE167 (promontory fort): community: Angle

PE316 (promontory fort): community: Castlemartin

PE318 (Flimston Bay promontory fort): community: Castlemartin

PE319 (Crocksydam Camp promontory fort): community: Castlemartin

PE320 (Buckspool Down Camp promontory fort): community: Stackpole

PE321 (St Govan's Chapel chapel): community: Stackpole

PE447 (farmstead): community: Castlemartin

PE451 (Pricaston farmstead): community: Castlemartin

PE467 (round barrow): community: Castlemartin

PE469 (deserted medieval village): community: Castlemartin

PE533 (firing range): community: Stackpole (this also falls partly into SCA36)

PE534 (coastal battery): community: Castlemartin

There are around wrecks off the coast, some dangerous, and one, the Ionian, with remnants apparent on the rocky shore.

This coastline has attracted early tourists and writers from the late 17th century, who were awed by the majestic scenery and ancient sites found along the sea-cliffs.

The coast is in military use at the Castlemartin practice firing range with rural uses to the east and no settlement. The Pembrokeshire Coast Path runs along the eastern half of the coast but access is denied when firing. Walking the Coast path continues to be a major activity. Climbing is a popular sport around the whole of the area's cliffs.

Oil tankers and other freight ships destined for the jetties, terminals and power station in Milford Haven may be visible passing offshore to the west. Sailing and leisure boating from the Haven including Dale may pass by when military operations allow. An anchorage lies at Bullslaughter Bay in the right winds. Kayaking, however, is found around all of this coast.

Aesthetic, perceptual and experiential qualities

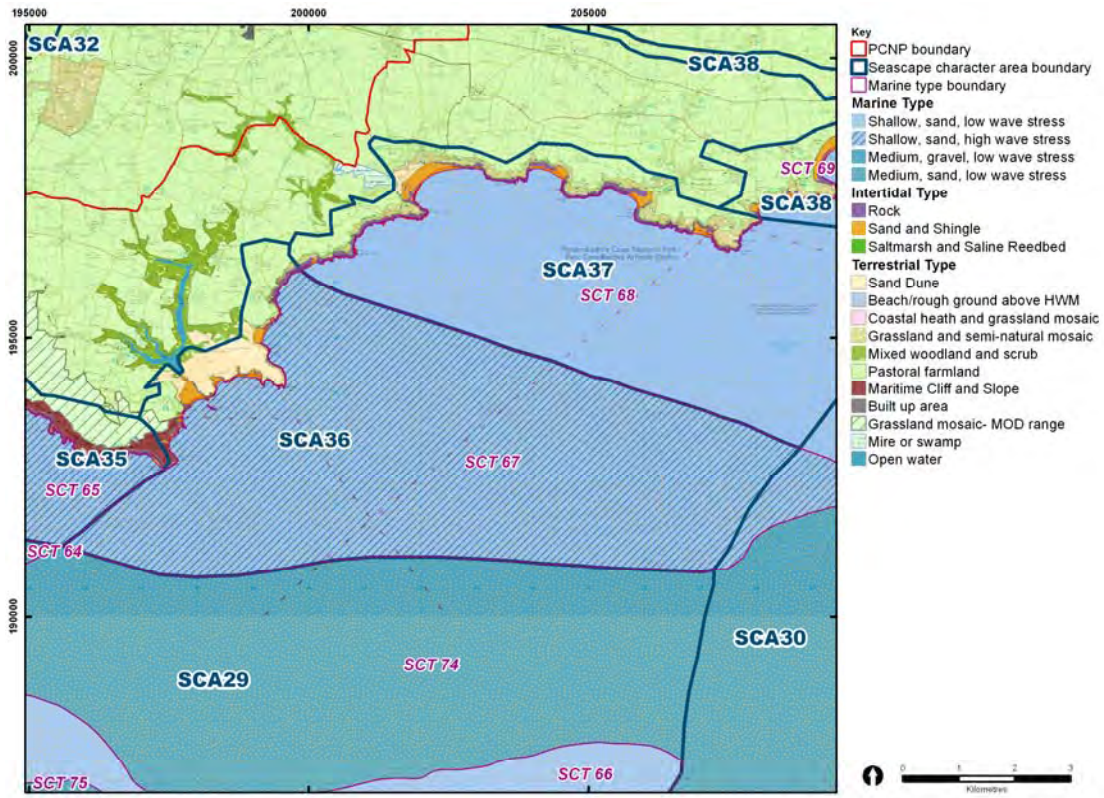
This is a large scale, simple and unified landscape, with a rough texture of the cliffs contrasting with the undulating grassland and semi-natural vegetation of the plateau. The coast is highly exposed to south and westerly winds, and the landscape of the hinterland is somewhat bleak and featureless. There is an exhilaration and sense of danger at cliff edge especially when sea is crashing against rocks and stacks and a feeling of wildness.

Key views include from the Pembrokeshire Coast Path, especially around St Govan's Head and the nearby chapel and from the Elegug Stacks. Views are limited to along this stretch of

<p>coast and out to sea. Long views are available on a clear day to Lundy Island and the North Devon coast.</p> <p>The periodic noise of heavy gunfire is discordant and intrusive but when absent, this feels like a remote, wild and rather tranquil area of the National Park.</p>
<p>Cultural benefits and services</p>
<p>The area contributes towards leisure and recreational services in the form of the coast path, to natural heritage in the form of the dramatic cliffs and nature conservation interest in the coast, sea and firing ranges, to spiritual services in respect of the sense of remoteness and St Govan’s Chapel and exposed sea views to south, and to cultural services in respect of the firing range.</p>

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky cliffs. Shoreline management plan states ‘Do Nothing’.</p> <p>Management of firing ranges has distinct effect on access and tranquillity of the area, but creates benefits to nature conservation and archaeology.</p> <p>Marine noise pollution from sonars etc.</p> <p>Marine pollution from rubbish.</p> <p>Potential for visual impact from offshore turbines (Atlantic Array) to the south east, affecting sense of remoteness and tranquillity. Potential for elevated and sustained views from Coast Path, and from key points along the coast.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors adding to sensitivity				Factors detracting from sensitivity				
<p>Remote, wild, exposed coastline.</p> <p>Spectacular indented cliffs with numerous features such as arches, stacks and caves.</p> <p>Significant nature conservation and archaeological interest.</p> <p>Openness and sustained sea views, including views on clear day to Lundy Island.</p> <p>Pembrokeshire Coast Path is a sensitive receptor.</p>				<p>Military range.</p> <p>Commercial shipping and ferries on route to Milford Haven to the west.</p>				

No: **36** Seascape Character Area Name: **Stackpole coastal waters**



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SCA 36: Stackpole coastal waters



View to St Govan's Head from Stackpole Head



Broad Haven beach looking towards Church Rock



Stackpole Quay



Barafundle Bay

Summary Description

South east facing limestone coast east of St Govan's Head with cliffs, dunes, beaches and coves popular for walking and climbing, and the main two beaches are popular. Access to the coast is limited, with one anchorage, so there is some limited recreational boat activity mainly out from Tenby.

Key Characteristics

- South east facing coast of steep limestone cliffs around 30m high interspersed with small coves and sandy beaches.
- The landcover is dune grassland, coastal grassland, improved pasture back from the coast and limited trees and scrub in sheltered valley areas.
- Settlement limited to a couple of traditional farmsteads.
- Popular car parks accessing Broad Haven beach and Stackpole/Barafundle Beaches, the Coast path with footpaths linking into Bosherton Lakes.
- Climbing is popular on the cliffs and there is kayaking and some motor and sail cruising around the coast which is protected from westerlies, especially at Barafundle Bay.
- Special relationship between Bosherton lakes inland with Broad Haven beach giving visual and sensory contrast and delight.
- Distinctive Stackpole Warren dune system as a buried archaeological landscape on cliff top and running down into adjacent valley.
- Wide, unspoilt views from the headlands to open sea, to Lundy Island and the North Devon coast, and along the coast and channelled views such as from Broad Haven beach to Church Rock.
- Feeling of tranquillity in places especially out of season, away from the Castlemartin range.

Physical Influences

The south east facing rocky headland (40-80m aod) from St Govan's Head to Stackpole Quay is composed of east-west striking Carboniferous Limestone, bounded by steep to vertical coastal cliffs. The headlands are scalloped into bays at the mouth of valleys (e.g. Broad Haven and Barafundle Bay). Stackpole Head has blowholes and caves. Off the coast there are erosional features such as rock stacks (e.g. Church Rock to the south west) and arches (e.g. Barafundle). High dunes lie adjacent to Broad Haven beach on the valley side south west of Bosherton, and at Stackpole Warren. Rocky shores (54%) fringe the Limestone cliffs, but bays have sandy shores (46%). Wind and wave erosion act through corrasion, solution, attrition and hydraulic action.

Sea floor sediment of gravelly sand covers the Limestone on a low to moderate slope (<10°) offshore. The seas are exposed to high wind and wave stress. Tidal currents set east and west along the Bristol Channel. Tidal streams set north east and south west, and a tidal race extends outside St Govan's Head. The tidal stream at Stackpole Head can reach 3 knots causing overfalls at times. The tidal range is 6.6 m.

The sea and intertidal area forms part of the Pembrokeshire Marine SAC. Most of the coast is a SAC (as part of the Limestone Coast of South West Wales). The coast to the north is part of the Stackpole Quay to Trewent Point SSSI and is an Important Bird Area as defined by the RSPB. Stackpole Warren and coast and environs are a National Nature Reserve and SSSI. The Castlemartin Coast to the south west is an SPA and an SSSI. Notable species include the chough, adder, grass snake and slow worm, with significant colonies of seabirds on the cliffs.

This landcover is dominated by Stackpole Warren, which consists of a plateau of wind-blown sand perched on the edge of high limestone sea cliffs and running down into the valley to the west. Coastal grassland extends onto Stackpole Head and along the cliff edges to the north and south. Behind this there are pastoral fields with low field boundaries with trees and scrub limited to the more sheltered valley sides.

Cultural influences

Several important prehistoric settlement and ritual sites are located at Stackpole Warren which is an example of a buried archaeological landscape. An enclosure complex has produced much worked flint, along with iron-slag and possibly spindle-whorls. It can be linked to a wider pattern of relict field enclosure. A group of prehistoric ritual sites is centred on the Devil's Quoit standing stone, sited where there is level ground between the warren and the surrounding terrain.

Stackpole was the seat of the Campbell family (Lords of Cawdor in Scotland), an 18th century mansion which was subsequently enlarged, on the undercroft of a much earlier house. It was demolished in 1963. Its distinctive field systems and farmhouses survive. Stackpole Quay indicates the recent historic use of this character area including the movement of limestone from quarry to kiln and bringing in luxury goods for the Stackpole Court estate.

Part of this area lies within the Stackpole Landscape of Special Historic Interest.

Scheduled monuments include:

- PE533 (firing range): community: Stackpole (this also falls into SCA35)
- PE367 (Stackpole Warren Hut Group): community: Stackpole
- PE316 (promontory fort): community: Castlemartin
- PE468 (round barrow): community: Castlemartin

The Lort family of Stackpole were smugglers, antiquarians and supporters of both sides in the Civil War. Julius Caesar Ibbetson's *The Guide to the Stackpole Scenery pointing to Stack Rock Pembrokeshire* (oil on canvas and water-colour and black ink, 1793) is one of the most explicitly topographical coastal views of the area from this period. Wrecks lie to the west and south of St Govan's Head- the Florrie, sunk in 1918 and the Otway, 1982.

The only settlement is a couple of small farmsteads set just back from the coast. Vehicular access and parking is at Broad Haven and at Stackpole Quay only. The former is also linked to the Bosherton Lakes making this a popular walk from the National Trust car park inland. Barafundle Beach and Broad Haven are popular for general beach activities. Coastal walking and wildlife watching takes place along the cliff tops along the Pembrokeshire Coast Path, often using Stackpole Head as a destination. Access is restricted to St Govan's Head when firing is being carried out at Castlemartin. Climbing takes place around St Govan's Head and Stackpole with clear evidence on the latter with worn routes and steel pegs along the cliff top. There is also a slipway at Stackpole Quay but access is restricted by the National Trust and this is a very small drying harbour which is usually used by one lobster potting boat.

Diving and snorkelling is popular off Barafundle beach, Stackpole Head and Broad Haven. Kayaking continues around the coast and surfing takes place off Broad Haven. There is a heavily used sailing cruising route from here around the coast west to Milford Haven [when MOD restrictions allow] and Tenby. Motor and sail cruising are popular here compared to the west with good anchorage in Barafundle Bay.

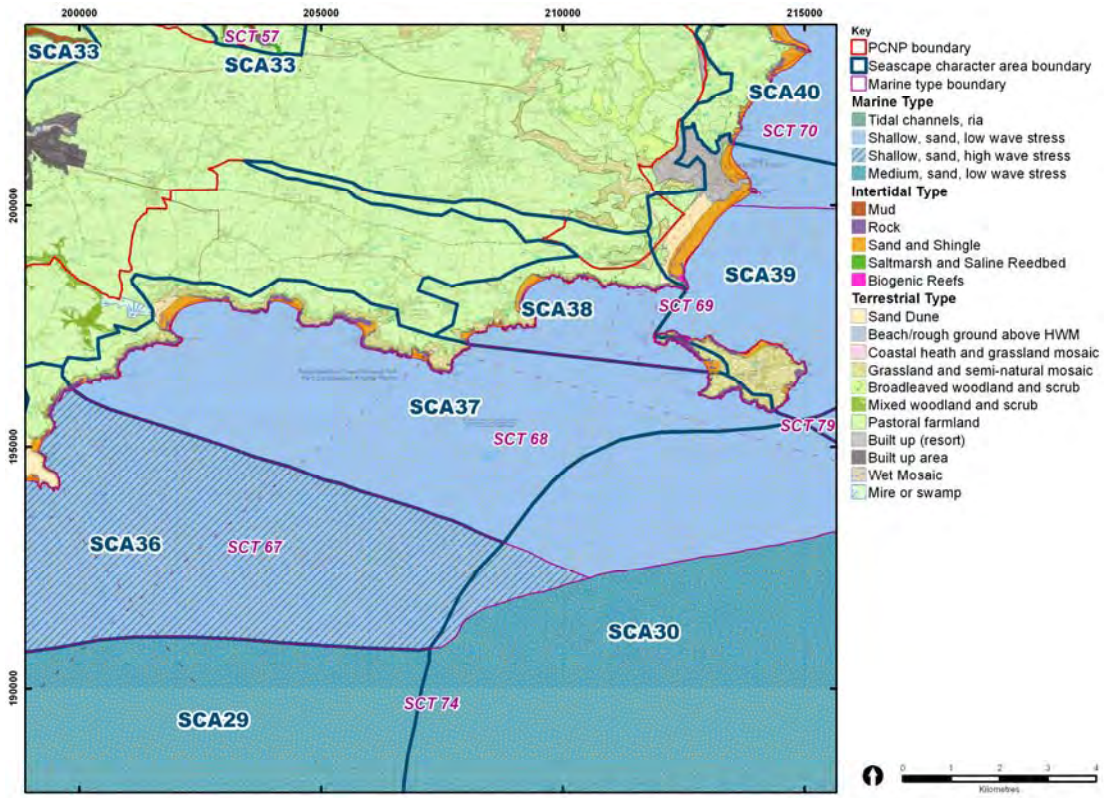
Fishing in the area comprises of beach seining and beach nets, set nets, whelk, lobster and crab potting and potential for light otter trawling. The western part of the area is used as part of the Castlemartin firing ranges/military practice areas and by the less intensively used Manorbier area to the east.

Aesthetic, perceptual and experiential qualities
<p>This coast has a strong unity with consistently moderately high grey limestone cliffs at around 30m indented with sandy beaches and deep coves. The coast is a moderate to large scale with the headlands at St Govan’s and Stackpole feeling exposed but sheltering, to an extent, the intervening coast from westerly winds. There is diversity in the landcover with sand dunes, grassland and scrub set against the cliffs. There are wide views from land out to an uninterrupted and unspoilt sea to the south, to Lundy Island, the North Devon coast and to Caldey Island to the east. Superb framed views are possible from the coves and beaches such as from Broad Haven where Church Rock is a feature. From the water the most apparent features are St Govan’s Head and Stackpole Head. Stackpole Quay is difficult to discern but lies near the distinct junction between the white limestone cliffs to the west and the red sandstone cliffs to the east [SCA 37].</p> <p>Areas are tranquil to an extent away from the car parks and beaches but this area is popular for walkers, climbers and beach users so there are often people around which reduces tranquillity. The structures at St Govan’s Head are detractors. However, the natural beauty of this coast prevails. There is a strong smell of the sea and the semi-natural grassland and dunes along the coast give a feeling of naturalness.</p>
Cultural benefits and services
<p>The area contributes significantly towards leisure and recreational services in the form of marine recreation, climbing and beach recreation, to natural heritage in the form of the unspoilt coast nature conservation interest and wildlife watching, and to cultural and spiritual services in respect of the Stackpole Estate and other historic features and connectedness with nature along this spectacular coast.</p>

Forces for change									
Summary	Key forces for change								
<p>Slow coastal erosion of rocky cliffs. The shoreline management plan states ‘do nothing’.</p> <p>Visitor pressure at car park areas and the coastal path including trampling of cliff top and dune vegetation.</p> <p>Apparent wear on cliffs through climbing with steel pins at top of cliffs (Stackpole Head).</p> <p>MOD uses to the east and west.</p> <p>Potential for visual impact from offshore turbines (Atlantic Array) to the south east, affecting sense of remoteness and tranquillity. Potential for elevated and sustained and sequential views from Coast Path, and from key points along the coast.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						

Key sensitivities	
Factors that contribute to sensitivity	Factors that detract from sensitivity
<p>Steep indented coastline with cliffs and coves forming a natural coastal edge.</p> <p>Rural pastoral character of the hinterland and dunes, with very limited built form.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p> <p>Nature conservation interest of coast, grassland and dunes.</p> <p>Special relationship between Bosherton lakes inland with Broad Haven beach.</p> <p>Distinctive, historically important Stackpole Warren dune system.</p> <p>Wide, unspoilt views from the headlands to open sea and along the coast and channelled views such as from Broad Haven beach to Church Rock.</p> <p>Feeling of tranquillity in places especially out of season, away from the Castlemartin range.</p>	<p>Presence of popular car parks accessing Broad Haven beach and Stackpole/Barafundle Beaches.</p> <p>Climbing is popular on the cliffs.</p> <p>MOD ranges and training areas nearby.</p>

No: 37 Seascape Character Area Name: **Freshwater East and Manorbier**



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SCA 37: Freshwater East and Manorbier



Manorbier beach and the Priest's Nose



Cliff path on the Priest's Nose looking west



Freshwater East looking east

Summary Description
<p>This area is located on the south facing coast, west of Tenby, centred on the historic settlements of Manorbier with its castle (and MOD establishment) and the holiday settlement of Freshwater East. This mainly accessible coast comprises mainly red sandstone cliffs with dramatic limestone features to the east and scalloped beaches with some recreational sea use, mainly emanating from Tenby.</p>
Key Characteristics
<ul style="list-style-type: none"> • South and south east facing coast with sloping deep red sandstone cliffs with strong bedding in parts and semi-natural grass and heather slopes above interspersed with scalloped sandy bays. • Dunes at Freshwater East partly built on with informal resort settlement sprawling up the hill. • Manorbier Castle is a strong coastal landmark with associated traditional settlement which is a Conservation Area. • Sea moderately sheltered from westerlies but feeling exposed on headlands and open to southerly breezes. • There is kayaking and some motor and sail cruising around the coast which is protected from westerlies, although there are no anchorages. • Accessible, well used beaches at Freshwater East and Manorbier with access elsewhere makes the coast less tranquil in parts, as does use as part of Manorbier Range. • Wide, mostly unspoilt views out to sea and along the coast including to and from Caldey Island, including to Lundy Island and the North Devon coast.
Physical Influences
<p>South east to south facing headland (~80m aod) with steep cliffs and scalloped bays in west-north west - east south east striking Old Red Sandstone, with Lower Palaeozoic (Ordovician shales, Silurian grey sandstones) exposed in Freshwater East Bay. The cliffs are distinctively angled, contrasting with the more vertical cliffs to the west, with strong bedding apparent, such as at Manorbier beach. This characteristic cliff profile is repeated on the southern coast of Caldey Island. Intertidal areas are dominated by narrow, moderate energy rocky shores (68%), with sandy coves and bays (32%). A wide rocky foreshore with rock cuestas crosses Manorbier Bay. The coast in this SCA is moderately exposed to wind and wave erosion through abrasion and attrition and hydraulic action.</p> <p>There is a gently sloping (<math><1^{\circ}</math>) shallow (<math><30\text{m}</math>) sandy sea floor covering the bedrock succession. Seas are fairly sheltered from wind and wave stress although subject to swells from the south west. Tidal streams are set north east and south west, with rough waters off West Beacon Point. The tidal range is 6.9m.</p> <p>Above the angled cliffs there are often steep semi-natural grassy slopes, some with coastal heathland. There is reverting grassland surround military installation/range on Old Castle Head. Behind these are fairly regular medium-sized fields of improved pasture or arable land with low cut hedgebanks. Dunes and scrub lie behind the beach at Freshwater East and there is also a reedbed running inland.</p> <p>The sea and intertidal area west of, and out from the coast from, Manorbier forms part of the Pembrokeshire Marine SAC. The sea and intertidal area west of Freshwater East is part of the Stackpole Quay to Trewent Point SSSI and is an Important Bird Area as defined by the RSPB. To the east the coast is Freshwater East cliffs to Skrinkle Haven SSSI. The south coast of Caldey is covered by the Carmarthen Bay and Estuaries SAC and Carmarthen Bay Important Bird Area. Bird species include chough and peregrine falcon.</p>
Cultural influences
<p>Strong linkages with the sea are evident from Prehistory (burial chamber, promontory fort) to modern times (the airfield). There are likewise strong linkages with the inland Ridgeway route, emphasised by the intervening Medieval field systems (outside the area), and with the town of Pembroke in the form of the 'Great Ditch'.</p>

Greenala Point is a multivallate promontory fort, naturally defended on the east and south by sandstone cliffs and on the north by a series of substantial defences. It was once much larger, with traces of the forts defences on at least one of the adjacent stacks.

King's Quoit is a burial chamber overlooking Manorbier Bay made up of an earthfast capstone, supported by upright slabs, one of a significant concentration of Prehistoric monuments that suggest the antiquity of the Ridgeway, the ancient route to the north of (and outside) this seascape character area. Sand incursions have masked the Prehistoric topography of much of this area. Defensive sites are much in evidence. Old Castle Head is a much-eroded cliff-top enclosure, overlooking the Bristol Channel. Manorbier Castle is an early 12th century structure commanding a quiet, wooded valley with a view of the sea beyond. The wartime Manorbier airfield on Old Castle Head still sees use in the hands of the army for flying helicopters. The strip field system extending from the Ridgeway to the sea is a marked feature, and the 'Great Ditch' which enters the sea at Freshwater East is one of the limits of Pembroke's market in its charter from Henry II. Freshwater East became a popular recreation destination in the 19th century with the growth of the naval dockyard at Milford Haven.

Scheduled monuments include:

- PE004 (Manorbier castle): community: Manorbier
- PE035 (King's Quoit chambered tomb): community: Manorbier
- PE046 (Greenala Point promontory fort): community: Stackpole
- PE367 (unenclosed hut group): community: Stackpole
- PE405 (Old Castle promontory fort): community: Manorbier
- PE545 (promontory fort): community: Manorbier

Part of this area lies within the Manorbier Landscape of Special Historic Interest, and Manorbier is a Conservation Area. Manorbier is famous as the birthplace, in 1147, of Giraldus Cambrensis, who provided a description of his native patch.

Three wrecks are recorded in the area. One lies at Old Castle Head, the HMS Tormentor, sunk in 1929, a second to the west of Barafundle Bay- the Quog, sunk in 1995, and another unnamed wreck lies off Manorbier.

The main settlements on the coast are the historic village of Manorbier protected by its impressive and elegant castle. The apparently informal settlement of Freshwater East with its mix of old small timber chalets and aspirational 20th century villas untidily climbs up the slopes within and behind the dunes and there is a large rectilinear pattern holiday village nearby on the valley floor- Trewent Park. Other settlement is rural and scattered. The military facility structures at Old Castle Head are visible on the headland, with associated regimented housing estate set back from the coast.

Kayaking is popular with surfing off Freshwater East and Manorbier beaches with windsurfing across the whole bay. Sea angling also takes place off these beaches and in Swanlake Bay, both from the shore and boats. Dive boats go out from Freshwater East. Motor and sail cruising continues across the bay with good anchorages.

Freshwater East and Manorbier Bay are popular beaches and there is also a slipway at Freshwater East. Walking the Coast Path continues and wildlife watching is especially popular south of Manorbier. Manorbier Castle is a visitor attraction.

Fishing in the area comprises of hand gathered periwinkles on the eastern stretch, beach seining and beach nets, set nets, whelk, lobster and crab. The area is used as part of the Castlemartin and Manorbier firing ranges/military practice areas. The eastern part of the area around Caldey is used both for general sailing and for sail racing. There is a heavily used cruising route from here around the coast west to Milford Haven and Fishguard (Castlemartin Range allowing), across the Bristol Channel and to points east across Carmarthen Bay. There are also numerous routes across to Ireland.

Aesthetic, perceptual and experiential qualities

The red sandstone geology results in a less dramatic coast than to the west although the angled, dark red cliffs with their steep grass slopes above are distinctive and consistent. The jagged striated platform at Manorbier is distinctive. The south facing coast feels moderately exposed, especially Castle Head, but Freshwater East is very sheltered from the south westerlies by Trewent Point. There is general consistency in landcover with coastal grassland and heath and

improved pasture although diversity is introduced at Freshwater East with rough textured dunes. Manorbier castle is a superb landmark feature. There are wide views from land out to an uninterrupted and unspoilt sea to the south and views to Caldey Island to the east, to Lundy Island and the North Devon coast. Caldey Island itself rises to the south to the red sandstone and there are unspoilt views from these cliffs to the south towards Lundy Island and along the coast west and across Carmarthen bay to Rhossili. Framed views are possible from the coves and beaches such as from Freshwater East and Manorbier. From the water the most apparent features are Freshwater East settlement and Manorbier Castle.

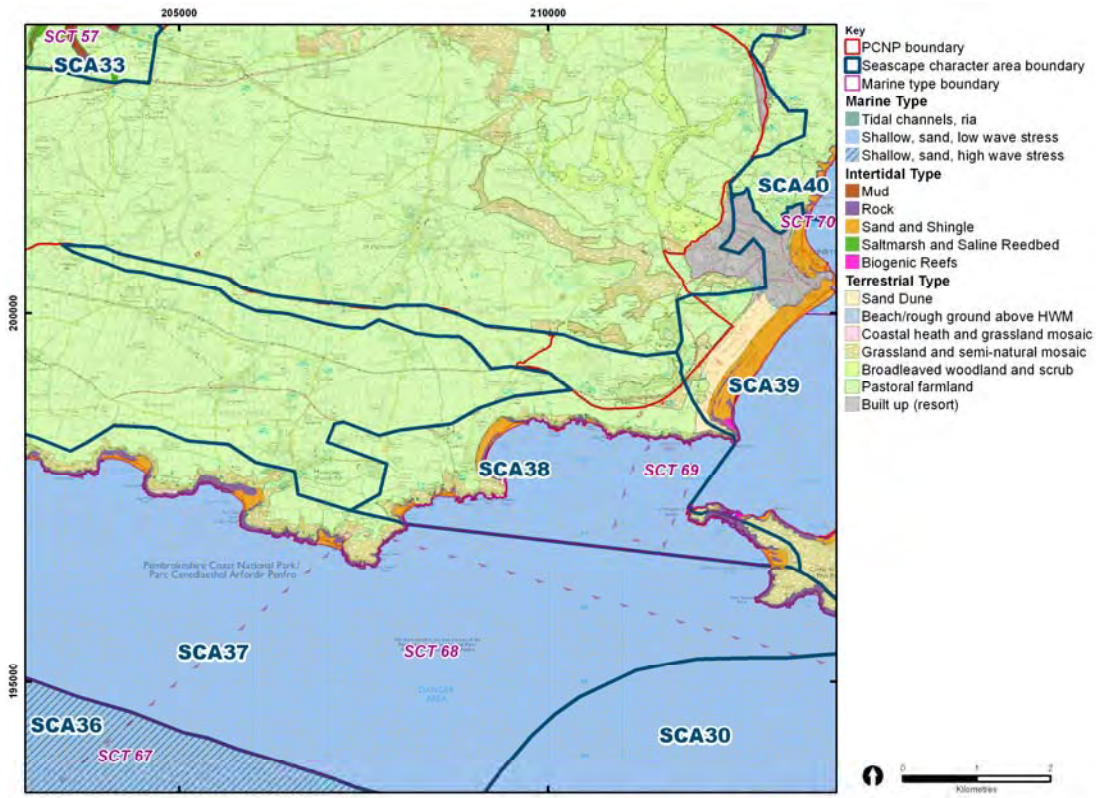
Areas are tranquil to an extent away from the car parks and beaches but this area is popular for walkers, climbers and beach users so there are often people around which reduces tranquillity. The structures at Old Castle Head are detractors. There is a strong smell of the sea and the semi-natural grassland and dunes along the coast give a feeling of naturalness in parts.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation, climbing and beach recreation, to natural heritage in the form of the unspoilt coast in parts and nature conservation interest, and to cultural and spiritual services in respect of Manorbier and other historic features and connectedness with nature along this coast which is particularly spectacular around Caldey Island.

Forces for change									
Summary	Key forces for change								
<p>Slow coastal erosion of rocky cliffs. The shoreline management plan states 'do nothing', except Freshwater East where managed realignment is specified to allow the dune system to function naturally.</p> <p>Tourism and associated built development at Freshwater East is changing the character of this area and settlement significantly.</p> <p>Visitor pressure at Freshwater East and Manorbier including wear at car park areas and the nearby accesses to the beach or cliffs and Coast Path.</p> <p>MOD uses associated with Manorbier Range.</p> <p>Potential for visual impact from offshore turbines (Atlantic Array) to the south east, affecting sense of remoteness and tranquillity. Potential for elevated and sustained and sequential views from Coast Path, and from key points along the coast.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key	Change occurring in the area affecting the selected special quality							
Key sensitivities									
Factors that contribute to sensitivity					Factors that detract from sensitivity				
<p>Natural sloping deep red sandstone cliffs with strong bedding and prominent semi-natural grass and heather slopes.</p> <p>Unspoilt sandy bays such as Swanlake Bay.</p> <p>Dramatic vertically bedded limestone cliffs, caves and arches to the east.</p> <p>Rural pastoral character of the hinterland.</p> <p>Manorbier Castle as a strong coastal landmark with associated traditional settlement which is a Conservation Area.</p> <p>Wide, mostly unspoilt views out to sea and along the coast including to and from Caldey Island, including to Lundy Island.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>					<p>Presence of Freshwater East partly built on with informal resort settlement sprawling up the hill and Trewent park holiday village.</p> <p>Accessible, well used beaches at Freshwater East and Manorbier with access elsewhere.</p> <p>Use as part of the Manorbier Range with structures at Old Castle Head.</p>				

No: **38** Seascape Character Area Name: **Lydstep Haven coastal waters**



SCA 38: Lydstep Haven coastal waters



Lydstep Bay from Lydstep Point



Looking east from Lydstep Point to Caldey Sound



Whitesheet Rock from Lydstep Point looking west

Summary Description

The area is located on the south facing coast west of Caldey Island running to Skrinkle Haven including Lydstep Point. It is a natural coast with limestone cliffs and rocky coast except at Lydstep Haven where there is a large static caravan park fronting an east facing sheltered beach and a contrasting remote beach at Sandtop Bay on Caldey. The sea feels relatively sheltered and there are small recreational craft emanating from Lydstep Haven and from Tenby, although Caldey Sound has tidal flows and is treated with caution.

Key Characteristics

- Sea enclosed by limestone mainland coast to the north and east and by Caldey Island to the east separated by Caldey Sound, with distinct east-west ridge to the north.
- Mainly rural south facing natural mainland coast with limestone cliffs with semi-natural grassland and pastoral coastal edge.
- Dramatic vertically bedded limestone cliffs, caves and arches and small east facing beaches to the west of Lydstep Point.
- Lydstep Point with cliffs, coastal quarries and limestone grassland.
- Sheltered east-facing sweep of the beach at Lydstep Haven with associated large organised caravan park and facilities.
- Remote, tranquil and isolated coast of Caldey Island with St Margarets Island and its deserted settlement.
- Dunes on Giltar Point and Penally military training to the east.
- Climbing is popular on the limestone cliffs around Lydstep Point
- Very well used commercially managed beach at Lydstep with small recreational boats emanating from here including jet skis and water skiers.
- Wide unspoilt views out to sea including to Lundy Island and the North Devon coast, and unspoilt along the coast [except to Lydstep] including to and from Caldey Island.
- Views from Pembrokeshire coastal path and to and from Caldey Island.

Physical Influences

North eastwards from Skrinkle Haven the east to south facing coast consists of east-west striking Carboniferous Limestone that makes up discontinuous cliffs between concave indented bays. The headland is 50-60m aod, with some steep to vertical cliffs <50m. There are highly distinctive vertical beds east of Lydstep Point with caves, arches and sheer cliffs including Whitesheet Rock. There are prominent headlands at Lydstep Point and Giltar Point and St Margaret's Island forms a rugged eastern outlier to Caldey Island. The bays of Skrinkle Haven and Lydstep Haven are east facing, whilst Sandtop Bay on Caldey faces west. Intertidal areas comprise narrow rocky shores (60%) and sandy bays (40%). The Limestone coast is subject to corrosion and solution, as well as hydraulic action. There are caves along the coast, e.g. Lydstep Point. Sediment transport occurs in bays through traction, suspension and saltation. This is a swash aligned coast with little net sediment drift.

The shallow (<30m) sea floor has sandy sediments overlying the Limestone, and slopes from gently (<1°) outside bays to moderately (<10°) off the rocky coasts. The seas are fairly sheltered

from wind and wave stress, particularly along the east facing coast. Tidal streams are set north east and south west. At Caldey Sound the tidal streams are upto 3 knots. A weather going stream causes a rip at the western end and steep seas can develop with the wind against the tide. The tidal range is 7.7m.

There is a gently undulating coastal plateau around 50mAOD with successive minor valleys and ridges orientated east west parallel to the northern part of the coast (land slopes *down* away from the coast at points) but reaching the coast on its eastern stretch at Giltar Point. The ridge to the north reaches over 100mAOD and forms part of the area as it has clear views of the sea and provides a backcloth to the coast.

There is semi-natural vegetation dominated by grassland on headlands and the narrow coastal cliff edge. There is calcareous vegetation between Skrinkle Haven and Lydstep Point including scrub. There are sand dunes which spread from the east at Tenby Burrows onto military installations/ranges on Giltar Point. Pastoral fields reach the coast at points, including on Caldey Island, and mixed arable/arable farming can be found on the ridge to the north. At Lydstep, deciduous woodland lies on the sheltered slopes.

The coast is all part of the Lydstep and Tenby Burrows SSSI around Lydstep Point and the cliffs are designated as SAC (as part of the Limestone Coast of South West Wales). Caldey Sound and the western environs of Caldey are covered by the Carmarthen Bay Important Bird Area. Bird species include chough and peregrine falcon.

Cultural influences

There was at one time a local trade in limestone, reflected in surviving kilns, and quarries on the north face of Lydstep Point. Lydstep House belonged in the early 19th century to the Adams family of Holyland, Pembroke. It was remodelled and extended in 1894 with a new wing and Arts and Crafts interiors. The 'Palace' is a Medieval house traditionally known as the 'Place of Arms', probably the location of the manorial court of Manorbier and Penally. The Watch Tower may have been a beacon before it became a windmill; it is now ruined. At Penally there are the World War 1 practice trenches just set back from the coast. These form clearly apparent zigzag lines in the coastal grassland.

No wrecks are recorded in this area which is an indication possibly of its relatively benign waters.

Scheduled monuments include:

- PE311 (round barrow): community: Carew
- PE403 (Lydstep palace): community: Manorbier
- PE420 (market cross): community: Tenby
- PE470 (round barrow): community: Manorbier
- PE483 (practice trenches): community: Penally

The main settlements are at Lydstep and Penally with occasional caravan sites, both set back from the coast with the largest extent of built form at the extensive fixed caravan park at Lydstep Bay. A single track railway runs just back from the coast and the A4319 also skirts around the inland extent of the area.

The most intensive use emanates from the beach at Lydstep and the caravan park which controls the associated beach, access and a slipway. Dinghy sailing, cruiser sailing and motor boats, including day boats, water skiers and jet skis [mainly from the beach at Lydstep], are present across the whole bay. There is a larger anchorage and harbour at Tenby to the north and the area is used extensively both for general sailing and for sail racing. There is a heavily used cruising route from here around the coast west to Milford Haven and Fishguard, across the Bristol Channel and to points east across Carmarthen Bay. There are also numerous routes across to Ireland. Kayaking continues around this coast. Sea angling from boats and the beach is present at Lydstep. Diving and snorkelling is popular just inside of Lydstep Point.

Other camp sites and caravan parks are present both close to the coast and in the hinterland. Climbing takes place on the limestone cliffs just to the west of Lydstep Point and to the west of Giltar Point which is also a popular spot for watching wildlife and views across the bay to Caldey Island. The Pembrokeshire Coast Path runs along the top of the cliff edge.

Fishing in the area comprises of hand gathered periwinkles, beach seining and beach nets, set nets, lobster and crab potting and there is potential for light otter trawling. The area is part of

the Manorbier and Penally military practice areas.

Aesthetic, perceptual and experiential qualities

This coast has unity with consistently moderately high grey limestone cliffs at around 30m indented with one major sandy beach and small coves. The coast is a moderate to large scale with the headlands at Lydstep and Giltar Points. The limestone geology east of Skrinkle Haven is highly dramatic with sheer cliffs, arches such as the church door and caves. It feels moderately sheltered especially at Lydstep Haven. There is some diversity in the landcover with grassland, trees and scrub set against the cliffs and some sand dunes to the east. There are wide views from land out to an uninterrupted and unspoilt sea to the south and views to Caldey Island to the east, Lundy Island and the North Devon coast on clear days. Superb views are possible from Lydstep Point south and east and St Margaret's Island forms a dramatic profile and interest in the seascape in views from the mainland coast. From the water the most apparent features are Lydstep Point, Giltar Point, St Margarets Island and the caravan park at Lydstep. This is the only significant intrusion in this coast appearing as an organised block and sweep of white static caravans climbing from the beach to the cliff tops albeit framed by surrounding woodland. Significant activity emanates from this resort development in season with the use of the bay of noisy motor boats and jet skis which reduce tranquillity on water and land.

The coast to the east is more tranquil due to footpath only access although trains and cars can probably be heard. The west coast of Caldey Island would be highly tranquil and feel remote. The small scale structures at Giltar Point and caravan parks inland are detractors but are not visible from the sea. There is a strong smell of the sea and the semi-natural grassland and rocky cliffs along the coast give a feeling of naturalness.

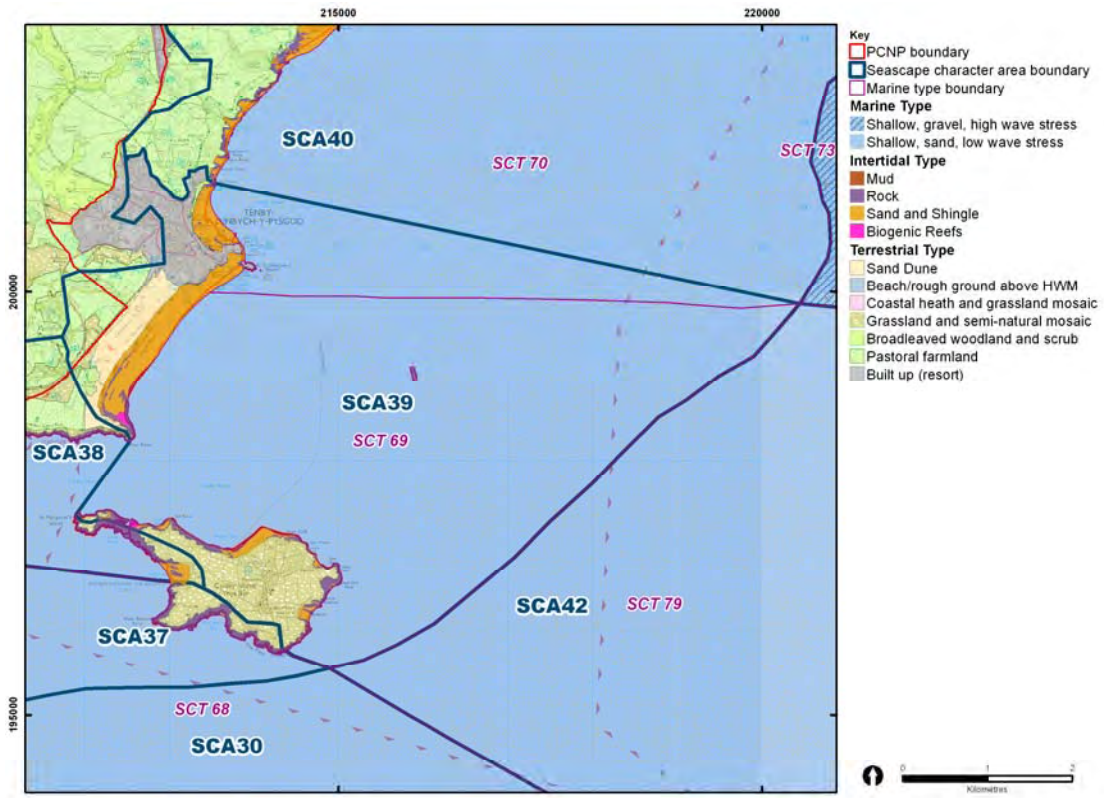
Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and beach recreation, to natural heritage in the form of the unspoilt coast in parts and nature conservation interest, and to cultural and spiritual services in respect of historic features and connectedness with nature along this coast which is particularly spectacular around Lydstep Point and Caldey Island.

Forces for change								
Summary	Key forces for change							
<p>Slow coastal erosion of rocky cliffs. Sediment drift limited. The shoreline management plan generally states 'do nothing' but to 'hold the line' locally at Lydstep Haven.</p> <p>Caravan development with associated facilities at Lydstep Haven have increased over recent years.</p> <p>Intensive recreational use at Lydstep Haven including motor based marine recreation.</p> <p>Visitor pressure at Skrinkle Haven and Lydstep Point including wear at car park areas and the nearby accesses to the beach or cliffs and Coast Path.</p> <p>Use of the Coast Path including trampling of cliff top on limestone grassland.</p> <p>Apparent wear on cliffs through climbing (Lydstep Point).</p> <p>Potential for visual impact from offshore turbines (Atlantic Array) to the south east, affecting sense of tranquillity. Potential for elevated and sustained and sequential views from Coast Path, and from key points along the coast.</p> <p>Change from pastoral to arable farming is leading to intensification with potential effects on character, pattern and nature conservation.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key	Change occurring in the area affecting the selected special quality						
Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity				
<p>Mainly rural south facing natural mainland coast with limestone cliffs with semi-natural grassland and pastoral coastal edge.</p> <p>Lydstep Point with dramatic vertically bedded cliffs and limestone grassland.</p> <p>Remote, tranquil and isolated coast of</p>				<p>Presence of Lydstep Haven with associated large organised caravan park and facilities.</p> <p>Presence of jet skis and water skiers reducing tranquillity.</p> <p>Presence of Penally military training to the east.</p>				

<p>Caldey Island with St Margarets Island and its deserted settlement.</p> <p>Wide unspoilt views out to sea including to Lundy Island and North Devon Coast, and along the coast including to and from Caldey Island.</p> <p>Views from Pembrokeshire coastal path and to and from Caldey Island.</p>	<p>A4319 and railway reducing tranquillity.</p>
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No: 39 Seascape Character Area Name: **Tenby and Caldey Island**



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SCA 39: Tenby and Caldey Island



Tenby with snipe from the south



Tenby North Beach with harbour



Tenby- sailing dinghy activity off North Beach



View across to Caldey island from South Beach

Summary Description
<p>The area is located on the western edge of Carmarthen Bay bounded by Tenby with its two large beaches on the mainland coast and by Caldey Island to the south. Tenby is a popular resort with a harbour and busy beaches and the sea is used for sailing and pleasure boating in fairly safe, sheltered waters, including trips to Caldey Island. The monastery on the island restricts visitors and the island has a tranquillity that is less apparent on the mainland. Tenby with its spire, Georgian houses and Conservation Area is an important landmark and feature on the coast.</p>
Key Characteristics
<ul style="list-style-type: none"> • A relatively sheltered area of sea on the western side of Carmarthen Bay enclosed to the south by Caldey Island and Giltar Point. • South east facing coastline with the resort town of Tenby flanked by two popular beaches. • Town with Conservation Area, church spire and Georgian Houses on cliffs dominates the coastline with St Catherine's Island particularly prominent. • The South beach is backed by dunes and links. • Caldey Island with its monastery and lighthouse is tranquil with carefully managed visitors. • There is a harbour for fishing vessels and lifeboat station and the sea is used for sailing, sail training and pleasure boating in fairly safe, sheltered waters, including trips to Caldey Island. • Long views out to sea (including to Lundy Island from Caldey) but also across to the Gower to the east.
Physical Influences
<p>The headland behind Tenby South Beach to Goskar Rock is composed of east-west striking Carboniferous Limestone 50-90m aod, bordered by cliffs at the points up to 30m. Tenby South Beach is a long east-facing bay between Giltar Point and Sker Rock/St Catherine's Island. Caldey Island lies 1km offshore to the south east, made of Limestone except in the south [in SCA37]. On Caldey Island (57m aod) the cliffs are 30-40m in height around a generally rocky coast indented with bays. Intertidal areas are dominated by the sandy bay of South Beach and coves on Caldey (64%), while rocky coasts surround Caldey Island and headland points (34%). Coastal erosion of the limestone through wind and wave action takes place through corrosion, solution and attrition. The long sandy stretch of Tenby South Beach, backed by dunes in the south (the Burrows), is subject to longshore sediment drift, with sediment transport through traction, suspension and saltation. Cliffs and headlands of the upper carboniferous sandstone and shales bound the sandy north beach at Tenby.</p> <p>The shallow (<30m) sea floor has sandy sediments overlying the limestone, and slopes from gently (<1°) in the bays to moderately (<10°) off the rocky coasts. The seas are fairly sheltered from wind and wave stress, particularly along the east facing coast. Caldey Island is more exposed. Tidal streams set to east and west, but flow north east and south west though Caldey Sound. Tidal streams through the sound can reach <2.5 knots. Tidal range is 7.7m.</p> <p>Carmarthen Bay just offshore is an SPA and an Important Bird Area holding 33,000 wintering water birds on a regular basis such as scoter. Tenby Cliffs and St Catherine's Island and Lydstep Head and Tenby Burrows are SSSIs so the area has significant nature conservation interest. Species include otter and bats.</p>
Cultural influences
<p>Tenby's promontory position makes it an ideal location to control maritime trade in the Severn; it has long-standing links with Ireland and continental Europe. Caldey Island illustrates the importance of the island community to the monastic ideal; monks first came there in the 6th century. In 1906 the Anglican Benedictines purchased Caldey. Since 1929 the Island has been owned by the Cistercian order. The present Italianate style abbey on Caldey evokes the international reach of the monastic order.</p> <p>Tenby's walls indicate its importance and the need to defend it. Tenby has been a prosperous</p>

port since the Middle Ages; the Welsh name *Dinbych y pysgod* indicates the importance of the fishing trade. It may have attracted the Vikings but was developed as a castle-borough by the Normans. It became a popular resort in the 19th century when the need for better landing facilities led to the straightening and widening of the pier. The harbour is a castellated stone structure of 1848. The town Conservation Area includes all of North Beach and its hinterland, the town walls, Castle Hill, St Catherine's Island and the built seafront facing South Beach. Its key qualities including the above and its Georgian architecture are explained in the Conservation Area statement. The land based area lies in LCA2: Tenby.

Scheduled monuments include:

- PE007 (town wall): community: Tenby
- PE163 (castle): community: Tenby
- PE424 (Nanna's Cave (Prehistoric/multi-period): community: Tenby
- PE425 (cave): community: Tenby
- PE426 (Daylight Rock Mesolithic Site - cave): community: Tenby
- PE436 (kiln): community: Penally
- PE439 (beacon): community: Penally
- PE450 (St Catherine's Fort): community: Tenby

'Etmic Dinbych' ('In Praise of Tenby') from the 9th century *Book of Taliesin* is amongst the oldest of Welsh poems. Robert Recorde (c. 1512-1558) the mathematician was brought up in Tenby. Nelson and Lady Hamilton visited it. Artists such as John Knapp Fisher have painted scenes in Tenby.

There are just two wrecks in the area- one just of Tenby and the other off Caldey.

The mainland coast is dominated by the picturesque resort and fishing town of Tenby set on rising ground and extending out to Castle Hill, a minor headland, which divides the North and South Beaches and which protects the harbour from prevailing winds. To the south there is pasture, sand dunes, dune grassland and golf links. Semi-natural grassland on sand lies on the cliffs running to Giltar Point to the south. The land based area lies in LCA2: Tenby.

Caldey Island's monastery is surrounded by mixed farmland with some deciduous woodland and coniferous plantations on land sloping from the higher southern cliffs to the lower northern shore with its sweeping sandy beach. The coastal strip consists of a semi-natural mosaic. The island is described in the landscape assessment as LCA3: Caldey Island.

There are four visitor mooring buoys near the harbour wall at Tenby. Dinghy and cruiser sailing, including racing, is popular as is the use of motor cruisers, day boats and jet skis. Wildlife and angling boat trips go regularly out of Tenby Harbour as well as the boat to Caldey Island. Kayaking takes place around the coastline of both the mainland and island. Surfing is popular, especially towards the north end of North Beach and windsurfing can be found across the whole bay. Some diving and snorkelling takes place round Catherine's Island which is immediately adjacent to Tenby. Sea angling from boats and the shore is popular and local fishing vessels have placed pots around both the mainland and island waters. Sea rowing also takes place out of Tenby.

Tenby's small harbour provides shelter for a small fleet of coastal fishing vessels and recreational craft with a slipway next to the beach. It is a popular town for tourists. There is a yacht club on the beach in the centre of Tenby. Beach activities are popular at both North and South Beaches.

The Pembrokeshire Coast Path runs behind North Beach and around the coastal edge of the town before splitting along the back of the beach or the Burrows and then running south around the cliff edge to Giltar Point.

Fishing in the area comprises of hand gathered cockles and razor clams, beach seining and beach nets, set nets, whelk, lobster and crab potting. The area is used extensively both for general sailing, sail training and for sail racing. There is a heavily used cruising route from here around the coast west to Milford Haven and Fishguard, across the Bristol Channel and to points east across Carmarthen Bay. There are also numerous routes across to Ireland.

A new lifeboat station is located at Tenby. The new structure sits alongside the older station. The lighthouse at Chapel Point on Caldey Island is an important navigational aid and landmark.

Aesthetic, perceptual and experiential qualities

The seascape has a feeling of some containment provided partly by Caldey Island but also by the headlands of Castle Hill and Giltar Point. The sense of scale is moderate with the town of Tenby giving a human reference and scale. There is diversity in coastal form and balance between the manmade and natural forms although south of Tenby there are discordant features including the school and MOD features such as the structure on Giltar Point. The mainland beaches and coastal waters are areas of activity with trips out to and around Caldey Island, especially in summer. This contrasts with the imposed and managed tranquillity of Caldey Island itself.

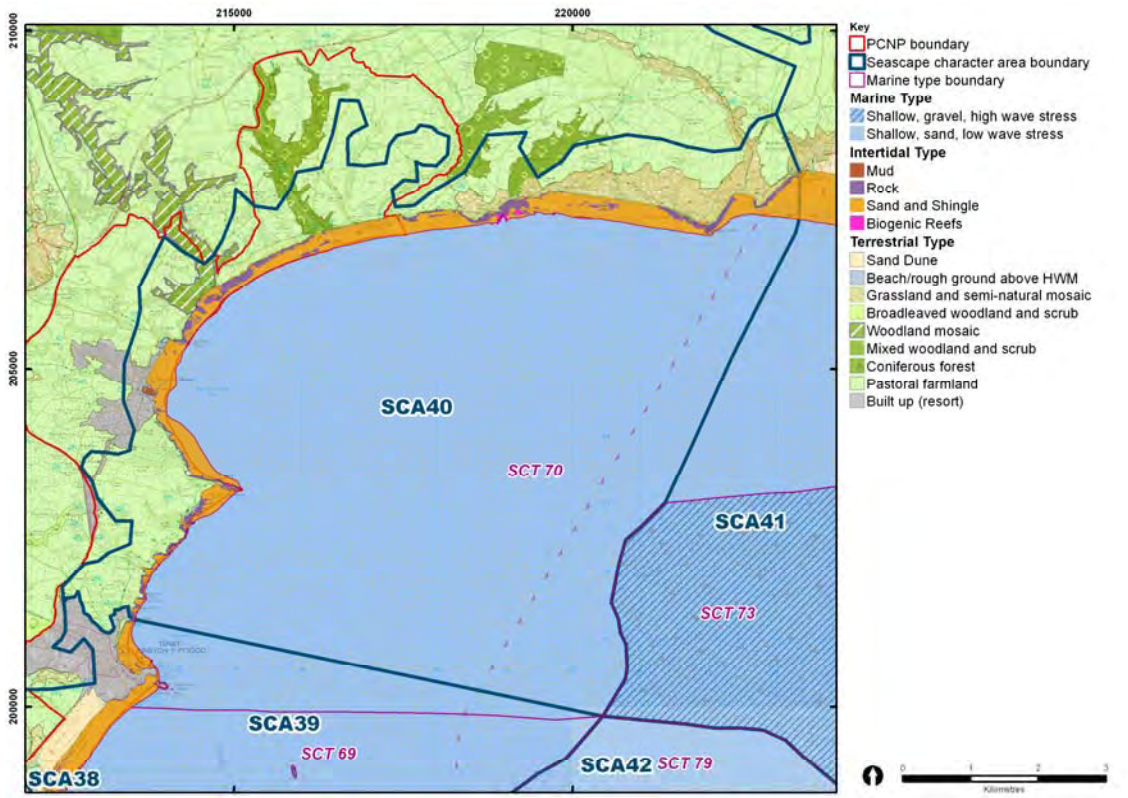
Key views are to and from Tenby, Caldey Island and Giltar Point and along the coast. The spire of the St Mary's church in Tenby is a strong landmark.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and beaches, to natural heritage in the form of the coastal SSSIs, and to cultural and spiritual services in respect of the natural beauty of the coastline with Caldey island, the monastery, and Tenby Conservation Area with its medieval walls and Georgian architecture.

Forces for change									
Summary	Key forces for change								
<p>Slow coastal erosion of rocky cliffs on Caldey.</p> <p>Shoreline management plan on Caldey in this area is Do Nothing.</p> <p>On Tenby South Beach longshore sediment movement is restrained by Castle Hill and St Catherines Island.</p> <p>Shoreline management plan recommendations are from managed realignment in the dune area to hold the line elsewhere.</p> <p>Development pressure on Tenby.</p> <p>Intense recreational use leading to erosion of coastal path and habitats such as the dunes and around Giltar Point, plus effects on marine/littoral habitats.</p> <p>Potential for visual impact from offshore turbines (Atlantic Array) to the south east, affecting sense of remoteness and tranquillity on Caldey. Potential for elevated and sustained and sequential views from Coast Path, and from key points along the coast.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						
	Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity				
<p>Undeveloped, tranquil character of Caldey Island.</p> <p>Views from Tenby, the beaches and Giltar Point to Caldey Island.</p> <p>Historic character of Tenby and associated features such as the church spire and St Catherine’s Island and their prominence along the coast.</p> <p>Historic character and religious use of Caldey Island.</p> <p>Pembrokeshire Coast Path is a sensitive receptor.</p>					<p>Presence of unsympathetic 20c housing and development in Tenby.</p> <p>The bustle of the town.</p> <p>The movement and use of the beaches and sea area reducing tranquillity.</p> <p>Presence of the Links golf course.</p>				

No: 40 Seascape Character Area Name: Carmarthen Bay west



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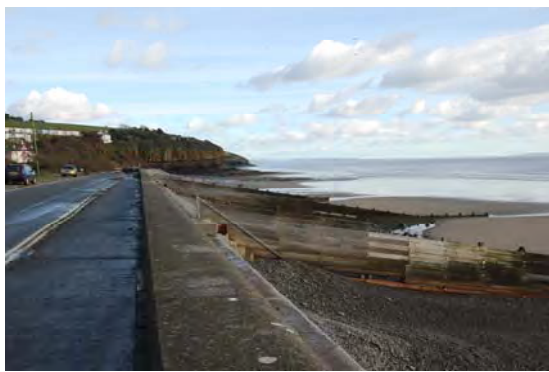
SCA 40: Carmarthen Bay west



Saundersfoot harbour and beach



Monkstone Beach illustrating natural beauty



Amroth sea wall and grounds



Caravan parks and woodland on the coast - Wiseman's Bridge

Summary Description
<p>The area is located on the north and west coast of Carmarthen Bay. It comprises an indented coast with small headlands and accessible beaches seen against a hill and valley rural backcloth. The focus is Saundersfoot which is a small resort and the area is popular for beach and marine recreation although there are quieter rural stretches of semi-natural coast.</p>
Key Characteristics
<p>An indented Upper Carboniferous rock coast of cliffs, rocky shores, a series of minor headlands and accessible beaches on the north and west side of the tidal Carmarthen Bay.</p> <p>Hill and valley hinterland of mixed farmland and mixed mature woodland running to the coast interspersed with coastal settlements and caravan parks which are noticeable and detractive in parts.</p> <p>Some sheltered bays are protected from the prevailing wind.</p> <p>A popular area for tourism due to accessibility of beaches to vehicular traffic focussed on Saundersfoot, Amroth and Wiseman's Bridge.</p> <p>Pembrokeshire Coast Path is popular starting at Amroth and running along the cliff tops linking the settlements.</p> <p>Traffic and hard edges to the coast in places reduce naturalness and tranquillity but this is present in rural stretches of coast.</p> <p>Long views out to sea across the bay to the Gower on clear days.</p>
Physical Influences
<p>The wide east to south facing Carmarthen Bay is enclosed to the west. The headland increases in height eastwards <160m aod, made of east-west striking Upper Carboniferous (Coal Measures, Millstone Grit) sandstones and shales, giving way to older, north-south striking Carboniferous Limestone in the east at Marros. Incised river valleys drain to the coast around the bay. Coastal hills lie generally close to the coast. Rocky coasts, boulder-strewn beaches and cliffs at headlands bound sandy bays at Saundersfoot and Amroth. Marros Sands is a ~2km long sand beach. Intertidal areas are dominated by sand beaches (80%), and rocky shores (19%). Sand sediment is transported and deposited through wind, wave and storm action, moving by traction, saltation and in suspension. Groynes are located on the northern coast around Amroth to modify the movement of material. Erosion of rocky coasts takes place through abrasion, attrition and hydraulic action.</p> <p>The shallow (<30m), gently sloping (<1°) sandy sea floor overlies Upper Carboniferous bedrock. The seas are fairly sheltered from wind and wave stress, particularly along the east facing coast. Tidal streams set north east and south west, with rates up to 1.5 knots in the north east flood stream. Tidal range is 7.7m.</p> <p>Carmarthen Bay is an SPA and Waterwynch Bay to Saundersfoot, the Telpyn Coast and Marros Pendine Coast are SSSIs so the area has significant nature conservation interest. Carmarthen Bay is an Important Bird Area holding 33,000 wintering water birds on a regular basis. There are mussel and barnacle communities in stretches such as around Telpyn Point. Old mine adits and tunnels along the coast are used by bats. In winter large numbers of Scoter gather offshore, but visible from the coast and gulls, oystercatcher and turnstones gather onshore.</p>
Cultural influences
<p>Saundersfoot's historic harbour area is testament to its significance as an industrial port. It exported anthracite coal from the 14th century until the mid-20th century. The colliery railways/tramways survive as relict features; part of the route follows the coastline from Saundersfoot to Wiseman's Bridge. Other exports were fire-bricks and pig-iron. The town Conservation Area extends west from the harbour to include the core of the town. Its key qualities are explained in the Conservation Area statement.</p> <p>Scheduled monuments include:</p> <ul style="list-style-type: none"> • PE019 (round barrow): community: Pendine • PE039 (chambered tomb): community: Eglwyscummin • PE053 (house, domestic): community: Eglwyscummin • PE321 (chapel): community: Stackpole

- PE458 (colliery shaft mounds): community: St Mary's Out
- PE563 (Trelessy enclosure, defended): community: Amroth

Winston Churchill visited Wiseman's Bridge in 1943 as part of the build-up to D-Day.

North of Tenby the majority of the coast is rural with a semi-natural mosaic on coastal land and cliffs backed by pasture with some arable and mixed and deciduous woodland on steep slopes and valley sides. Estate farmlands are apparent in the hinterland. Woodlands are remarkably close to the coast and trees quite large mature heights, indicating that parts are relatively sheltered from prevailing winds. Within this rural matrix lie the coastal settlements which were previously related to the coal industry are now in tourism use mainly around Saundersfoot, Amroth and Wiseman's Bridge. The key to the area's development is the availability of easily accessible beaches. Saundersfoot is focussed on a harbour with associated car park and there are caravan parks on flat and rising ground which are particularly apparent along this coastline. Elsewhere settlement is relatively sparse and scattered. The land based area lies in LCA1: Saundersfoot Settled Coast.

Kayaking continues along this coast as does sea angling from boat and shore. Surfing takes place around Monkstone Point while windsurfing takes place across the bay. Dinghy sailing and sea rowing are to be found along Saundersfoot Bay. Motor and sail cruising is popular across the whole of this area. Wildlife and general boat trips operate out of Saundersfoot Harbour. Saundersfoot and Coppit Hall are popular anchorages.

There is a small harbour at Saundersfoot providing shelter for a small coastal fishing fleet and recreational craft with a slipway. There is also a large area for hard standing boat storage adjacent to the car park. There is also a slipway at Coppit Hall. Beach activities are popular along the wide beaches which spread from Saundersfoot to Pendine. Coastal walking along the Pembrokeshire Coast Path and wildlife watching are especially popular to the north of Tenby as far as Monkstone Point and from Amroth to Pendine. There are camp and caravan sites all along this coast.

Fishing in the area comprises of hand gathered cockles off South Beach, beach seining and beach nets, set nets, whelk potting and potential for light otter trawling. The eastern fringe of the area is in the Pendine military practice and firing danger area. The sea is mainly used for general sailing based at Tenby.

Aesthetic, perceptual and experiential qualities

This indented, angular and essentially rural coast of cliffs, rocky shores and small sand bays and coves is medium scale, generally enclosed, diverse and interrupted by settlements in this part of the 'resort coast'. Framed, balanced views are generally possible although the caravan parks are discordant elements. There is activity in the tourist honeypots but elsewhere the coast is relatively tranquil although movement is usually perceptible in views along the coast and out to sea. Marros Sands appear to be relatively unspoilt.

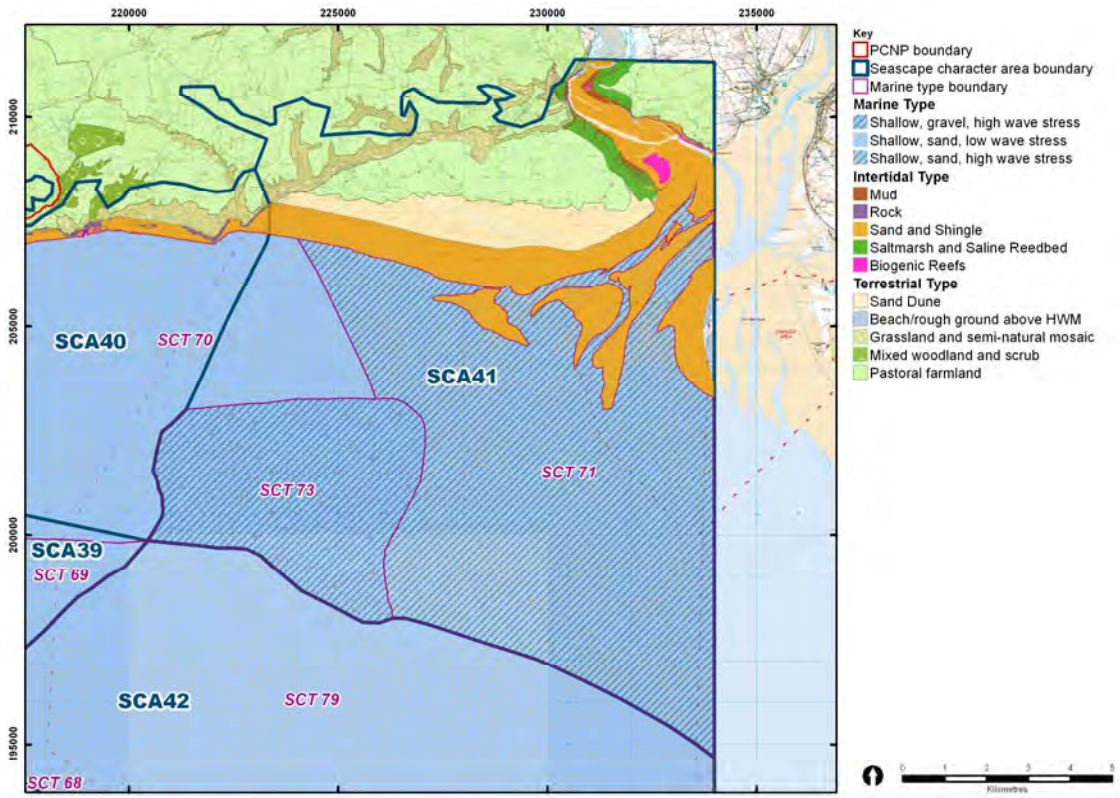
Wide views are possible across Carmarthen Bay as far as Worms Head on the Gower in clear visibility, and along the coast to Caldey Island with the spire at Tenby a particular landmark feature to the south.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of beach and marine recreation and coast path, to natural heritage in the form of the mainly unspoilt coast of cliffs, beaches and rocky shores, and to cultural and spiritual services in respect of the area's historic sites.

Forces for change									
Summary	Key forces for change								
<p>Slow coastal erosion of rocky cliffs, more rapid in the back of the small bays.</p> <p>Limited net longshore sediment drift.</p> <p>The shoreline management plan is to Do Nothing in areas of rocky cliffs and hold the line in bays (Amroth, Wiseman’s Bridge, Saundersfoot).</p> <p>Development pressure on tourist settlements. It is understood that there are plans to redevelop the whole Saundersfoot Harbour area.</p> <p>Recreational use leading to compaction and erosion of coast path and habitats.</p> <p>Intensity of tourism/ recreation reducing the area’s tranquillity.</p> <p>Potential for visual impact from offshore turbines (Atlantic Array) to the south, potentially affecting elevated and sequential views from Coast Path, and from key points.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use	
	Coastal Splendour								
	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
	Space to Breathe								
	Key		Change occurring in the area affecting the selected special quality						
	Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity				
<p>Indented coast of intricate rocky shores and sandy bays forming a natural coastal edge.</p> <p>Views framed by headlands and trees.</p> <p>Woodland cover on and near coast.</p> <p>Semi-natural mosaic along coastal edge including cliffs.</p> <p>Historic character of settlements including Saundersfoot with its harbour.</p> <p>Views out to sea, across Carmarthen Bay and along the coast.</p> <p>Nature conservation designations including marine SPA and SSSIs.</p> <p>Pembrokeshire Coast Path as a sensitive receptor.</p>					<p>Presence of resort settlements and caravan parks interrupting rural character and reducing tranquillity and scenic beauty.</p> <p>Presence of intensive recreational use at resort and other beaches and spreading along coast and coastal waters.</p> <p>Hard edge to coast including groyne reducing naturalness.</p> <p>Lighting related to settlements and roads.</p>				

No: 41 Seascape Character Area Name: Carmarthen Bay north- Pendine



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SCA 41: Carmarthen Bay north - Pendine Sands



View south east across Carmarthen Bay towards the Gower



View west



View east along Pembrey Sands

Summary Description
<p>The area is located on the eastern fringes of the study area forming the north coast of Carmarthen Bay, flanked by the Taf estuary to the east. The area is defined by the extensive flat beach and shallow waters bordered by the flat topography of the Pendine and Laugharne Burrows and grazing marshes to the north used for MOD purposes. Coastal settlement is limited to Pendine on the western edge which is a small tourist resort with associated caravan parks and slipway. Activities are focussed on the beach with some kayaking around Pendine and small craft inshore. Larger leisure boats generally avoid the shifting sands and the Taf Estuary.</p>
Key Characteristics
<p>A wide, large scale, open south facing very shallow tidal bay bordered by a wide estuary to the east.</p> <p>Highly distinctive long, wide sandy beach of hard sand which has allowed land speed record to have been set here.</p> <p>Beach backed by dunes and grazing marsh and a steep and prominent hill fringe with woodland to the north.</p> <p>The beach, dunes and part of the marsh are owned by MOD with firing range and military exercises extending out into Carmarthen Bay.</p> <p>Tourism and recreation focussed to the east at Pendine. Beach access is limited at times due to MOD restrictions.</p> <p>Wildness and tranquillity increase to the east towards the estuary.</p> <p>Long views out to sea and across to the Gower including Worms Head. Also views across to Caldey Island, Tenby and Saundersfoot to the west.</p>
Physical Influences
<p>The headland in east-west striking Old Red Sandstone (Raglan Mudstone Formation) is up to 180m aod. The coast is fringed by the 11km long straight level strip of Pendine Sands, backed by the dunes of Pendine Burrows, the grazing marsh of East Marsh and the marshy land of West Marsh before the steep hills rise to the north. The Sands extend east to the Taf estuary. At the west end of the Sands a river valley is incised east of Dolwen Point. The intertidal areas are sandy, backed by salt marsh.</p> <p>The shallow (<30m), gently sloping (<1°) sandy sea floor overlies Old Red Sandstone bedrock. The seas are exposed to high wind and wave stress. Tidal streams set east and west, with rates up to 1.5 knots in the east flood stream. The tidal range is 7.7m. Wind and wave action transport and deposit sediment through traction, saltation and suspension.</p> <p>Carmarthen Bay is an SPA and the Pembrey Coast, Taf Estuary and Laugharne and Pendine Burrows are SSSIs so the area has significant nature conservation interest. Carmarthen Bay is an Important Bird Area holding 33,000 wintering water birds on a regular basis such as scoter.</p>
Cultural influences
<p>The small harbour has been used for local sea-going trade, also evident in several shipwrecks within this seascape character area. The remains of a timber wreck have been exposed by sand-dune erosion at top of Pendine beach within the MOD area. There are in addition aircraft crash sites within this seascape character area.</p> <p>The small harbour developed into a resort in the early 20th century. The sands have been used since the 1920s for car and motor bike races as was straighter and smoother than many major roads of the time. <i>Motor Cycle</i> described them as 'The finest natural speedway imaginable'. Pendine Museum of Speed celebrates the motor racing enthusiast Malcolm Campbell, who broke the world speed record three times here, and preserves 'Babs', the motor car raced by John Parry-Thomas on the sands to the world record in 1926, and recovered from the beach. Amy Johnson and her husband unsuccessfully attempted a non-stop flight to New York from here in 1933.</p> <p>The beach has been owned by the Ministry of Defence since the Second World War; signs warn of the dangers of unexploded munitions and public access is restricted. The sea area forms the</p>

major part of the Pendine military practice and firing danger area.

Scheduled monuments include:

- PE141 (enclosure): community: Llanddowror
- CM003 (castle): community: Laugharne
- CM232 (enclosure): community: Laugharne

Beach activities take place on the sands in front of Pendine- the sands to the east, along with associated dunes, are exposed and prone to shifting. However, these sands are popular for walking and wildlife watching but some areas are restricted due to hazardous conditions. There is a slipway at Pendine and two at Laugharne.

Kayaking only extends, in the main, to waters off Pendine due to the shifting conditions of Pendine Sands, and up the River Taf. Windsurfing and rowing also take place up the River Taf. Sea angling from boats and the shore are popular activities. Motor and sail cruising takes place but craft keep further out to be well clear of Pendine Sands. Recreational cruising routes for sailing craft cross the area linking nearby anchorages [Tenby, Llanstephan and Burry Port] and Milford with the north coast of Devon and Cornwall and points east such as Cardiff.

Cockling is a viable activity for local fishermen. There is also beach seining and beach nets, set nets, whelk potting and potential for light otter trawling offshore.

Aesthetic, perceptual and experiential qualities

A large, open relatively simple bay. It is generally smooth in texture. The area feels exposed and windy with such limited shelter. There is some containment by cliffs to the west but this diminishes significantly to the east and out to sea in the very wide bay. The area has low contrasts with muted colours of the grey sea, and sand and sand dunes.

There are long views to the Gower including Worms Head to the south east and Tenby and Caldey Island to the south west. Views are mainly from the beach but also from the coast path.

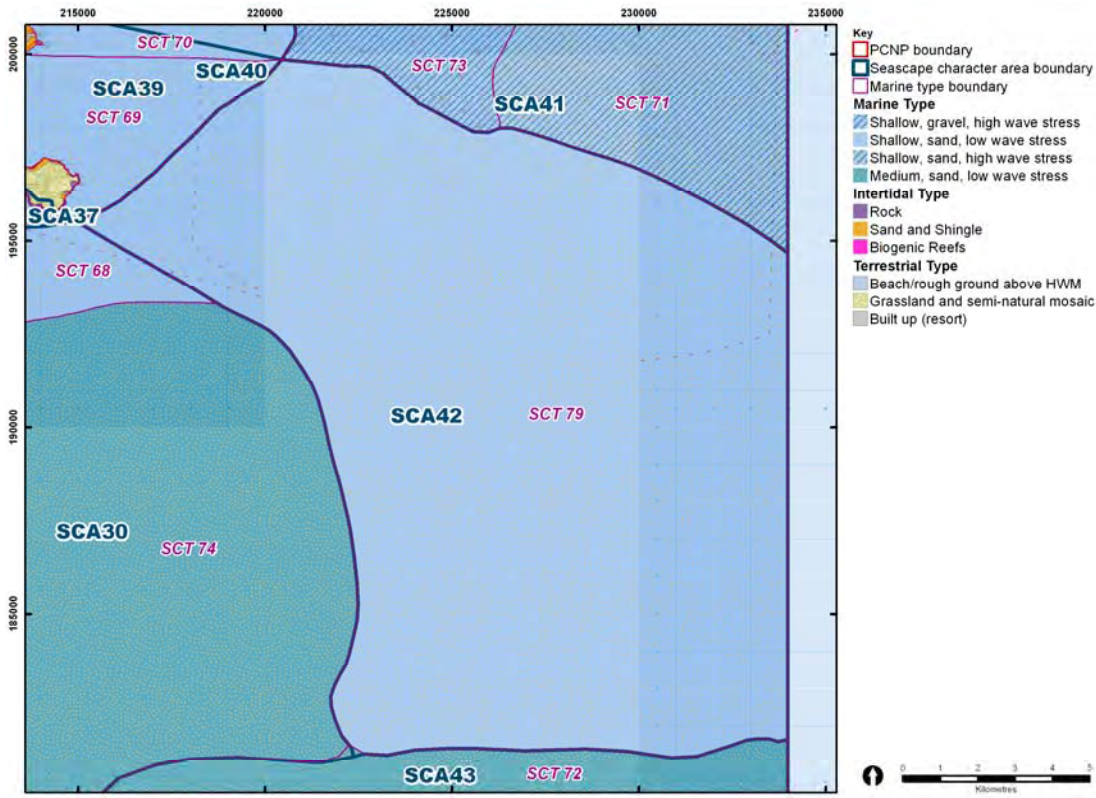
The eastern reaches of the beach especially around the estuary can feel remote, natural and very tranquil.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of the beach and marine recreation, to natural heritage in the form of the nature conservation interest of the dunes, estuary and waters of Carmarthen Bay, and to cultural and spiritual services in respect of the historical use of the beach for land speed records and motor related use.

Forces for change								
Summary	Key forces for change							
<p>The natural forces for change are the estuary which is a sediment sink, an extensive dune system which is vulnerable to storm damage and low lying grazing marsh which is vulnerable to flooding.</p> <p>The shoreline management plan recommends managed realignment, to allow the dune system to function naturally.</p> <p>MOD use degrades the aesthetic and physical character of the area, reducing tranquillity.</p> <p>Tourism use including caravan parks can be visually intrusive and reduce tranquillity.</p> <p><i>[Note: the area is outside the National Park but the forces for change on the SCA's qualities are still noted to the right]</i></p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
Key		Change occurring in the area affecting the selected special quality						
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Simple, wide, open character of the sandy bay and simple backcloth of dunes has limited capacity for visual change.</p> <p>Open estuary with wild coastal character.</p> <p>Views across Carmarthen Bay to Worms Head and to Caldey Island.</p> <p>Steep backcloth behind flat land is visually prominent.</p> <p>Wales Coast Path as a sensitive receptor.</p> <p>Grazing marsh as a rare and distinctive land cover.</p> <p>Nature conservation designations including marine SPA and SSSIs.</p> <p>Cultural connection to land speed record.</p>					<p>Presence of MOD infrastructure and use.</p> <p>Tourism infrastructure including caravan parks and poor quality buildings on seafront around Pendine.</p> <p>Beach focussed activities at Pendine.</p>			

No: 42 Seascape Character Area Name: Carmarthen Bay



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SCA 42: Carmarthen Bay



Area visible from Pendine Sands in Carmarthen Bay- Rhossili Downs in Gower lies to east and Caldey Island to west [right]

Summary Description

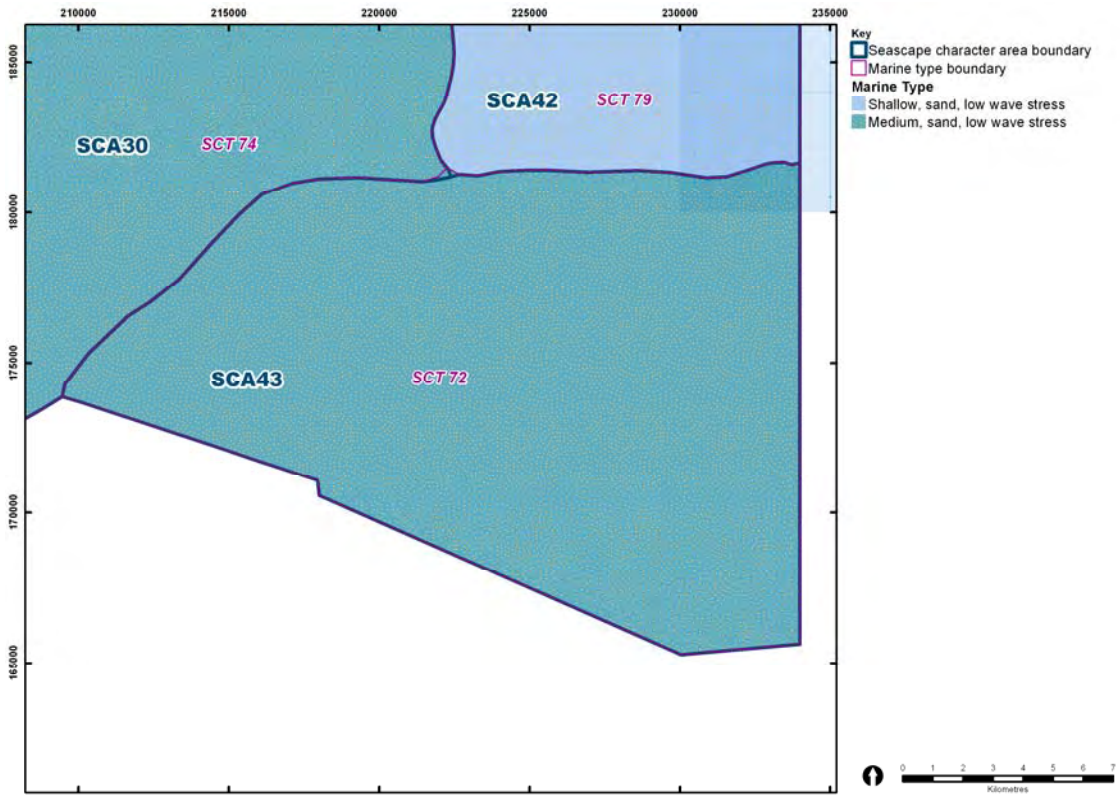
The area is located in the outer reaches of Carmarthen Bay south east of Caldey Island and west of the Gower. It is predominantly shallow water less than 30m deep with a sand seabed and low waves.

Key Characteristics
<ul style="list-style-type: none"> • Shallow outer bay less than 30m deep with gently sloping sandy sea floor • Generally low wave stress and low tide speed. • Northern and eastern parts used by overwintering wildfowl and designated nature conservation interest. • Very few wrecks. • Used for leisure sailing by larger boats and dredgers and commercial craft may be visible to the south. • Open sea with simple, open characteristics at a vast scale dominated by swell, waves and winds with a sense of remoteness. • The key visible coastal features are Rhossilli Down and the Carmarthenshire coastal hills with Caldey Island and its lighthouse plus Tenby spire to the west. • Tranquillity will be reduced by MOD use as a training area.
Physical Influences
<p>Shallow water (>30m), gently south sloping (<1°) sandy sea floor in bay that has tidal currents set around the curve of the coastline. Tidal streams at flood tides are <1.5 knots inshore. The bay is exposed to low wind and wave stress, increasing towards the east coast. Sediments cover east-west striking bedrock of Upper Palaeozoic sandstones and mudstones to Jurassic mudstones and limestones, cut by east-west faults.</p> <p>The northern and eastern half of the area is Carmarthen Bay SPA and SAC and the northern part is an Important Bird Area holding 33,000 wintering water birds on a regular basis such as scoter.</p>
Cultural influences
<p>The area forms part of the off-shore waters of the sea-way to South Wales and to Cornwall and Devon, and that is fed by the Severn and the Avon. It has strong linkages with the maritime trade-routes of western Britain since Prehistory. The cultural associations of this seascape character area are made up by the long history of sea-borne trade. There are very few wrecks in the area which is an indication of its lack of dangerous features. The only recorded wrecks are Lady Sheila and the Juta.</p> <p>The West Helwick light lies on the south eastern fringes of the area. Recreational cruising routes for sailing craft cross the area linking Llanstephan with Tenby and with the north coast of Devon and Cornwall and east to Burry Port and Cardiff. Motor cruising is also found in this area.</p> <p>Fishing in the area comprises of set nets, whelk potting and potential for light otter trawling, and long lines in the south eastern corner.</p> <p>The north and western parts of the area form the outer part of the Pendine and Manorbier military practice and firing danger areas. Dredging licences lie to the south.</p>
Aesthetic, perceptual and experiential qualities
<p>This area is in the outer reaches of Carmarthen Bay and so the land is only just apparent in some areas. The main features will be Rhossilli Downs in the Gower which are a particular landmark, nearer Caldey Island with its lighthouse and the coastal hills of Carmarthenshire, with a smudge of wind turbines visible on clear days. Tenby spire might be visible to the west. The land will appear as a single dimensional line on the horizon with simple colours. Lundy Island is visible as a simple isolated landform to the south in clear visibility.</p> <p>The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure which increases to the south. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea.</p> <p>The number of leisure craft will be limited but there may be occasional views of commercial vessels including dredgers to the south. The use of the area for military exercises and training</p>

will severely disrupt tranquillity at times.
Cultural benefits and services
The area contributes significantly towards leisure and recreational services in the form of marine recreation ie sailing and motor cruising, to natural heritage in respect of its role as overwintering area for birds, and to cultural and spiritual services in the form of the mainly unspoilt sea visible from the sensitive coasts of the Gower and the National Park.

Forces for change								
Summary		Key forces for change						
<p>Limited natural forces for change in this bay.</p> <p>Proposed wind farm at Atlantic Array to the south would change the feeling of remoteness in this area and block views to Lundy.</p> <p>Dredging reduces tranquillity.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Simple, open, wild and remote character with clear views of South Wales coast and Lundy.</p> <p>Forms part of the open setting for Carmarthen Bay overlooked by the Pembrokeshire Coast National Park and the Gower AONB contributing to the sense of remoteness and wildness in these areas.</p> <p>Nature conservation value of part of the area for overwintering birds.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p> <p>General lack of light pollution.</p>					<p>Presence of MOD use and dredging use to the south reducing tranquillity.</p>			

No: 43 Seascape Character Area Name: Bristol Channel offshore

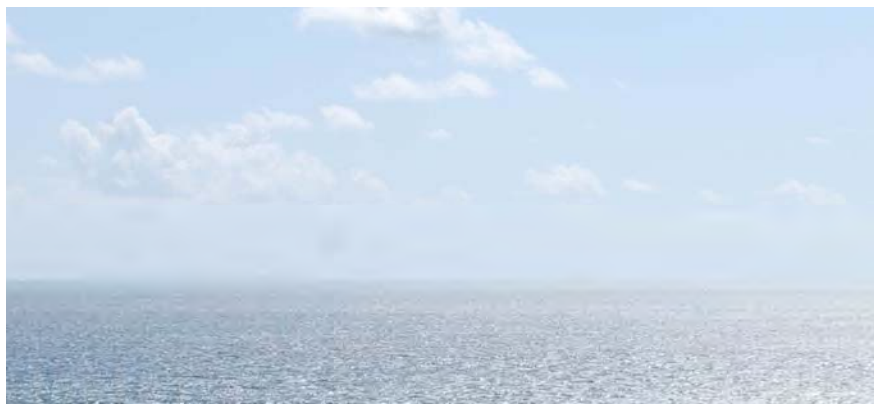


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SCA 43: Bristol Channel offshore



Area over horizon from Pendine Sands in Carmarthen Bay- Rhossili Downs lies to east and Caldey Island to west



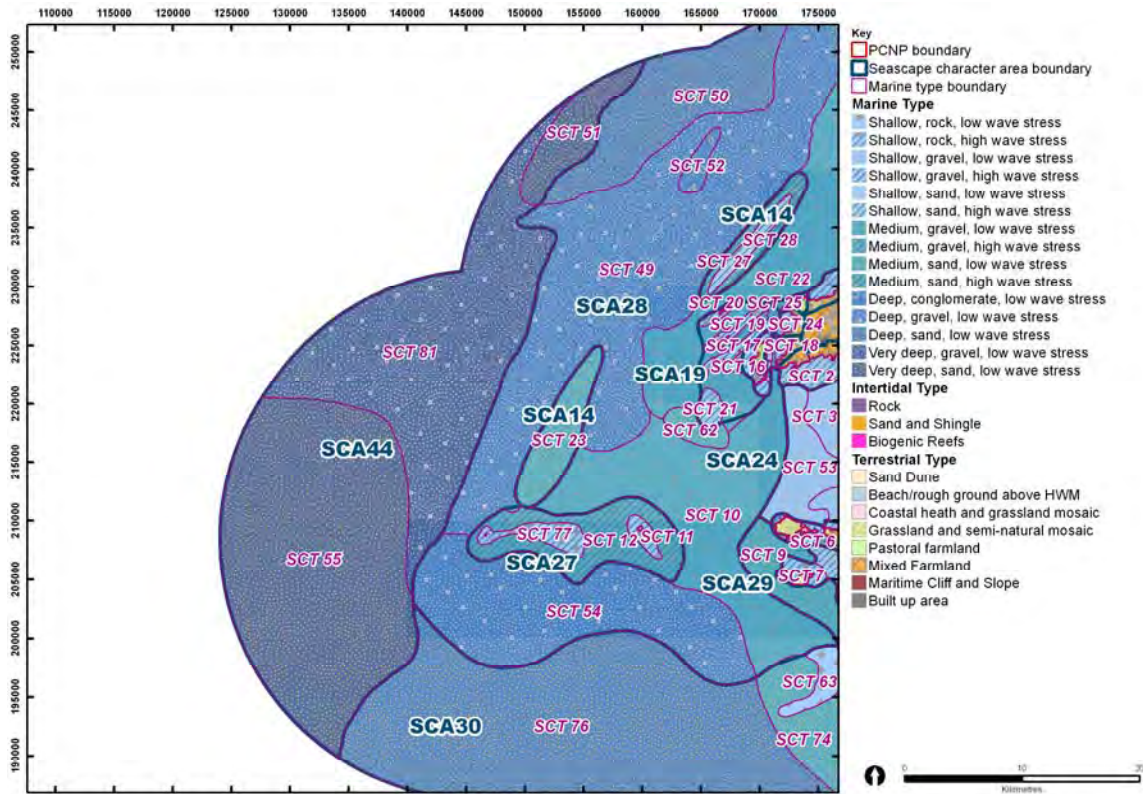
Area between coast and Lundy Island on the horizon [to the left] [View from Gower].

Summary Description
The area is located in the middle of the Bristol Channel with a seabed of sand ridges and channels which are dredged. The area is a highly exposed marine environment with distant views to land.
Key Characteristics
<ul style="list-style-type: none"> • Open sea in the middle of the Bristol Channel with medium depth water between 30 and 60m deep with a seabed of sand ridges and channels perpendicular to the east-west tidal currents. • Generally low wind stress and moderate tide speed. • Few wrecks. • Used for dredging with leisure sailing by larger boats and commercial craft may be visible to the south. • Sea with simple, open characteristics at a vast scale dominated by swell, waves and winds with a sense of remoteness. • The key visible coastal features are Rhossili Down and Lundy and the North Devon coast. • Tranquillity will be reduced by dredging activity.
Physical Influences
<p>Medium depth water (30-60m), gently south sloping (<math><1^\circ</math>) sand sea floor with topography of sand ridges/channels perpendicular to the east-west tidal currents of around 2-3knots. Seas exposed to low wave stress. Sediments cover bedrock of Triassic sandstones and halite, cut by east-west faults. Sediment transport in tidal currents, through suspension, traction.</p> <p>Species are mainly sand and bottom dwelling species such as whelks and pelagic species, interrupted by dredging operations.</p>
Cultural influences
<p>The area is part of the channel that provides the sea-way to South Wales and to Cornwall and Devon, and that is fed by the Severn and the Avon. It has strong linkages with the maritime trade-routes of western Britain since Prehistory.</p> <p>There are no identified coastal or hinterland features, as within Carmarthen Bay, though the inundated palaeolandscapes of the Bristol Channel may yield evidence for the change from hunter-gatherer societies to communities of settled farmers. Four wrecks are recorded but their identities are uncertain. The Gloriosa fishing vessel sunk in 1917 is one with some degree of certainty.</p> <p>The cultural associations of this seascape character area are made up by the long history of sea-borne trade.</p> <p>Recreational cruising routes for sailing craft cross the area linking Wales [Tenby, Llanstephan and Burry Port] with the north coast of Devon and Cornwall and motor cruisers use the area.</p> <p>Fishing in the area comprises of whelk potting, long lines in patches, and potential for heavy beam and rockhopper trawling offshore and light otter trawling.</p> <p>Dredging licences cover much of the area. The southern and western fringes form part of the Round 3 Windfarm licensed area [Atlantic Array]. The western fringe forms the outer part of the Manorbier military practice and firing danger area.</p>
Aesthetic, perceptual and experiential qualities
<p>This area lies near the middle of the Bristol Channel, 15km south east of Caldey Island at its closest point, and so the land is only just apparent. The main features will be Rhossili Downs in the Gower to the north and Lundy Island and the North Devon coast to the south. The land will appear as a low single dimensional line on the horizon with simple colours.</p> <p>The sea has a simple, consistent and unified character at a vast scale and a sense of openness, isolation and exposure. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of</p>

<p>tranquillity and sense of wildness and remoteness in this open sea.</p> <p>The number of leisure craft will be limited but there may be occasional views of commercial vessels including dredgers using the area. The use of the area for military exercises and training will severely disrupt tranquillity at times.</p>
<p>Cultural benefits and services</p>
<p>The area contributes significantly towards leisure and recreational services in the form of marine recreation ie sailing and motor cruising, to natural heritage in respect of its sense of wildness, and to cultural and spiritual services in the form of the mainly unspoilt sea visible from the sensitive coasts of the Gower and the National Park.</p>

Forces for change								
Summary	Key forces for change							
<p>Ongoing sediment deposition in the area.</p> <p>Dredging modifying and disturbing seabed.</p> <p>Proposed wind farm at Atlantic Array would change the feeling of remoteness in this area, and would affect and block views to Lundy and the North Devon Coast.</p>	<p>Special Qualities</p>	<p>Natural processes/ climate change</p>	<p>Visitor pressure</p>	<p>Marine use- commercial and fishing</p>	<p>Offshore energy or minerals</p>	<p>Development pressure</p>	<p>Land management changes</p>	<p>MOD use</p>
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity					Factors that detract from sensitivity			
<p>Simple, open, wild and remote character with views of South Wales coast and Lundy.</p> <p>Forms part of the open setting for Carmarthen Bay overlooked by the Pembrokeshire Coast National Park and the Gower AONB contributing to the sense of remoteness and wildness in these areas.</p> <p>Pembrokeshire and Wales Coast Path as a sensitive receptor overlooking the area at a distance.</p> <p>Lack of light pollution</p>					<p>Presence of dredging use reducing tranquillity.</p>			

No: 44 Seascape Character Area Name: **Western offshore- very deep water**



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SCA 44: Western offshore - very deep water

Summary Description
This offshore open sea is located on the furthest westernmost part of the study area running upto territorial limits. It is very deep water on a gravelly sand seabed and is used by shipping as safe water west of the Smalls, having a traffic separation zone.
Key Characteristics
<ul style="list-style-type: none"> Very large area of sea, over 100m deep on gravelly sand and sand seabed with low wave stress. There are a moderate number of wrecks in the area. A very small part is in the Pembrokeshire Marine SAC. The area is used by commercial shipping with a traffic separation zone west of the Smalls, for ferries and for fishing. Land would be apparent to the east and forms part of the unspoilt view on the horizon from the western coast, including from the Pembrokeshire Coast Path. Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, tranquillity, remoteness and exposure. The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.

Physical Influences
<p>This is a zone of very deep water (>100m) with a gently NE-SW sloping (<1°) sea floor at the western margin of the study area, extending westwards from 20km off the Ramsey Island to around 46km. The sandy gravel sea floor that extends northwards from Milford Haven into Cardigan Bay is replaced towards the south by finer, gravelly sands then sands, which trend across from Carmarthen. The area has low wave stress.</p> <p>The offshore bedrock beneath sea floor sediments comprises Mesozoic (Permian-Jurassic) mudstones, sandstones and limestones in the south, overlain by Cenozoic (Palaeogene-Neogene) mudstones, sandstones and lignite over the northern part. The bedrock is cut by north east-south west faults.</p> <p>The eastern central fringe of the area is part of the Pembrokeshire Marine SAC.</p>
Cultural influences
<p>The area forms part of the deep water route where the Bristol Channel joins the Irish Sea - as such part of the coastal trading seascape, and also the 'home waters' seascape of Britain and northern Europe as well as of the global deep-water trade. The cultural 'story' of this area derives from its associations with maritime trading, warfare and emigration, and always with Pembrokeshire's role on aviation, particularly during the war years.</p> <p>There are a number of wrecks. These include those lost in war- the Wilson, an Irish schooner scuttled by a U boat (1918), a u boat, the U 84 rammed (1918), Empire Frost lost in an air raid (1941), Beemsterdijk (1941) and the Churchill (1944). More recent losses include the Cawsand Bay (1984), Solitude (2001) and the Arca, a trawler which foundered (2007).</p> <p>The ferry route between Pembroke Dock and Rosslare crosses the area. There is a north/south commercial shipping traffic separation area west of the Smalls. Recreational cruising routes for sailing craft cross the area linking Wales with Ireland and there is motor cruising.</p> <p>Fishing in the area comprises of whelk, lobster and crab potting, drift lining to south, heavy beam and rockhopper trawling offshore and light otter trawling inshore.</p> <p>The area has a Round 24 licence for oil and gas in its northern waters and is a restricted area in this location.</p>
Aesthetic, perceptual and experiential qualities
<p>This area has not been visited. It is in the outer reaches of the study area at least 20km west of Ramsey Island and it would be expected that only the higher hills such as Carn Llundain or Carn Llidi and the tops of cliffs would be apparent as a single dimensional line on the horizon in good visibility. These would disappear below the horizon in the outer reaches of the area.</p> <p>The sea has a simple, consistent and unified character at a vast scale and a significant sense of openness, isolation and exposure. Its qualities are determined entirely by the natural forces of water, through swell and waves, and wind. The area is exposed to the south westerlies and in poor weather conditions the sea is likely to feel threatening. There is a strong likelihood of tranquillity and sense of wildness and remoteness in this open sea.</p> <p>The number of leisure craft will be limited but there will be occasional views of commercial vessels using the shipping ways west of the Smalls. The lighthouse just to the east will be highly apparent at night.</p>
Cultural benefits and services
<p>The area contributes towards leisure and recreational services in the form of marine recreation, to natural heritage in the form of an unspoilt marine area of sea visible in the distance from the sensitive coasts of the National Park, and to spiritual services in respect of a sense of wildness and connectedness with nature.</p>

Forces for change								
Summary	Key forces for change							
<p>Limited forces for change in deep seas.</p> <p>The area has a Round 24 licence for oil and gas</p> <p>The use by tankers has potentially adverse effects which could increase with increased traffic eg LNG.</p>	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes	MOD use
	Coastal Splendour							
	Islands							
	Diversity of Landscape							
	Remoteness, Tranquillity and Wilderness							
	Diverse Geology							
	Richness of Habitats and Biodiversity							
	Rich Archaeology							
	Distinctive Settlement Character							
	Cultural Heritage							
	Accessing the Park							
	Space to Breathe							
	Key		Change occurring in the area affecting the selected special quality					
Key sensitivities								
Factors that contribute to sensitivity				Factors that detract from sensitivity				
<p>A very small part is in the Pembrokeshire Marine SAC.</p> <p>The area forms part of the unspoilt view on the horizon from the western coast, including from the Pembrokeshire Coast Path.</p> <p>Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, tranquillity, and remoteness.</p> <p>General lack of light pollution.</p>				<p>Presence of commercial shipping with a traffic separation zone</p> <p>Presence of the Smalls lighthouse to the west.</p>				

APPENDICES

Appendix A Data and Sources

Pembrokeshire Seascape Character Assessment

DATA SOURCES FOR BASELINE

INFORMATION

Key datasets	Data Layers	Source	Projection	Source	Path
	Hydrospatial Chartered Rasters	Seazone	WGS84	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\Chartered Raster
	Hydrospatial Chartered Vector Features	Seazone	WGS84	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial\
	OS map - 1:250,000	Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS250K
	OS map - 1:50,000	Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS50K
	OS map - 1:25,000	Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS25K
	Mean High Water	Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS_mastermap\wales_osmm_mhw
		Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS_boundaryline\hwm
	Mean Low Water	Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS_mastermap\wales_osmm_mlw
		Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS_boundaryline\mlw
	12 Nautical Mile Territorial Sea limit	Seazone	WGS84	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial\Welsh_12nm
		UKHO	BNG	CCW	M:\GIS_Data\Live\Hydrographic\UKHO\UKHO_territorial_limits\lines\nm1_12_lines
		UKHO	BNG	CCW	M:\GIS_Data\Live\Hydrographic\UKHO\UKHO_territorial_limits\polygons\nm1_12_polys
		UKHO	BNG	CCW	M:\GIS_Data\Live\Hydrographic\UKHO\UKHO_territorial_limits\polygons\nm12_poly
	UK Continental Shelf Limit	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial

Key datasets	Data Layers	Source	Projection	Source	Path
	Renewable Energy Zone	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Unitary Authority Boundaries	Ordnance Survey	BNG	CCW	M:\GIS_Data\Live\Ordnance_Survey\OS_boundaryline\Unitary_Authority
	Harbour Limits	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Shoreline Management Plan	Councils		Contractor	Web for detailed information. PCNPA for GIS polygons
	Coast Pilot	Yatching Monthly		Contractor	Reeds Almanac and local coast/sea user book obtained
	Ports	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Character Assessment				
	Landscape Character Map for Wales	CCW	BNG	CCW	M:\GIS_Data\Live\Physical\Landscape_character\Landscape_Character_Areas_July09
	Regional Seascape Units	CCW	BNG	CCW	M:\GIS_Data\Live\Physical\Seascapes\Seascapes Units (FINAL June 2008)
	LANDMAP aspects	CCW	BNG	Download	Download from CCW Web site
	Landscape character assessment	PCNPA	BNG	PCNPA	PCNPA email
	AONB	CCW	BNG	CCW	Download from CCW web site
	Natural Features				
	OS Landform Panorama	Ordnance Survey		Contractor	OS Open Data Contractor to Source

Key datasets	Data Layers	Source	Projection	Source	Path
	Seazone Bathymetry and Elevation	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
		Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Wave Climate	CCW	WGS83	CCW	M:\GIS_Data\Live\Biological\Habitats\Marine\HABMAP
	LANDMAP Geological Landscapes	CCW	BGN	Download	Download from CCW web site
	LANDMAP Landscape Habitats	CCW	BGN	Download	Download from CCW web site
	DigMapGB-250	CCW		Contractor	sourced separately- essential dataset
	DigBath (Digrock250 & DigSB250)250	CCW		Contractor	sourced separately- essential dataset
	Hydrospatial Climate and Oceanography	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Intertidal Phase 1 Habitat Survey	CCW	BNG	CCW	M:\GIS_Data\Live\Biological\Habitats\Marine\phase1_intertidal
	Terrestrial Phase1 Habitat Survey	CCW	BNG	CCW	M:\GIS_Data\Live\Biological\Habitats\Terrestrial\phase_1
	UK SeaMap 2006 & 2010	JNCC		Contractor	Contractor to Source
	Tidal Flow	Renewable Energy Atlas		Contractor	Contractor to Source
	OS Base Maps	OS	BNG	CCW	See Above

Key datasets	Data Layers	Source	Projection	Source	Path
	Cultural/Social Factors				
	Wrecks	CADW	BNG	CCW	M:\GIS_Data\Live\Physical\historic_landscapes\CADW\CADW_Designated_Wrecks
	Marine Archaeological Sites	RCAHMW		Contractor	Contractor sourced on web
	Wrecks & Obstructions	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial\Wrecks & Obstructions
	Anchorage, Anchor Berths & bad weather Refuge	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Buoys	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Ferry Terminals	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Fog Signals	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Traffic separation Zones	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Coastguard Stations	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Coastal Path/Long Distance Walking Routes	CCW	BNG	CCW	M:\GIS_Data\Live\Access\Rights_of_way\Wales_coastal_path
	Sailing Areas	RYA		Contractor	National dataset not sourced due to cost- hard copy used instead
	Cruising routes	RYA		Contractor	National dataset not sourced due to cost- hard copy used instead
	Sailing Facilities	RYA		Contractor	National dataset not sourced due to cost- hard copy used instead
	Small Craft mooring sites	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial

Key datasets	Data Layers	Source	Projection	Source	Path
	Tourism Sites	Pembrokeshire Coastal Forum		Contractor	sourced
	Water Skiing Areas	Pembrokeshire Coastal Forum		Contractor	sourced
	Wind & Kite Surfing Areas	Pembrokeshire Coastal Forum		Contractor	sourced
	Yatch Harbour & Marine Areas	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	MOD Areas	MOD	BNG	CCW	M:\GIS_Data\Live\Land_Management\external_agency\ministry_of_defence
	Activity Licenses [MOD, wind, dredging, oil, gas]	Seazone	Lat/long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Infrastructure	Seazone	Lat/Long	CCW	M:\GIS_Data\Live\Hydrographic\seazone_hydrospatial\data\hydrospatial
	Tidal Energy resource	UK Renewable Atlas		Contractor	Contractor to Source- not used
	Wave power Resource	UK Renewable Atlas		Contractor	Contractor to Source- not used
	Fisheries Atlas	Clare Eno, CCW			
	AONB	CCW	BNG	Download	Download fron CCW web site
	Landmap Historic Landscape Aspects	CCW	BNG	Download	Download fron CCW web site
	Cultural landscape Aspects Landmap	CCW	BNG	Download	Download fron CCW web site
	Visual and Sensory Aspect Landmap	CCW	BNG	Download	Download fron CCW web site
	Conservation Areas			Contractor	Local authority

Key datasets	Data Layers	Source	Projection	Source	Path
	Historic Parks & Gardens	CADW	BNG	CCW	M:\GIS_Data\Live\Physical\historic_landscapes\CADW\Parks_&_gardens
	Listed Buildings	CADW	BNG	CCW	M:\GIS_Data\Live\Physical\historic_landscapes\CADW>Listed_Buildings
	Protected Wreck Sites	CADW	BNG	CCW	M:\GIS_Data\Live\Physical\historic_landscapes\CADW\CADW_Designated_Wrecks
	Scheduled Momuments	CADW	BNG	CCW	M:\GIS_Data\Live\Physical\historic_landscapes\CADW\Scheduled_Ancient_Monuments
	Historic landscape Areas	CADW	BNG	CCW	M:\GIS_Data\Live\Physical\historic_landscapes\CADW\historic_landscapes
	Special Areas of Conservation SACs	CCW	BNG	Download	Download from CCW web site
	National Nature Reserves NNRs	CCW	BNG	Download	Download from CCW web site
	Ramsar Sites	CCW	BNG	Download	Download from CCW web site
	Special Protected Areas SPAs	CCW	BNG	Download	Download from CCW web site
	RSPB Reserves	RSPB	BNG	CCW	M:\GIS_Data\Live\Land_Management\external_agency\rspb_reserves
	Important Bird Areas	RSPB	BNG	CCW	M:\GIS_Data\Live\Biological\Species\all_wales\Terrestrial\RSPB
	Important Bird Areas				Also download from the NBN Gateway
	Dark Skies			Contractor	LUC
	Wave Climate	CCW	WGS83	CCW	LUC
	Land with Sea Views	CCW	BNG	CCW	M:\GIS_Data\Live\Physical\Seascapes\Land with sea views
	Sea Surface Visibility	CCW	BNG	CCW	M:\GIS_Data\Live\Physical\Seascapes\Seascapes relative visibility of the sea 0-24km from coastline
	Tranquil Areas	CCW	BNG	CCW	M:\GIS_Data\Live\Physical\Tranquil_Areas

Key

Yellow = CCW supplied

Orange = download from CCW website

Orange- CCW supplied separately

Blue = contractor sourced if necessary

light green= received from client [PCNPA]and third parties- LUC, CPRE

Red- cost prohibitive, pdf mapping obtained. Helpful if NRW obtained GIS dataset

Dark green- information obtained at a cost

Appendix B Seascape Typology and Types

Pembrokeshire seascape character assessment

MARINE SEASCAPE CHARACTER TYPES										
Names, numbers and nomenclature				Main drivers defining type boundaries			Additional descriptors			
SCT no.	Location	Nomenclature	SCT Name	Bathymetry	Seabed	Wave stress	Topography	Turbulence	Sea feature	Bedrock
1	St Brides Bay	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand	High/strong waves (4-7)	low slope (<1°)	tidal/subtidal	20m contour	Carboniferous sandstones and mudstones
2	St Davids/Porth Clais cliffs	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	E-W sand to gravelly sand	High/strong waves (4-7)	low slope (<1°)	tidal/subtidal	20m contour	Precambrian--Cambrian sandstones and mudstones
3	St Brides Bay (outer)	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	sand out (W) to muddy sand	Low waves [1-3]	low slope (<1°)		20m contour	mostly Carboniferous sandstones and mudstones
4	Stack Rock - Talbenny cliffs	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sand/bedrock islet	High/strong waves (4-7)	low slope (<1°); islet	tidal/subtidal	low ridge	dacite intrusion
5	St Brides-Marloes	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand	High/strong waves (4-7)	low slope (<1°)	tidal/subtidal		Old Red Sandstone Raglan Mudstone and St Maughan's Formation mudstones and sandstones
6	Skomer - Marloes	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	gravelly sand/bedrock islets	High/strong waves (4-7) on W and S sides	steep slope (<10°) to low slope (>1°); islets	tidal/subtidal	ridge	Skomer Volcanic Group
7	Skokholm	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	gravelly sand/bedrock islet	High/strong waves (4-7)	moderate slope (1-10°); islets		islet	Old Red Sandstone
8	Marloes offshore incl Gateholm	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand	High/strong waves (4-7)	low slope (<1°)	tidal/subtidal		Old Red Sandstone
9	offshore Skomer-Milford	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	gravelly sand	Low waves [1-3]	low slope (<1°)	slack	30-50m	
10	deeper S of Ramsay - Milford Haven	PeSCTmmgl	Medium depth water/gravel sea bed/low wave stress	Medium depth water 30-60m	sandy gravel and gravel	Low waves [1-3]	low slope (<1°)		50-60m	Skomer Volcanic Group-Devonian/Carboniferous
11	Grassholm	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sandy gravel and bedrock islet	High/strong waves (4-7)	low slope (<1°) to moderate slope (1-10°)		islet	Skomer Volcanic Group
12	outer Grassholm - the Smalls	PeSCTmmgh	Medium depth water/gravel sea bed/high wave stress	Medium depth water 30-60m	sandy gravel	High/strong waves (4-7)	low slope (<1°) to moderate slope (1-10°)		rougher to W of islands	Skomer Volcanic Group
13	Ramsay Sound	PeSCTmsgh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sandy gravel	High/strong waves [4-7]	steep slope (>10°)	tidal	strait	Precambrian-Cambrian sandstones, mudstones, tuffs
14	Ramsay Sound	PeSCTmmgh	Medium depth water/gravel sea bed/high wave stress	Medium depth water 30-60m to deep <60m)	sandy gravel	High/strong waves [4-7]	deep channel	tidal	strait	Precambrian-Cambrian sandstones, mudstones, tuffs
15	Ramsay Sound	PeSCTmsgl	Shallow water/gravel sea bed/low wave stress	Shallow water 0-30m	sandy gravel	Low waves [1-3]	moderate slope (1-10°)	tidal	strait	Precambrian-Cambrian sandstones, mudstones, tuffs
16	Ramsay	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sandy gravel/rock	High/strong waves [4-7]	moderate slope (1-10°)	tidal	island	gabbros and acid intrusions, Cambrian-Ordovician sandstones and shales
17	Islets W of Ramsey	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sandy gravel/rock	High/strong waves [4-7]	islets/moderate slope (1-10°)		islets/ridge	gabbros
18	St Georges channel	PeSCTmmgh	Medium depth water/gravel sea bed/high wave stress	Medium depth water 30-60m	sandy gravel	High/strong waves [4-7]	low slope (<1°)		channel	Cambrian-Ordovician sandstones and shales
19	Islets W of Ramsey	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sandy gravel/rock	High/strong waves [4-7]	islets/moderate slope (1-10°)		islets/ridge	gabbros
20	Islets W of Ramsey	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sandy gravel/rock	High/strong waves [4-7]	islets/moderate slope (1-10°)		islets/ridge	bedrock' ?gabbros
21	Shallows S of Ramsey	PeSCTmsgh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sand -sandy gravel	High/strong waves [4-7]	shallow area			? Intrusion

Names, numbers and nomenclature				Main drivers defining type boundaries			Additional descriptors			
SCT no.	Location	Nomenclature	SCT Name	Bathymetry	Seabed	Wave stress	Topography	Turbulence	Sea feature	Bedrock
22	Offshore Strumble - S of Ramsey	PeSCTmmgl	Medium depth water/gravel sea bed/low wave stress	Medium depth water 30-60m	sandy gravel-gravel	Low waves [1-3]	low slope (<1°)			Lower Palaeozoic-Devonian/Carboniferous
23	~50-70m: Offshore sand bar W of St Brides Bay	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	gravelly sand to sand	Low waves [1-3]	low slope (<1°)	slack	sand bar	Lower Palaeozoic-Devonian/Carboniferous - Permian-Jurassic - Palaeogene-Neogene. Large NE-SW fault
24	Whitesand Bay	PeSCTmsggh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sandy gravel	High/strong waves [4-7]	low slope (<1°)	tidal/subtidal	bay	Precambrian-Cambrian sandstones, mudstones, tuffs
25	Continuation N of Ramsey channel	PeSCTmmgh	Medium depth water/gravel sea bed/high wave stress	Medium depth water 30-60m	sandy gravel	High/strong waves [4-7]	moderate slope (1-10°) - steep slope (>10°)	moderate depth trough		
26	Carn Llidi coastline	PeSCTmsggh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sandy gravel	High/strong waves [4-7]	moderate slope (1-10°)	tidal/subtidal	bordering high cliffs	Ordovician gabbros, shales
27	offshore sand bar N of Ramsey islets	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand - gravelly sand	High/strong waves [4-7]	moderate slope (1-10°)		sand bar	Lower Palaeozoic
28	offshore sand bar N of Ramsey islets	PeSCTmmsh	Medium depth water/sand sea bed/high wave stress	Medium depth water 30-60m	gravelly sand	High/strong waves [4-7]	moderate slope (1-10°)		sand bar	Lower Palaeozoic
29	St David's - Strumble	PeSCTmsggh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sandy gravel	High/strong waves [4-7]	moderate slope (1-10°) headlands, low slope (<1°) bays		cliff headlands, bays	Cambrian-Ordovician sandstones and shales
30	Strumble headland	PeSCTmsch	Shallow water/conglomerate sea bed/high wave stress	Shallow water 0-30m	conglomerate	High/strong waves [4-7]	moderate slope (1-10°) - steep slope (>10°)		bordering cliffs	Ordovician gabbros, shales
31	off Strumble-Fishguard	PeSCTmmch	Medium depth water/conglomerate sea bed/high wave stress	Medium depth water 30-60m	conglomerate mostly (minor sandy gravel)	High/strong waves [4-7]	low slope (<1°) to moderate slope (1-10°)			Ordovician gabbros, shales
32	off Strumble	PeSCTmdcl	Deep water/conglomerate sea bed/low wave stress	Deep water 60-100m	conglomerate	Low waves [1-3]	low slope (<1°)			Ordovician gabbros, shales
33	sand slack n of Strumble	PeSCTmmsl	Deep water/sand sea bed/low wave stress	Deep water 60-100m	gravelly sand	Low waves [1-3]	low slope (<1°)	slack	very sheltered (1)	Lower Palaeozoic mudstones/sandstones, Permian mudstones/sandstones, Jurassic sandstones/limestones; large faults NE-SW
34	Fishguard - Dinas Head	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	muddy sand	Low waves [1-3]	low slope (<1°)			Ordovician volcanics, Ordovician mudstones and sandstones
35	Dinas Head	PeSCTmsch	Shallow water/conglomerate sea bed/high wave stress	Shallow water 0-30m	conglomerate	High/strong waves [4-7]	moderate slope (1-10°)			Ordovician mudstones and sandstones
36	Dinas Head to Morfa	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	muddy sand	High/strong waves [4-7]	low slope (<1°)		more exposed E side	Lower Palaeozoic (Ordovician) mudstones/sandstones
37	Strumble Bank - off Strumble-Fishguard	PeSCTmsgl	Shallow water/gravel sea bed/low wave stress	Shallow water 0-30m	sandy gravel	Low waves [1-3]	low slope (<1°)			Lower Palaeozoic (Ordovician) mudstones/sandstones
38	off Fishguard - E Newport Bay	PeSCTmsggh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sandy gravel to gravel	High/strong waves [4-7]	low slope (<1°)			Lower Palaeozoic (Ordovician) mudstones/sandstones
39	Northern offshore	PeSCTmmgl	Medium depth water/gravel sea bed/low wave stress	Medium depth water 30-60m	sandy gravel	Low waves [1-3]	low slope (<1°)			Jurassic - Cenozoic; ENE-WSW faults
40	offshore sandbank N of Dinas Head	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	sand	Low waves [1-3]	low slope (<1°)	slack	E-W sand bar	Lower Palaeozoic (Ordovician) mudstones/sandstones
41	Foel Fach to Pengam	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	sand	Low waves [1-3]	low slope (<1°)		outer sand bar	Lower Palaeozoic (Ordovician) mudstones/sandstones

Names, numbers and nomenclature				Main drivers defining type boundaries			Additional descriptors			
SCT no.	Location	Nomenclature	SCT Name	Bathymetry	Seabed	Wave stress	Topography	Turbulence	Sea feature	Bedrock
42	E of Cardigan island	PeSCTmsmh	Shallow water/mud sea bed/high wave stress	Shallow water 0-30m	sandy mud and gravelly sand	High/strong waves [4-7]	low slope (<1°)			Lower Palaeozoic (Ordovician) mudstones/sandstones
43	Pengam	PeSCTmsch	Shallow water/conglomerate sea bed/high wave stress	Shallow water 0-30m	conglomerate	High/strong waves [4-7]	moderate slope (1-10°)			Lower Palaeozoic (Ordovician) mudstones/sandstones
44	Moylgrove	PeSCTmsgh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	sandy gravel and gravelly sand	High/strong waves [4-7]	moderate slope (1-10°)			Lower Palaeozoic (Ordovician) mudstones/sandstones
45	Cardigan island	PeSCTmsch	Shallow water/conglomerate sea bed/high wave stress	Shallow water 0-30m	conglomerate/island bedrock	High/strong waves [4-7]	moderate slope (1-10°)			Lower Palaeozoic (Ordovician) mudstones/sandstones
46	Teifi estuary	PeSCTmTe	Tidal channels/estuary	Tidal channels	estuary, muddy sand		low slope (<1°)	tidal		
47	sand bar W of Cemaes Head	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand	High/strong waves [4-7]	moderate slope (1-10°)			
49	Offshore N of Strumble - Skomer Volcanic Group islands	PeSCTmdgl	Deep water/gravel sea bed/low wave stress	Deep water 60-100m	sandy gravel and gravel	Low waves [1-3]	low slope (<1°)			
50	offshore sand slack NW of Ramsey area	PeSCTmdsl	Deep water/sand sea bed/low wave stress	Deep water 60-100m	gravelly sand and sand	Low waves [1-3]	low slope (<1°)			
51	offshore sand slack NW of Ramsey area	PeSCTmvsl	Very deep water/sand sea bed/low wave stress	Very deep water >100m	gravelly sand and sand	Low waves [1-3]	low slope (<1°)			
52	offshore NW of Ramsey area	PeSCTmdcl	Deep water/conglomerate sea bed/low wave stress	Deep water 60-100m	conglomerate	Low waves [1-3]	low slope (<1°)			
53	outer St Brides Bay	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	gravelly sand and slightly gravelly sand	Low waves [1-3]	low slope (<1°)			Devonian-Carboniferous mudstones/sandstones
54	offshore S of Grassholm and islets	PeSCTmdgl	Deep water/gravel sea bed/low wave stress	Deep water 60-100m	sandy gravel and gravel	Low waves [1-3]	low slope (<1°)			
55	western deep offshore	PeSCTmvsl	Very deep water/sand sea bed/low wave stress	Very deep water >100m	sand	Low waves [1-3]	low slope (<1°)	slack		Permian -Jurassic mudstones, sandstones, limestones
56	Milford Haven mouth	PeSCTmTr	Tidal channels/ria	tidal channel	estuary/ria	low waves (1-3)	moderate slope (1-10°) at entrance, low slope (<1°) in estuary	tidal	channel <25m	Old Red Sandstone, some Carboniferous Limestone
57	Milford Haven	PeSCTmTr	Tidal channels/ria	tidal channel	estuary/ria	low waves (1-3)	moderate slope (1-10°) in channel, low slope (<1°) on muddy banks	tidal/slack	channel <25m	Old Red Sandstone, Carboniferous Limestone; Ritec Fault
58	Sheep island - Linney Head	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand	High/strong waves [4-7]	low slope (<1°) to moderate slope (1-10°)	tidal/subtidal	bay	Old Red Sandstone, dune fields
59	Carreg Bwch Ddu-Strumble	PeSCTmsch	Shallow water/conglomerate sea bed/high wave stress	Shallow water 0-30m	conglomerate	High/strong waves [4-7]	low slope (<1°) to steep slope (<10°)	tidal/subtidal		Ordovician gabbros, shales
60	offshore W of Strumble	PeSCTmmch	Medium depth water/conglomerate sea bed/high wave stress	Medium depth water 30-60m	conglomerate	High/strong waves [4-7]	low slope (<1°) to moderate slope (1-10°)			Ordovician gabbros, shales
62	sand bar S of Ramsey	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	sand and gravelly sand bar	Low waves [1-3]	low slope (<1°)		sand bar	? Devonian-Carboniferous
63	offshore W of Freshwater W	PeSCTmmrl	Shallow water/rock sea bed/low wave stress	Medium depth water 30-60m	rock	Low waves [1-3]	low slope (<1°)	slack	rock sea floor	? Devonian-Carboniferous

Names, numbers and nomenclature				Main drivers defining type boundaries			Additional descriptors			
SCT no.	Location	Nomenclature	SCT Name	Bathymetry	Seabed	Wave stress	Topography	Turbulence	Sea feature	Bedrock
64	offshore Linney Head	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	sand and gravelly sand	Low waves [1-3]	low slope (<1°)	slack		
65	Linney Head - Trevellen	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	gravelly sand	High/strong waves [4-7]	low slope (<1°) to moderate slope (1-10°)			Carboniferous Limestone rocky coast and Brownslade Burrows
66	S of Trevellen	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	gravelly sand	Low waves [1-3]	low slope (<1°)	less slack	sand bar	Triassic sandstones, halite, E-W faults
67	Trevelen - Stackpole	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	gravelly sand	High/strong waves [4-7]	low slope (<1°) to moderate slope (1-10°)	slack by coast		Carboniferous Limestone rocky coast and Stackpole Warren
68	Stackpole - Lydstep	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	sand	Low waves [1-3]	low slope (<1°)			Old Red Sandstone, some Ordovician shales and Silurian grey sandstones
69	Lydstep - Gosker Rock	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	sand	Low waves [1-3]	low slope (<1°) to moderate slope (1-10°)	slack along N-S coast		Carboniferous Limestone rocky coast and Caldey Island and The Burrows
70	Gosker Rock - Pendine	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	sand	Low waves [1-3]	low slope (<1°)			Millstone Grit, Coal Measures, Carboniferous Limestone in E
71	Pendine Sands	PeSCTmssh	Shallow water/sand sea bed/high wave stress	Shallow water 0-30m	sand	High/strong waves [4-7]	low slope (<1°)			Old Red Sandstone
72	offshore S, 30m ridges	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	sand	Low waves [1-3]	low slope (<1°)	slack	ridges of sand perpendicular to currents	Triassic sandstones, halite, E-W faults
73	S Of Pendine	PeSCTmsggh	Shallow water/gravel sea bed/high wave stress	Shallow water 0-30m	gravel	High/strong waves [4-7]	low slope (<1°)		gravel bar	Devonian-Carboniferous mudstones/sandstones
74	Offshore S	PeSCTmmsl	Medium depth water/sand sea bed/low wave stress	Medium depth water 30-60m	sand	Low waves [1-3]	low slope (<1°)		drainage channels/sand waves perp. To channel	Triassic sandstones, halite, E-W faults
75	ofshore S of Trevellen	PeSCTmmgl	Medium depth water/gravel sea bed/low wave stress	Medium depth water 30-60m	gravel	Low waves [1-3]	low slope (<1°)	less slack	gravel edge to shallower sand bar	Devonian-Carboniferous mudstones/sandstones
76	offshore SW	PeSCTmdsl	Deep water/sand sea bed/low wave stress	Deep water 60-100m	sand	Low waves [1-3]	low slope (<1°)	slack	drainage channels/sand waves perp. To channel	Triassic sandstones, halite, E-W faults; Cretaceous chalk
77	The Smalls and other islets	PeSCTmsrh	Shallow water/rock sea bed/high wave stress	Shallow water 0-30m	sandy gravel and bedrock islet	High/strong waves (4-7)	low slope (<1°) to moderate slope (1-10°)		islet	Skomer Volcanic Group
79	Carmarthen Bay	PeSCTmssl	Shallow water/sand sea bed/low wave stress	Shallow water 0-30m	sand	Low waves [1-3]	low slope (<1°)	less sheltered to E		Triassic sandstones, halite, E-W faults
81	W offshore	PeSCTmvgl	Very deep water/gravel sea bed/low wave stress	Very deep water >100m	gravel	Low waves [1-3]	low slope (<1°)	slack		Palaeogene-Neogene mudstones.sandstones, lignite

Pembrokeshire seascape character assessment

INTERTIDAL AND TERRESTRIAL SEASCAPE CHARACTER TYPES

Intertidal		
Nomenclature	Type	Source and comments
		<i>Based on CCW Phase 1 intertidal EUNIS L3 description</i>
PeSCTiR	Rock	derived from high energy, moderate energy and low energy littoral rock, infralittoral rock and supralittoral rock, features of littoral rock
PeSCTiS	Sand and shingle	derived from littoral sand, sub littoral sand, littoral coarse sediment and littoral mixed sediment
PeSCTiM	Mud	derived from littoral mud and littoral muddy sand
PeSCTiSM	Saltmarsh and saline reedbed	derived from coastal saltmarsh and saline reedbed
PeSCTiB	Biogenic reefs	derived from littoral biogenic reefs
Terrestrial		
Nomenclature	Type	Source and comments
		<i>Based on CCW LANDMAP landscape habitats aspect Level 2 classification primarily and also Level 3 layers where information available as a query with added local knowledge and Google Earth to refine categories if necessary to provide differentiation between areas</i>
Pe LCTa	Amenity land	derived from Google Earth
PeLCTb	Tall herb and fern [bracken]	derived from querying level 2 and 3
PeLCTbw	Broadleaved woodland and scrub	derived from querying level 2 and 3
PeLCTc	Maritime cliff and slope	derived from querying level 3
PeLCTcm	Coastal heath and grassland mosaic	derived from querying levels 2 and 3- Dry Mosaic on coastal fringe with habitats defined plus Google Earth to verify areas.
PeLCTcw	Coniferous forest	derived from querying level 3
PeLCTd	Sand dune	derived from querying level 3
PeLCTgm	grazing marsh	derived from querying level 3- marshy grassland plus Google Earth to verify
PeLCTgam	Pastoral farmland	derived from level 3 as improved grassland
PeLCTgm	Grassland and semi-natural mosaic	mosaic derived from querying levels 2 and 3 with habitats defined plus Google Earth to identify some areas.
PeLCTgmm	Grassland mosaic-MOD range	derived from level 3 as grassland mosaic but identified in addition as MOD area
PeLCTgw	improved grassland with woodland	derived from querying level 3- derived from grassland and marsh classification at Level 2 and identifying additional areas of woodland within aspect area
PeLCTh	Heathland	derived from querying level 2
PeLCTi	Built up [industrial]	derived from querying level 2 and identifying specific use
PeLCTm	Mire and swamp	derived from querying level 2

Nomenclature	Type	Source and comments
PeLCTmf	mixed farmland	derived from querying level 3- dry mosaic . This classification describes a coarse grain/large scalemosiac better described as mixed farmland classification in some locations to differentiate from smaller scale/ grain grassland mosaics on the coast and inland
PeLCTmfw	Mixed farmland and woodland	derived from querying level 3- derived from grassland and marsh classification at Level 2 and identifying additional areas of woodland within aspect area
PeLCTmw	Mixed woodland and scrub	derived from querying levels 2 and 3
PeLCTp	Built up [port]	derived from querying level 2 and identifying specific use
PeLCTr	Built up [resort]	derived from querying level 2 and identifying specific use
PeLCTst	Beach/rough ground above HWM	area identified as intertidal in Level 3 but not included in intertidal areas identified in CCW Phase 1 intertidal EUNIS L3
PeLCTu	Built up area	derived from querying level 2 and identifying specific use
PeLCTw	Open water	derived from querying level 2
PeLCTwm	Wet mosaic	derived from querying level 2
PeLCTwom	Woodland mosaic	derived from querying level 2 woodland and scrub and using Google Earth to define as a mosaic with fields etc

Appendix C Cultural Benefits and Services

8. Appendix C Cultural benefits and services

- 8.1. Cultural benefits and services cover the non-material benefits that people obtain from ecosystems such as spiritual and religious enrichment, cultural heritage, recreation and tourism and aesthetic experience. The Pembrokeshire seascape clearly offers these services in a number of ways.
- 8.2. We define cultural benefits and services based on the UK National Ecosystem Assessment, 2011. This provides a '*comprehensive overview of the state of the natural environment in the UK and a new way of estimating our national wealth*'. The assessment includes a review of the state of natural resources, including coastal margins and the marine environment, their value to society, and forces for change and future threats. It builds on a Natural England report NECR024 'Experiencing landscapes: capturing the *cultural* services and *experiential qualities* of landscape, October 2009.
- 8.3. A Green Paper by the Welsh Government in 2012³ states that ecosystems should form the basis for a fresh approach to management and regulation of the environment in Wales. '*Wales' nature, land, water and air are our ultimate resource*'. The consultation responses to the green paper were positive agreeing with a holistic approach. A White Paper is to be produced in 2013-2014 informing the Environment Bill and Planning Bill. It is therefore crucial to collect data to inform our knowledge of the ecosystems resource.
- 8.4. The UKNEA identifies 'ecosystem cultural services' provided by the environment; which it defines as '*the environmental settings that give rise to the cultural goods and benefits that people obtain from ecosystems*'. These involve '*a range of complex cultural practices, such as the development of institutions, the application of capital, and human processes involving memories, motions, the senses, and aesthetic appreciation.*'
- 8.5. It notes that '*encounters with the natural world maintain their fascination for very substantial numbers of people*' and that '*daily contact with nature is part, still, of being human*'. Interactions with green space, for example, have been linked with longevity and decreased risk of mental ill-health, and '*children's relationship with nature is a fundamental part of their development.*'
- 8.6. Evidence is noted that '*every environmental setting is capable of being interpreted as possessing a distinctive sense of place which can contribute to a range of human value needs.*' What are described as '*heritage goods*' can '*contribute to a sense of identity, place, freedom and understanding.*' It goes on to suggest that '*environmental settings are valuable surroundings for outdoor learning where engaging with nature can lead to enhanced connectedness to nature and increased ecological knowledge.*'
- 8.7. The UKNEA notes that an '*ecosystem services approach to understanding culture-nature interactions is a relatively new perspective and consequently many key sources of social, economic and environmental data are not designed to examine key aspects of cultural services and goods.*' It also notes that spiritual and religious 'goods' are provided by interaction with the natural environment, although quantifying the evidence for this is difficult.

³ Sustaining a Living Wales: A green paper on a new approach to natural resource management in Wales, January 2012

- 8.8. Urbanisation means that *'more people have a set of local environmental settings with urban characteristics. At the same time, however, increased mobility has allowed more people to travel longer distances nationally and internationally to environmental settings for tourism and recreation purposes.'* Places such as Pembrokeshire and its seascape therefore have a valuable role to play in delivering cultural ecosystem services. Broad categories of what the Pembrokeshire seascape offers are set out in Table 1 in the main report as a framework for the brief descriptions for each seascape character area.

Appendix D Forces For Change

9. Appendix D Forces for change

- 9.1. The seascape of Pembrokeshire is undergoing change through a number of natural and man-related forces. These forces for change are explored and defined to ensure consistent use and to avoid repetition in the individual SCA descriptions.
- 9.2. The National Park Management Plan notes the ways of 'particular significance' in which the appearance and integrity of the landscape may be under threat:
- **Climate change** and responses to it
 - The UK's National Security Strategy (March 2008) cites climate change and competition for energy as key challenges, and also makes reference to security of food and water supplies, the longer term impact of climate change from habitat fragmentation and environmental degradation to energy-hungry food production and fuel poverty.
 - Climate change may, specifically, put pressure on wildlife and marine fish populations as well as coastal scenery.
 - It may also affect farming, particularly in terms of crop suitability, growing seasons, availability of drinking water and shade, effects on livestock, and losses to soils (and consequent soil run off to water courses) and trees or hedgerows
 - Some areas may become inaccessible due to flooding or instability, including coastal paths or recreational areas.
 - **Land management practices**, which have particular implications for semi-natural habitat and its wildlife, and for management of natural stocks and flows, such as soils and water. Traditional farming practices, such as extensive grazing, are critical contributors to the character of the landscape, yet farming continues to suffer an uncertain future with an aging farming population and more part time farmers, with barely viable businesses. Farming is also very vulnerable to fuel price changes and consequent cost of input materials such as fertiliser and feed.
 - **Development** - the National Park has a very limited landscape capacity for development in general and for housing in particular. Development proposals must be considered against the special qualities listed at para 4.56 of the Pembrokeshire Coast Local Development Plan (to 2021); LDP Strategy Policy 8 and Policy 15 in particular apply.
- 9.3. The National Park Management Plan notes that factors particularly likely to affect remoteness and tranquillity in the National Park are:
- visible development or intensive land use,
 - traffic noise,
 - light,
 - intrusive noise from recreational activity,
 - firing on the ranges,
 - waste and litter, and
 - activity arising from mineral and aggregate workings.
- 9.4. **Tourism and recreational use** of the National Park, whilst one of its core functions, can also have significant impacts, such as erosion of paths, effects of parking and road access, noise from power craft in particular, and impacts on fauna. The Pembrokeshire Coastal Forum are working to ensure that adventure

- activities such as coasteering, kayaking and cliff climbing, do not impact on the environments and wildlife of Pembrokeshire
- 9.5. A number of areas and settlements have been identified as at risk from the effects of storms and sea level rise over the next decade. The shoreline management planning process is largely concerned with managing these flood risks and associated potential impacts. Shoreline Management Plans are non-statutory documents. The latest plans for the Pembrokeshire coast were prepared in 2000 by WS Atkins. New plans are in the process of being developed.
- 9.6. Pembrokeshire is being promoted as a Hub for Marine Renewables. Marine energy is being researched with proposals such as tidal turbines in Ramsey Sound.
- 9.7. The UKNEA examines the trends for change throughout the UK. Findings for coastal margins and marine areas are set out below:

Table D1: Relative importance of, and trends in, the impact of direct drivers on Broad Habitat extent and condition.

<i>Location</i>	<i>Habitat Change</i>	<i>Pollution & Nutrient Enrichment</i>	<i>Over-exploitation</i>	<i>Climate Change</i>	<i>Invasive Species</i>
Coastal margins	Moderate, increasing	Very High, continuing	Low, decreasing	High, increasing	Moderate, increasing
Marine	Moderate, increasing High and increasing impact on wild fish.	Moderate, decreasing	Very high, increasing	Moderate, increasing	Low, increasing

- 9.8. The UKNEA continues to explain these changes in more detail.
- **Coastal Margins:** Coastal Margin habitats have declined in extent, by about 10%, and quality in the last 60 years due to development and coastal squeeze. Sand dune and saltmarsh have been lost due to agricultural improvement and forestry, as well as land-claim, while rapid coastal development for industry, housing, military activities and tourism has affected all habitats. The quality of these habitats has been impacted by widespread installation of artificial sea-defence structures and increased armouring of soft cliffs, which reduces sediment supply and natural dynamics, crucial to contributing to protection elsewhere. Furthermore, reductions in traditional forms of management, such as grazing of levees, have led to the risk of increased erosion and potential flooding (TR 11.2).
 - **Marine:** The Marine habitats around the UK deliver a very wide range of ecosystem services and goods of value to society. However, the delivery of many of these provisioning and regulating services in the Marine environment are declining because of heavy exploitation and sea temperature rise associated with climate change. Wild fisheries are declining, while trawling also has an adverse effect on seabed life, which plays a key role in cycling nutrients crucial to ensuring the productivity of the seas. The breakdown of waste and detoxification of freshwater runoff appears to be keeping pace but is locally problematic in estuaries and coastal waters. Increasing sea temperatures also raise concerns about the potential outbreak of pathogens (TR 12.3).

- 9.9. Whilst these may not correspond exactly with what is happening in Pembrokeshire it sets the national context.
- 9.10. In relation to Pembrokeshire other particular forces for change apply. The use of the safe deep water harbour of Milford Haven for the importation of oil and gas has resulted in associated oil storage, refineries and power station. The use of Castlemartin and Manorbier areas for military firing ranges provide a further distinctive effect on the seascape.
- 9.11. The broad categories of what forces for change in Pembrokeshire's seascape are set out in **Table D2** as a framework for the brief descriptions for each seascape character area.

Table D2 Forces for change

Natural processes and emerging climate change	
Threat to what	Nature of threat
Coastal Splendour Islands Diversity of Landscape Remoteness, Tranquillity and Wilderness	Effects on seascape character and visual amenity through: <ul style="list-style-type: none"> erosion or sedimentation altering the character of the coastline eg removal of sand from beaches increased frequency of extreme weather eg storms exacerbating flooding and erosion eg dunes, shingle beaches. sea defences and flood protection measures affecting natural character of coastline in low lying areas eg dunes, shingle beaches
Diverse Geology Richness of Habitats and Biodiversity	<ul style="list-style-type: none"> coastal erosion leading to direct loss of habitat eg cliff top semi-natural heathland, dunes increased flooding affecting low-lying habitats habitat fragmentation, for example in estuarine ecosystems
Rich Archaeology Distinctive Settlement Character Cultural Heritage	<ul style="list-style-type: none"> coastal erosion leading to potential loss of archaeological resource eg coastal prehistoric forts Sea defences and flood protection measures affecting natural character of traditional vernacular of settlement eg harbours stress to buildings and other man made features from extreme weather events and flooding inundation of historic coastal landscapes
Accessing the Park Space to Breathe	<ul style="list-style-type: none"> erosion of coastline blocking or diverting coastal path or access to open access land or other recreational areas flooding blocking or diverting coastal path or access to recreational areas change in coastal processes eg sedimentation or threat of flooding changing use of harbours or anchorages weather-related changes to patterns of tourism and recreational activity
Marine/water activity	
Threat to what	Nature of threat
Coastal Splendour Islands Diversity of Landscape Remoteness, Tranquillity and Wilderness	Effects on seascape character, visual amenity and tranquillity through: <ul style="list-style-type: none"> offshore wind, tidal or wave energy installations other offshore development such as rigs dredging- boats and infrastructure commercial shipping movements and anchorages eg tankers, ferries increasing recreational/tourism boat trips and motor watersports eg powerboats and ribs around Ramsey increasing non motor powered boat and small craft use eg canoes visitor litter and seasonal waste marine rubbish, tank cleaning and oil spills on physical environment and visual quality MOD uses including firing ranges fishing intensification eg potting user conflicts eg anglers and powerboats
Diverse Geology Richness of Habitats and Biodiversity	<ul style="list-style-type: none"> increasing recreational/tourism boat trips and leisure sailors motor on sensitive marine habitats and breeding populations eg marine nature reserves and estuarine habitats impacts of marine rubbish, tank cleaning and oil spills on wildlife and habitats impacts of wind, tidal or wave energy installations eg on bird populations effects of dredging on seabed

	<ul style="list-style-type: none"> • effects of fishing such as trawls and dredging on seabed and on associated habitats • increasing pressure on fish populations from exploitation • effects of static fishing such as baited pots and fixed lines • physical effect on seabed and associated habitats of MOD firing range • erosion of estuary banks from high-speed motor craft
Rich Archaeology Distinctive Settlement Character Cultural Heritage	<ul style="list-style-type: none"> • direct effects and effects on the setting of heritage features through tourism development, commercial, energy and rural diversification • loss of traditional small boat fisheries and associated processing and distribution infrastructure
Accessing the Park Space to Breathe	<ul style="list-style-type: none"> • MOD uses including firing ranges restrict access to sea • Motorised leisure craft can cause disturbance to other users/feeling of space to breathe • Commercial marine and energy users can cause disturbance to other users/feeling of space to breathe
Coastal development and marine related activity	
Threat to what	Nature of threat
Coastal Splendour Islands Diversity of Landscape Remoteness, Tranquillity and Wilderness	<p>Effects on seascape character, visual amenity and tranquillity through:</p> <ul style="list-style-type: none"> • oil and natural gas harbour/port, storage, processing facilities and users eg refineries, oil and liquid gas tanks, gas fired power station, power lines and pipelines on coast • intensification of ferry port use and associated infrastructure on the coast • energy infrastructure related to offshore energy development such as sub stations and power lines. • wind turbine development onshore • solar photovoltaic panels, at field scale or on building roofs • tourism development infrastructure, such as marina development parking and visitor facilities, paths, slipways, moorings etc • development/pressure of tourist accommodation eg new caravan parks or extensions, campsites • increasing use of coast for active sports eg coasteering, climbing, walking, beach related activity • visitor pressure on honeypots including wear and tear, litter, parking. • new housing or other development potentially suburbanising coast and not responding or respecting landscape or settlement character • light pollution from commercial, residential and tourist accommodation • MOD uses including firing ranges • particular pressure of all of the above on the undeveloped coast.
Diverse Geology Richness of Habitats and Biodiversity	<ul style="list-style-type: none"> • sea defences causing loss of or changes to coastal habitats eg dune and saltmarsh • direct loss of land or habitat from new buildings such as for housing, tourism or other development structures including roads/parking and access provision • indirect effects on habitat and local ecosystems such as habitat fragmentation or impact on breeding bird populations • increased development leading to pollution of water or air and additional waste management implications • increased recreational activity and access leading to trampling, disturbance or erosion impacts on habitat eg semi natural coastal heathland vegetation • invasion of bracken into semi-natural coastal habitats eg heathland • effect on fauna of light pollution from development

Rich Archaeology Distinctive Settlement Character Cultural Heritage	<ul style="list-style-type: none"> • effects on the sense of remoteness and tranquillity • erosion of coast and threat to coastal heritage eg cliff forts or harbours • neglect of heritage features eg in estuary and on coast
Accessing the Park Space to Breathe	<ul style="list-style-type: none"> • effect on coastal path continuity of exclusion zones relating to use of firing range • direct impacts/erosion of walkers/bikers/horse riders on paths bridleways and lanes eg coastal path erosion • pressure on honeypots such as embarkation points for boat trips including parking and congestion • visitor pressure and numbers can conflict with 'space to breathe'
Land management	
Threat to what	Nature of threat
Coastal Splendour Islands Diversity of Landscape Remoteness, Tranquillity and Wilderness	<p>Effects on seascape character, visual amenity and tranquillity through:</p> <ul style="list-style-type: none"> • intensification of agriculture such as grass 'improvement' of unimproved grass, overgrazing and polytunnels • abandonment of agricultural land with incursion of bracken and scrub • reduced maintenance/management or removal of elements of landscape eg field boundaries such as Pembrokeshire hedgebanks and walls and introduction of fences leading to degraded landscapes, • farm/rural diversification to tourism uses, selling off farm dwellings or buildings for second homes or holiday homes changing settlement character and pattern • onshore wind turbines and other renewable energy such as solar voltaic panels • an increase in forestry and woodland and changes in management eg for biomass heating systems, and associated processing and storage areas, could change landscape character inland [eg Daugleddau] • Intensification of tourism and commercial activities could increase congestion of roads, traffic noise and demand for parking and other infrastructure could change the tranquillity and character of the area • MOD uses including structures and firing ranges
Diverse Geology Richness of Habitats and Biodiversity	<ul style="list-style-type: none"> • intensification of agriculture such as grass 'improvement', new crops, overgrazing or removal of hedge banks leading to loss of biodiversity • loss of or reduction in agricultural management through non-viability of farm business, leading to incursion by scrub and ruderal species, and loss of species-rich pasture which depends on grazing • changes in forestry management or new areas of commercial forestry • pollution of water courses and marine ecosystem from nutrient run-off / enrichment • MOD uses generally positive for biodiversity but physical effect on land/habitats of exploding munitions
Rich Archaeology Distinctive Settlement Character Cultural Heritage	<ul style="list-style-type: none"> • reduced agricultural management leading to loss of distinctive features of landscape including historic field systems, hedge banks and walls • reduced management of parks and gardens • impacts of changing food marketplace on viability of raising heritage breeds of farm animals
Accessing the Park Space to Breathe	<ul style="list-style-type: none"> • increase in infrastructure including main roads reducing tranquillity • pressure on honeypots including parking and congestion • congestion on narrow roads leading to coast with associated effects on highway detailing and signage

Appendix E Sensitivity of Seascape Character Areas

10. Appendix E Sensitivity of seascape character areas

- 10.1. We define sensitivity within the framework of Countryside Agency Topic Paper 6 and LCA guidance. Though the brief states that the *inherent* sensitivity of an SCA should be addressed, it also mentions that the study needs to explore sensitivity to different types of development citing the Regional Seascape Assessment [RSA] in relationship to offshore renewable energy as a template. We therefore examine the different characteristics of SCAs and where they may be more or less sensitive to development- see **Table E1**. This table acts as the framework for discussion of sensitivity to relevant forces for change for each SCA.
- 10.2. Landscape designations and their associated value should be considered separate to judgements on sensitivity. Designations are derived through a number of criteria, some subjective, including scenic beauty, wildness, cultural associations and necessarily involve consensus. Boundaries are placed along easily defined permanent features on the ground such as roads. As such, there can be areas of varying value within a designation, as indicated by LANDMAP studies, and also areas of varying sensitivity. However, it would not be surprising if there was an increased incidence of sensitivity in designated areas due to their intrinsic characteristics.

Table E1: Factors affecting the sensitivity of seascape character areas

<i>Criteria</i>	<i>Factors that add to sensitivity</i>	<i>Factors that detract from sensitivity</i>
Heritage features	Presence of wrecks and other submerged historic features. Presence of coastal and island historic features such as forts, castles, chapels, monasteries, other buildings and structures and other heritage features which have a strong relationship with the coast and sea visually, physically or culturally.	Limited number or no heritage features
Nature Conservation features	Presence of marine habitats with high biodiversity. Presence of intertidal and coastal edge habitats with high biodiversity. Presence of BAP species or habitats.	Limited range and extent of biodiverse areas.
Cultural associations	Where there are strong collective cultural associations with the sea and coast through people and events and their expression through literature, art, music or other media. These can include religious connections, military connections, legends, books and poems, pictures, music, films, plays and other cultural media.	Where there are limited cultural associations.
Scale	Small scale, enclosed, views to horizon limited by landform Introduction of an element of scale into previously un-scaled area Where scale is huge and smaller elements would detract	Large scale views
Openness and enclosure	Where openness is a key characteristic and introduction of built elements would compromise this.	Unframed open views unimpeded by natural elements or features.

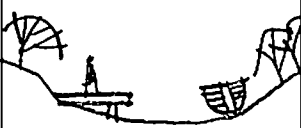
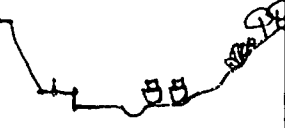

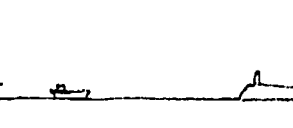

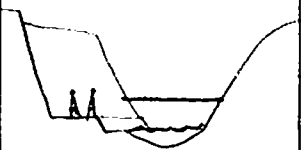
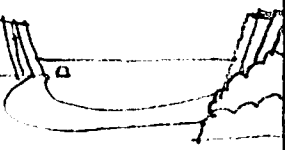
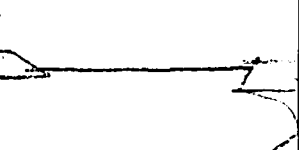

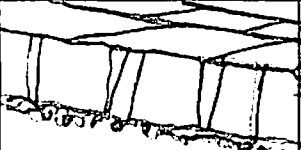
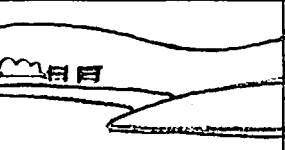


<i>Criteria</i>	<i>Factors that add to sensitivity</i>	<i>Factors that detract from sensitivity</i>
Coastal and hinterland form	<p>Intricate, complex, rugged forms and dramatic headlands/ends of peninsulas</p> <p>Where great simplicity is the key characteristic and introduction of structures into very horizontal composition would compromise this.</p> <p>Gently sloping towards coast allowing views of near shore elements.</p>	<p>Flat, horizontal or gently undulating or indented coast.</p> <p>Simple forms</p> <p>Plateau or flat hinterland.</p>
Settlement/ Development pattern and foci	<p>Small scale, traditional, historic settlements and monuments. Small clustered villages.</p> <p>Lack of infrastructure</p>	<p>Ports, industrial facilities, larger scale infrastructure, urban form, linear settlements</p>
Seascape Pattern and Foci	<p>Complex or unified pattern which would be disrupted by development.</p> <p>Important focal points eg islands, islets, headlands, distinctive sweeping beaches, and high hills.</p> <p>Open unspoilt views of the sea with no signs of development offshore.</p>	<p>Simple pattern</p> <p>Lack of natural focal points</p> <p>Presence of existing vertical or other elements at sea including shipping/ferries.</p>
Movement	<p>Where stillness is a key feature</p> <p>Where/when movement is highly natural, irregular or dramatic (currents, tidal streams, waves crashing on exposed coastlines) and regular mechanical movement or presence of development would detract.</p>	<p>In busier areas where development movement relates to other forms of mechanical movement present e.g. commercial shipping, ferries, boats, cars, lorries, aircraft or to a lesser extent other movement eg crowded swimming and surfing beaches</p> <p>Where/when waves are gentler and slow, regular movement of development could complement lapping of waves.</p> <p>Where clear current gives meaning/purpose to tidal renewable energy.</p>
Dark skies/ Lighting	<p>Where the area is unlit at night and is classified as such in dark skies study.</p> <p>Little impact of lights from sea and land traffic.</p> <p>Where lighting is from scattered small settlements, lighthouses etc and where marine development lighting would introduce a new, different scale.</p>	<p>Area is already well lit at night</p> <p>Lights of sea and land traffic or installations present.</p>

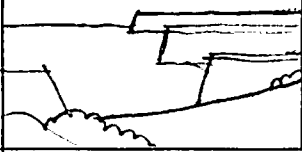
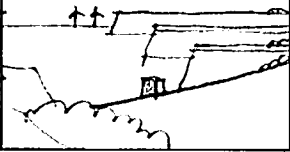

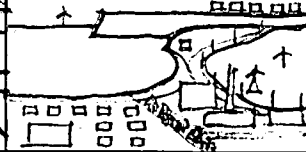

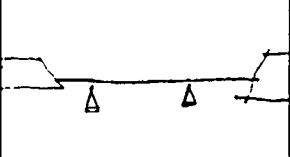



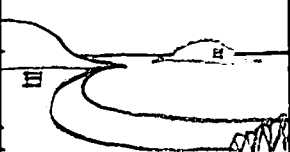
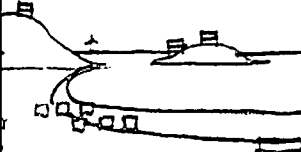



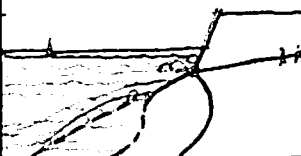

<i>Criteria</i>	<i>Factors that add to sensitivity</i>	<i>Factors that detract from sensitivity</i>
Aspect	<p>Development would interfere with sunrises and particularly sunsets</p> <p>Where turbines would be most often backlit, thereby increasing visibility.</p> <p>Front lit development from higher level views.</p>	<p>Development located away from sunrise and sunset positions</p> <p>Development front lit</p>
How seascape is experienced	<p>From remote little use stretch of sea with little shipping or boat use.</p> <p>From secluded coastline, intimate coastal roads and footpaths.</p> <p>From important viewpoints and elevated positions where the focus is the view and not the activity.</p>	<p>From ferry/shipping.</p> <p>From main coastal, busy roads.</p> <p>Crowded beaches where focus is on beach activities.</p>
Remoteness, Tranquillity, Wildness	<p>Undeveloped seascape</p> <p>Wild character</p> <p>Highly natural, unmanaged</p> <p>Remote or isolated</p> <p>Tranquil</p>	<p>Highly developed seascape</p> <p>Highly modified / managed.</p> <p>Not remote</p> <p>Lacking in tranquillity</p>
Exposure	<p>Sheltered and calm seascapes</p> <p>Where seascape is extremely exposed such that the perceived wild, elemental nature is a key characteristic and development would significantly change this perception.</p>	<p>Open, exposed seascapes which does not provide a perception of elemental or wild seascape character and development would be perceived as relating to these characteristics.</p>

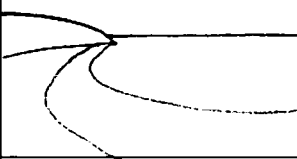
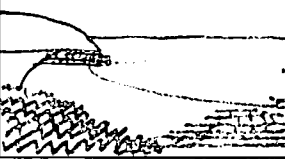






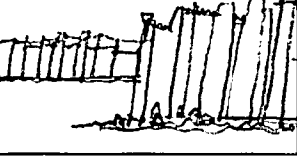
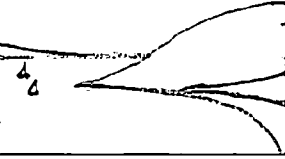
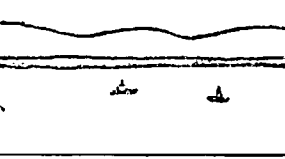
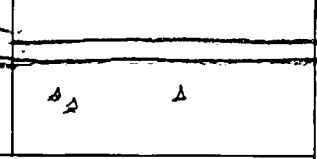
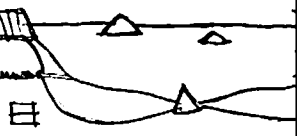



Appendix F Aesthetic and Perceptual Factors

11. Appendix F Aesthetic and perceptual factors

- 11.1. Aesthetic and perceptual factors have been considered in a structured way in undertaking the seascape character assessment. This information could not be fully researched as part of the desk study and so was collected as part of the site survey. Whilst aesthetic terms can be collected in a reasonably objective way, perceptual terms are more subjective. Both rely on the professional judgement of the surveyor. In order to achieve consistency of use each term is defined and a sample illustration prepared for aesthetic terms. The latter cannot hope to capture all instances but relates to certain scenarios which may occur in the study area. The terms were used as a checklist for the site surveys/SCA descriptions. They derive from seascape guidance in England and Wales, landscape character guidance and the Skye and Lochalsh landscape character assessment (LCA). The definitions are derived and adapted from LANDMAP guidance (2003) where possible to try to achieve consistency between the assessments. The terms and definitions are shown in Table F1. The list is not entirely comprehensive and other terms are used in descriptions of an area to suit particular situations at the seascape assessor's discretion.

AESTHETIC ASPECTS OF SEASCAPE CHARACTER				
Scale				
Intimate	Elements and spaces of a predominantly personal scale, such as private moorings and curtilages			
Small	Elements and spaces of a community scale, such as small harbours, coves, islands/islets.			
Medium	Elements and spaces which are of a moderate scale, in that they are neither extensive nor intensive such as bays, towns, straits.			
Large	Elements and spaces which extend to cause the observer to feel small, such as large bays or high cliffs or coastal hills			
Vast	Elements and spaces where the coast is a minor or minimal visual element such as offshore or in very large bays			
Scale examples	Intimate	Small	Medium	Large
				
				Vast
				
Enclosure				
Confined	Presents the observer with close spaces such as in thick coastal woodland, narrow coastal gorges or clefts; likely to see relatively little sky			
Enclosed	Presents the likely observer with short distance views to a high horizon on at least two sides, such as from most valley bottoms leading to the coast			
Open	Presents the likely observer with predominantly eye level horizons, such as lowlands and cliff-less coastal areas			
Expansive/Exposed	Presents the likely observer with far-distance horizons, such as at sea away from the coast, on cliff-tops, on coastal hilltops etc			
Enclosure examples	Confined	Enclosed	Open	Expansive
				
Diversity				
Uniform	Unvarying in texture, form, colour, etc with a single recognisable pattern of visual elements.			
Simple	Little variation in texture, form, colour, etc with only a narrow range of visual elements			
Diverse	Widespread variation in texture, form, colour, etc with a broad range of visual elements			
Complex	Complete variation in texture, form, colour, etc with little or no recognisable pattern of visual elements			
Diversity examples	Uniform	Simple	Diverse	Complex
				

Unity				
Unified	An area where there is a strong sense of unity of character, patterns and elements.			
Interrupted	An area which is broadly unified in character with some features or elements which are out of character and which disrupt the unity			
Fragmented	Patches of areas of unified character are broken up by other elements and features which are out of character			
Disunity	An area where there is no or limited unity between seascape or landscape patterns or elements.			
Unity examples	Unified	Interrupted	Fragmented	Chaotic
				
Visual Dynamic				
Panoramic	Uninterrupted view in most directions			
Framed	View framed by landform or other elements			
Intermittent	View between elements, closed off in places			
Channelled	View channelled down a linear feature by landform or other elements			
Visual Dynamic	Panoramic	Framed	Intermittent	Channelled
				
Balance				
Harmonious	All the characteristics/features/elements visually contribute to a harmonious composition			
Balanced	Most characteristics/features/elements visually contribute to a balanced composition or unity			
Discordant	Some characteristics/elements visually disrupt and detract from a balanced composition or unity			
Chaotic	Characteristics/elements visually compete and disrupt each other to create a chaotic composition.			
Balance	Harmonious	Balanced	Discordant	Chaotic
				
Movement				
Still	No movement			
Calm	Very limited movement			
Restful/rhythmic	Movement that is gentle, far away or rhythmic which does not cause disturbance			
Busy	Movement usually involving a number of people or machines			
Movement examples	Still	Calm	Restful/rhythmic	Busy
				

Texture				
Smooth	Consistent cover with smooth appearance e.g. calm water, large beach, coastal grassland.			
Textured	Moderately textured sea and land cover eg moderately disturbed sea surface, shingle beaches, some rocks, coastal scrub vegetation.			
Rough	Coastal cover with coarse texture due to intrinsic nature of cover e.g. rocks, rocky islets, rocky cliffs, disturbed water, mosaic vegetation patterns			
Very rough	Significant rock exposures in forms of rocky islets, jagged cliffs and littoral rocks, turbulent water			
Texture examples	Smooth	Textured	Rough	Very rough
				
Form				
Straight	Predominantly straight lines such as in a straight beach, groynes, jetties, rectilinear field system e.g. levels.			
Angular	Predominantly straight lines at a variety of angles such as in a rugged coastal landscape with cliffs or a strong field system.			
Curved	Predominantly curved lines possibly dominated by gentle landform such as a sweeping bay.			
Sinuuous	Predominantly sinuous lines possibly defined by fluvial patterns such as estuaries or rias			
Form examples	Straight	Angular	Curved	Sinuuous
				
Line				
Vertical				
Sloping				
Rolling				
Rolling				
Line examples	Vertical	Sloping	Rolling	Horizontal
				
Colour				
Monochrome	A predominance of neutral colours or monotones such as found offshore at a distance from the coast.			
Muted	A predominance of neutral colours possibly closer to, or on the coast, on farmland, cliffs, dunes and hill sides or woodland for most of the year.			
Colourful	A predominance of more bold colours and tones, such as cliff paths in late spring/early summer, coloured rocks or building materials/structures in rural locations			
Garish	A predominance of bold colours with little recognisable pattern, such as commercial signage amid bold natural colours			
Moderate contrasts	Moderate contrasts between vegetation types such as bracken, heather and pastures.			
Strong contrasts	A predominance of bold contrasts between just a few strong colours or tones, such as dark cliffs against a pale background			
Pattern				
Random	Characteristics/elements do not appear to have a purposeful relationship with each other			
Organised	Characteristics/elements have a purposeful relationship with each other			
Regular	Characteristics/elements are consistent and regular.			
Formal	Characteristics/elements have a formal designed relationship with each other.			
Pattern examples	Random	Organised	Regular	Formal
				

Appendix G Glossary and Abbreviations

Appendix G: Glossary and Abbreviations

<i>Term</i>	<i>Definition</i>
Seascape, marine and coastal processes terms	
Abrasion	The mechanical wearing effect on rocks caused by corrosion. The abrading agent can take a variety of forms e.g. sand, pebbles or boulders moving across a rock surface.
Attrition	The mechanism by which the particle size of any material is reduced by friction during transport.
Biogenic	A feature that is created by living organisms, either animal or plant.
Character	see Seascape character.
Characteristics	elements, features and qualities which make a particular contribution to distinctive character. *
Characterisation	the process of identifying areas of similar character, classifying and mapping them and describing their character. *
Classification	concerned with dividing the seascape into areas of distinct, recognisable and consistent common character in grouping areas of similar character together. It requires the identification of patterns in the seascape, created by the way the natural and human influences interact and are perceived and experienced to create character in the seascape. *
Description	capturing the overall essence of the character of the seascape, with reference to geology, landform, bathymetry, habitats, use of the coast and sea, cultural associations etc, drawing out the ways in which these factors interact together and are perceived and experienced and are associated with events and people. *
Demersal	In relation to marine organisms: those which flourish on the ocean floor.
Elements	individual component parts of the seascape such as beaches, cliffs, submerged reefs, sea walls, groyne and rocky outcrops.
Features	particularly prominent or eye-catching elements such as lighthouses, rock stacks and coastal cliffs.
Fetch	The distance of open water across which wind blows or over which wind generated water wave travels, unobstructed by major land obstacles. The amount of fetch helps to determine the magnitude and energy of a wave and therefore its erosional or depositional tendencies on neighbouring shorelines.
Hydraulic action	Force exerted by moving water on rocks eg air forced into cracks in solid rocks by breaking waves is capable of causing their disintegration by expanding the fissures.
Key characteristics	those combination of elements which help given area its distinct sense of place. They can in many cases to be 'positive' characteristics but they may also in some cases be 'negative' features which nevertheless are important to the current character of the seascape. *
Landward limits (of a seascape character assessment)	the distance which the seascape character assessment will expand onshore and inland. Such considerations relate to the mainland, peninsulas and islands, regardless of their distance out at sea. The extent is dependent on the purpose and/or scope of the assessment being undertaken.
Littoral	Pertaining to a shoreline.
Longshore drift	A general movement of beach material along the shoreline due to the effect of waves breaking obliquely on to the beach.

<i>Term</i>	<i>Definition</i>
Pelagic	In relation to the environment: the open ocean as distinct from the ocean floor. In relation to marine organisms: those which flourish independent of the ocean floor and shoreline environments.
Perception	perception combines the sensory (that which we receive through our senses) with the cognitive (knowledge and understanding gained from many sources and experiences).**
Reef	A line of rocks or material in the tidal zone of the coast, submerged at high water but partly uncovered at low water.
Ria	Submerged coastal valley or estuary resulting from a rise of sea level, often associated with post-glacial coasts.
Saltation	Sediment transported by bouncing or hopping along a surface carried by water or wind.
Seascape	An area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors. *
Seascape character	Seascape character is a distinct and recognizable pattern of elements in the seascape that makes one seascape different from another, rather than better or worse. *
Seascape character assessment (SCA)	SCA is the process of identifying and describing variation in the character of the seascape, and using this information to assist in managing change in the seascape. It seeks to identify and explain the unique combination of elements and features that make seascape distinctive. *
Seascape character areas	these are single unique areas which are discrete geographical areas of a particular seascape character. Each has its own individual character and identity. These areas may be made up of a number of seascape types.
Seascape character types	these are distinct types of seascape that are relatively homogenous in character. They are generic in nature in that they may occur in different locations but wherever they occur they share broadly similar combinations of bathymetry, seabed geology and wave climate characteristics.
Seascape guidelines	actions required to ensure that distinctive seascape character is maintained, enhanced or if appropriate, changed through the creation of new character. *
Seascape quality	the physical state of the seascape. It includes the extent to which typical character is represented in individual areas, sometimes referred to as strength of character, the intactness of the seascape from visual, functional and ecological perspectives and the condition or state of repair of individual elements of the seascape.*
Seascape sensitivity	the ability of the seascape to respond to and accommodate change. It reflects the seascape character, the nature of change in the way both are perceived and experienced by people.*
Seascape strategy	the objectives and overall vision of what the seascape should be like in the future, and what is thought to be desirable for a particular seascape character type or area, as a whole.*
Seascape, Landscape and Visual Impact Assessment (SLVIA)	is an established methodology which is used to assess the impact of the development or other use change on seascape, landscape and visual amenity. It includes analysis of the effects during the construction, operation and decommissioning phases of the development, including any restoration or after uses.

<i>Term</i>	<i>Definition</i>
Seaward limits (of an SCA)	distance out to sea that the SCA will extend.
Slack	An area of almost motionless water.
Suspension	The process by which lightweight materials are transported by moving water in the zone of turbulent flow.
Swash	The movement of a turbulent layer of water up the slope of the beach as a result of the breaking of a wave. It is capable of moving beach material of substantial size and is an important element in longshore drift.
Swell	A regular movement of marine waves created by wind stress in the open ocean.
Traction	Solid load carried by water.
Other terms associated with landscape	
Amenity (Planting)	planting to provide environmental benefit such as decorative or screen planting.
Analysis	the process of dividing up the seascape/landscape into its component parts to gain a better understanding of it.
Ancient Woodland	land continuously wooded since AD 1600. It is an extremely valuable ecological resource, usually with a high diversity of flora and fauna.
Apparent	object visible in the seascape/landscape.
Approach	the step-by-step process by which seascape/landscape assessment is undertaken.
Arable	land used for growing crops other than grass or woody species.
Aspect	in Wales, an aspect is a component of the LANDMAP information recorded, organised and evaluated into a nationally consistent spatial data set. The landscape information is divided into five aspects- geological landscape, landscape habitats, visual and sensory, historic landscape and cultural landscape.
Aspect area	areas defined in each of the LANDMAP aspect assessments which are mutually exclusive
Assessment	term to describe all the various ways of looking at, analysing, evaluating and describing the seascape/landscape or assessing impacts on seascape/landscape and visual receptors.
Biodiversity	the variety of life including all the different habitats and species in the world.
Conservation	the protection and careful management of natural and built resources and the environment.
Carr	woodland in waterlogged terrain. Characteristic species include alder, willow and sallow.
Clawdd/cloddau	earth bank or mound relating to a hedge faced with stone in some areas
Complexity	[in the context of describing a skyline]how varied or complicated the skyline is from dead flat with even vegetation at one end of the scale to mountainous with varied vegetation at the other.
Coppicing	the traditional method of woodland management in which trees are cut down near to the ground to encourage the production of long, straight shoots that can be harvested.

<i>Term</i>	<i>Definition</i>
Consistent	relatively unchanging element or pattern across a given area of seascape/landscape.
Cultural heritage asset	see heritage asset
Cultural pattern	expression of the historic pattern of enclosure and rural settlement.
Cumulative impacts/effects	either additional changes caused by a proposed development in conjunction with similar developments or the combined effect of a set of developments, taken together
Distinctiveness	see sense of place
Diversity	[in terms of the function of an area] the variety of different functions of an area.
Dominant	main defining feature or pattern.
Effects	term used in environmental impact assessment [EIA] where effects are changes arising from the action, operation or implementation of a proposed development.
Effects, direct	where development lies within a seascape/landscape and physically removes an element or feature eg rocks, cliff, coastal vegetation
Effects, indirect	effects away from the development such as perceived change of character or from associated development such as transport infrastructure
Field Boundary	the defined edge of a field whether fence, hedge, bank, ditch or wall.
Field Size	Large 2 Ha Above, Medium Around 1.5 Ha, Small Less Than 1 Ha.
Geology	the study of the origin, structure, composition and history of the Earth together with the processes that have led to its present state.
Ground Type	expression of the soil forming environment and its influence in determining the surface pattern of vegetation and land use.
Hedge	fence of shrubs or low trees, living or dead, or of turf or stone. Though strictly a row of bushes forming a hedge, hedgerow has been taken to mean the same as a hedge.
Hedge bank	earth bank or mound relating to a hedge
Heritage asset	a building, monument, site, place, area or landscape positively identified as having a degree of historical significance meriting consideration in planning decisions. Designated heritage assets include world heritage sites, scheduled ancient monuments, protected wreck sites, battlefields, listed buildings and registered parks and gardens.
Horticulture	intensive form of cropping, such as vegetables or fruit.
Impact	used as part of overall term, as in EIA or LVIA, to help describe the process of assessing potentially significant effects- see effects.
Improved [in relation to soils or pasture]	addition of fertiliser and, in the case of pasture, reseeding with more productive grass species.
Inherent	dictionary definition- 'existing as an inseparable part'. In the context of sensitivity means the sensitivity of the seascape/landscape zone itself with all its component elements and features rather than its relationship with adjacent zones.
Integrity	unspoilt by large-scale, visually intrusive or other inharmonious development

<i>Term</i>	<i>Definition</i>
Landcover	combinations of natural and man-made elements including vegetation that cover the land surface.
Landform	combinations of slope and elevation which combine to give shape and form to the land.
LANDMAP	<i>LANDMAP</i> is the national Geographical Information System (GIS) based information system for Wales, devised by the Countryside Council for Wales, for taking landscape into account in decision-making. It is a nationally consistent dataset divided into 5 aspects- geological landscapes, landscape habitats, visual and sensory, historical landscapes and cultural landscapes.
Landscape	an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors
Landscape and Visual Impact Assessment (LVIA)	is an established methodology which is used to assess the impact of the development or other use change on landscape and visual amenity. It includes analysis of the effects during the construction, operation and decommissioning phases of the development, including any restoration or after uses. (GLVIA 2002)
Landscape Character	a distinct, recognisable and consistent pattern of elements, features and qualities in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Area [LCA]	these are single unique areas which are discrete geographical areas of a particular landscape character. Each has its own individual character and identity. These areas in Wales are primarily derived from LANDMAP aspects.
Landscape Resource	The overall stock of the landscape and its component parts. [The landscape considered as a measurable finite resource like any other eg minerals, land, water].
Landscape value	the relative value that is attached to different landscapes and LANDMAP aspects. A landscape may be valued by different communities of interest for many different reasons. These can include scenic beauty, tranquillity, wildness, special cultural associations, the presence of conservation interests, rarity or the existence of a consensus about importance, either nationally or locally. Some areas will be designated to express their value. Value is also attributed to each LANDMAP aspect using a variety of criteria. An indication of how an area is valued may also be gained from observation of how it is used- eg a popular path to a hilltop viewpoint.
Magnitude of effect	degree of change
Mixed Farmland	a combination of arable and pastoral farmland
Mosaic	mix of different landcovers at a fine grain such as woodland, pasture and heath.
Objective	method of assessment in which personal feelings and opinions do not influence characterisation or judgements.
Outcrop	the area where a particular rock appears at the surface.
Pastoral	land down to grass either grazed by animals or for cutting.
Physiography	expression of the shape and structure of the land surface as influenced both by the nature of the underlying geology and the effect of geomorphological processes.
Polygon	discrete digitised area in a geographic information system[GIS].

<i>Term</i>	<i>Definition</i>
Prominent	noticeable feature or pattern in the landscape.
Protect	to keep from harm.
Qualities	aesthetic [objective visible patterns] or perceptual [subjective responses by the seascape/landscape assessor] attributes of the seascape/landscape such as those relating to scale or tranquillity respectively.
Receptor, visual	people in a variety of different situations who can experience views within an area and who may be affected by change or development. Receptors can include users of public footpaths, open access land, roads, rail or cycleways or urban or rural residents.
Receptor, seascape/landscape	seascape/landscape character areas, designations, elements or features which may be affected by development
Remoteness	physical isolation, removal from the presence of people, infrastructure (roads and railways, ferry and shipping routes) and settlement
Resource	see seascape/landscape resource.
Restore	repair or renew.
Riparian	vegetation associated with the water body, usually a river or stream.
Scenic quality	seascape/landscape with scenes of a picturesque quality with aesthetically pleasing elements in composition
Semi-natural vegetation	any type of vegetation that has been influenced by human activities, either directly or indirectly. The term is usually applied to areas which are reverting to nature due to lack of management.
Sense Of Place	the character of a place that makes it locally identifiable or distinctive ie different from other places. Some features or elements can evoke a strong sense of place eg islands, forts, vernacular architecture
Sensory	that which is received through the senses ie sight, hearing, smell, touch.
Setting, of a heritage asset	The surroundings in which the 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 a negative contribution to an asset, may affect the ability to appreciate that significance or may be neutral.
Settlement	all dwellings/habitations, whether single or clustered in cities, towns and villages.
Settlement Pattern	the predominant pattern of settlement in an area.
Significance	In environmental impact assessment- the importance of an effect. A significant effect needs to be taken into account in decision-making.
Subjective	method of assessment in which personal views and reaction are used in the characterisation process.
Topography	term used to describe the geological features of the Earth's surface eg mountains, hills, valleys, plains.
Unity	consistency of pattern over a wide area ie the repetition of similar elements, balance and proportion, scale and enclosure.
Value	see landscape value
Vernacular	built in the local style, from local materials.
Visual Effects	the likely visual effects undergone by people that would result from a development proposal or change in land management.

<i>Term</i>	<i>Definition</i>
Visual sensitivity	visual sensitivity or 'visibility' is a measure of the degree to which change is likely to cause a visual impact within a particular seascape/landscape.

*Natural England, Scottish Natural Heritage and the Countryside Council for Wales (2011) landscape character assessment guidance (consultation draft).

**AD Hooley (forthcoming?)

Abbreviations used in text

AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
CLVIA	Cumulative Landscape and Visual Impact Assessment
CCW	Countryside Council for Wales
EIA	Environmental impact assessment
GLVIA	Guidelines for landscape and visual impact assessment
GIS	Geographic information system
HPMCZ	Highly protected marine conservation zone
HSC	Historic Seascape Characterisation
HW	High water
ICZM	Integrated Coastal Zone Management
Km	kilometres
LBAP	Local Biodiversity Action Plan
LCA	Landscape character assessment <i>or</i> landscape character area
LDP	Local Development Plan
LVIA	Landscape and visual impact assessment
LW	low water
m	metres
MPA	Marine Planning Area
MPS	Marine Policy Statement
nm	nautical miles
NRW	Natural Resources Wales
PCC	Pembrokeshire County Council
PCNP	Pembrokeshire Coast National Park
PCNPA	Pembrokeshire Coast National Park Authority
PSAC	Provisional Special Area of Conservation
PU	Shoreline Management Plan policy unit
RSU	Regional Seascape Unit
RHL	Registered Historic Landscape [Landscapes of outstanding or special historic interest in Wales]

rLCA	Regional Landscape Character Unit
SAM	Scheduled Ancient Monument
SCA	Seascape character assessment / seascape character area
SCT	Seascape character type
SINC	Site of Importance for Nature Conservation
SLA	Special Landscape Area
SMR	Scheduled Monument Record
SPA	Special Protection Area
SPG	Supplementary planning guidance
SSA	Strategic Search Area [for wind energy as defined by TAN8]
SSSI	Site of Special Scientific Interest
SNH	Scottish Natural Heritage
SLVIA	Seascape, landscape and visual impact assessment
WAM	Welsh Activity Mapping

Appendix H Samples of Site Assessment Worksheets

Pembrokeshire Seascape Character Area	
no.:26 name: Skokholm and Gateholm coastal waters	
Sea-based Survey location / GPS / grid ref: 175550/206450 Distance from coast: 1.5km from nearest land and islands Photo numbers: K..	
Survey date: 12.2.13 Survey by: SM	
Weather: fine/cloudy/showers/rain/mist-fog Visibility: v.good/good/average/poor Horizon: clear/blurred/none Wind/Sea state, Beaufort scale: calm 0/light 1-2/breeze 3-4/breeze 5-6/gale7-9/ storm + Swell: low/medium/high Tide: low/mid/high Rising/ ebbing Spring/ mid-tide/ Neap	
FEATURES	
Coastal form	Low/ Medium/ High/ Cliffs/ Variable Linear/ Bay/ Convex/ Indented/ Estuary/ Other...island
Coastal landform	Flat/ Undulating/ Sloping/ Steep/ Vertical
Aspect	Predominant, land from sea - N/ NE/ E/ SE/ S/ SW/ W/ NW
Sea Water	Clear/ Murky/ Sediment laden Brown/ Grey/ Azure blue/ Green Blue/ Blue/ Deep blue
Built form	No or little evident development/ Small settlements/ Large settlements
Onshore features/ landmarks	Harbour/ Port/ Ferry terminal/ Marina/ Pier/ Sea wall/ Slipway/ Sea defences/ Rocks/ Shelterbelt Power station/ Wind turbines/ Electricity pylons/ Radio masts/ Lighthouse/ Beacon/ Chimney/ Gantries/ Pipeline/ Lifeboat station Road/ Rail/ Industrial buildings/ Container store/ Retail park Church spires-towers/ Monument or ruin/ Topographical feature/ Other...
Offshore features/ landmarks	Oil rigs or Gas rigs/ Wind turbines/ Navigational marks or buoys/ Fishing buoys/ Lighthouse Islands/ Rocks/ Reefs/ Sand-bar Other...
Sea features	Overfall/ Eddy/ Whirlpool/ Evident tidal stream
Navigational features, coastal	Moorings/ Anchorage Channel markers/ Cardinal marks/ Special feature buoys/ Other...
Notes	Land features evident at this distance Rocky shoreline and naturalness of sea edge just evident Some disturbed water, especially in Jack Sound St Ann's Lighthouse not really visible to naked eye in far distance, approx 6km
ACTIVITIES	
Marine activity	Fish farming/ Mussel rafts/ Commercial fishing/ Shipping lane/ Ferry route Sailing/ Canoeing-surfboarding/ Power craft/ Recreational fishing Other...
Coastal activity	Settlement/ Development/ Caravans/ Chalets/ Camping/ Port/ Harbour/ Marina/ Beach activity/ Other...
Cultural associations	Historical event/ Artistic/ Literature/ Culinary/ Musical/ Festivals
Notes	None evident
DYNAMICS or evident forces for change	
Apparent dynamics	Fishing industry/ Leisure activity/ Commercial marine/ Coastal processes/ Coastal development Other...
Notes	Widespread/ localised/ limited? None evident

AESTHETIC ASPECTS OF SEASCAPE CHARACTER	
Scale	Intimate / Small / Medium / Large / Vast
Enclosure	Confined / Enclosed / Open / Expansive/Exposed
Diversity	Uniform / Simple / Diverse / Complex
Movement	Still / Calm / Restful-rhythmic / Busy
Colour	Monochrome / Muted / Colourful / Garish / Moderate contrasts / Strong contrasts
Notes incl attractors and detractors	Colours and shapes only visible at this distance and in poor to average visibility
PERCEPTUAL AND EXPERIENTIAL ASPECTS OF SEASCAPE CHARACTER	
Exposure	Very exposed / Exposed / Mixed / Sheltered / Very sheltered
Proportion sea to sky at viewpoint	Land not visible / Sea dominates / Land distant / Balanced / Land noticeable / Land dominates
Focus	Objects or landform fill the view / Balanced / Objects or landform are less strong
Security	Safe / Unsettling / Disturbing/ Threatening
Stimulus	Monotonous -Non-descript / Interesting / Challenging / Inspiring due to navigation through Jack Sound
Tranquillity	Still-tranquil / Some tranquillity / Limited tranquillity / Busy
Remoteness	Remote / Some evidence of man-made features / Man made features are strong
Views	Panoramic / Channelled / Narrow / Filtered views vary but generally contained by islands and mainland
Naturalness	Natural / Tamed / Managed / Artificial / Manmade
Noise	Quiet / Distant / Intermittent / Loud none
Smell	Natural / Salty / Seaweed / Fisheries / Agricultural / Industry / Fumes
Sense of place	Weak.....**...Strong
Notes	Islands and sounds give strong sense of place and interest and orientation Excitement of navigational hazards
QUALITY	
Rarity	Single example / Infrequent / Frequent / Common due to islands
Intactness	Complete -**-----Remnant
Condition	Maintained -----Abandoned
Fragility	Robust -**-----Delicate
Notes	

Pembrokeshire Seascape Character Area : 40 CARMARTHEN BAY WEST .

Summary of location/limits: MONKSTONE POINT

Land-based Survey location- GPS (632) 214751/203300

Photograph nos: 2 356 - 371

Survey date: 2/3/13 Survey by: SW.

Weather: fine/cloudy/showers/rain/mist-fog Visibility: v.good/good/average/poor Horizon: clear/blurred / none

Wind/Sea state, Beaufort scale: calm 0/light 1-2/breeze 3-4/breeze 5-6/gale 7-9/ storm + Swell: low/medium/high

Tide: low/mid/high Rising/ ebbing Spring / mid-tide / Neap

FEATURES

Coastal form	Open Bay / <u>Enclosed Bay</u> / <u>Headland</u> / Terrace / Estuary / Spit / Cliff / Stacks / Arches / Dunes / River
Landform	Flat / Undulating / Sloping / Steep / <u>Vertical</u>
Aspect	Predominant, sea from land - N / NE / <u>E</u> / <u>SE</u> / <u>S</u> / SW / <u>W</u> / NW
Land-use	Rough pasture or scrub / Pasture / Arable / Mixed farming / <u>Meadow</u> / Woodland / Forestry Recreational / Parkland / Settlement / Military / <u>semi natural</u>
Geology visible	Alluvium / Shale / <u>Mudstone</u> / <u>Sandstone</u> / Granite
Sea Water	<u>Clear</u> / Murky / Sediment laden Brown / <u>Grey</u> / Azure blue / Green Blue / Blue / Deep blue
Recreational / built form	<u>Houses</u> / <u>Holiday homes</u> / <u>Caravans</u> -tents / Golf course / Coastal path Farmstead / Hamlet / <u>Village</u> / <u>Town</u>
Inter-tidal zone Visible? Y/N	Broad / <u>Moderate</u> / <u>Narrow</u> <u>Bedrock</u> / <u>Rock-boulders</u> / Shingle / <u>Sand</u> / Mud Boats beached at low tide
Onshore features / landmarks	Harbour / Port / Ferry terminal / Marina / Pier / Sea wall / Slipway / Sea defences / Shelterbelt Power station/ Wind turbines / Electricity pylons / Radio masts / Lighthouse / Beacon / Chimney / Gantries / Pipeline / Lifeboat station Road / Rail / Industrial buildings / Container store / Retail park <u>Church spires-towers</u> / Monument or ruin / Topographical feature <i>Tenby</i>
Offshore features/ landmarks	Oil-rigs or Gas rigs / Wind turbines / Navigational marks or buoys / Fishing buoys / Lighthouse Islands / Rocks / Reefs / Sand-bar N/A
Sea features	Overfall / Eddy / Whirlpool / Evident tidal stream N/A
Navigational features, coastal	Moorings / Anchorage Channel markers / Cardinal marks / Special feature buoys / N/A
Notes	SETTLED COAST INTERSPERSED WITH CLIFFS WITH WOODLAND / PLANTATION.

AESTHETIC ASPECTS OF SEASCAPE CHARACTER

Scale	Intimate / Small / <u>Medium</u> / Large / Vast
Enclosure	Confined / Enclosed / <u>Open</u> / Expansive/Exposed
Diversity	Uniform / Simple / Diverse / <u>Complex</u>
Texture	Smooth / Textured / Rough / <u>Very rough</u>
Form	Straight / <u>Angular</u> / Curved / Sinuous
Line	<u>Vertical</u> / Sloping / Rolling
Colour	Monochrome / Muted/ Colourful / Garish / Moderate contrasts / Strong contrasts <i>— GRASS + WHITE SETTLEMENTS</i>
Pattern	<u>Random</u> / <u>Organised</u> / Regular / Formal
Unity	Unified / <u>Interrupted</u> / Fragmented / Disunity
Visual Dynamic	Panoramic / <u>Framed</u> / Intermittent / Channelled
Balance	Harmonious / <u>Balanced</u> / Discordant / Chaotic
Movement	Still / <u>Calm</u> / Restful-rhythmic / Busy
Notes incl attractors and detractors	WHITE WOODPANELLED BUILDINGS IN SETTLEMENTS + CARAVANS - DETRACTORS, ESPECIALLY ON CLIFF TOPS.

PERCEPTUAL AND EXPERIENTIAL ASPECTS OF SEASCAPE CHARACTER	
Exposure	Very exposed / <u>Exposed</u> / Mixed / Sheltered / Very sheltered
Proportion sea to sky at viewpoint	Sea dominates / <u>Balanced</u> / Land dominates
Focus	Objects or landform fill the view / <u>Balanced</u> / Objects or landform are less strong
Security	<u>Safe</u> / Unsettling / Disturbing / Threatening
Stimulus	Monotonous -Non-descript / <u>Interesting</u> / Challenging / Inspiring
Tranquillity	Still-tranquil / <u>Some tranquillity</u> / Limited tranquillity / Busy
Remoteness	Remote / Some man-made features-few people / <u>Settled rural -some people</u> Settled/urban /crowded
Views	<u>Panoramic</u> / Channelled / Narrow / Filtered
Naturalness	Natural / Tamed / <u>Managed</u> / Artificial / Manmade
Noise	<u>Quiet</u> / Distant / Intermittent / Loud
Smell	<u>Natural / Salty</u> / Seaweed / Fisheries / Agricultural / Industry / Fumes
Sense of place	<u>Strong</u>Moderate.....Weak
Notes including key views	KEY VIEWS TO TENBY + ACCESS TO GOWER + CALDEY ISLAND SOME TRANQUILLITY BETWEEN SETTLEMENTS
ACTIVITIES	
Coastal	General beach activity / Leisure sailing / Canoeing / Windsurfing / Power boating / Shore angling / Walking / Kite surfing / Sand sailing/fisheries/commercial/port/ <u>harbour</u>
Marine	Fish farming / Mussel rafts / Commercial fishing / <u>Shipping lane</u> / Ferry route/renewable energy <u>Sailing</u> / Canoeing-surfboarding / Power craft / Recreational fishing 2 SETS OF DINGHIES OUT OF TENBY .
Cultural associations	Historical event / Artistic/ Literature / Culinary / Musical / Festivals ?
Notes	WINTER - REDUCED USE
DYNAMICS	
Dynamics- forces for change	Fishing industry/ <u>Tourism</u> / Erosion / <u>Development: residential-industrial-retail</u> / Road or rail / Parking
	DEVELOPMENT PRESSURE ON COAST APPARENT
CONDITION	
Rarity	Single example / <u>Infrequent</u> / Frequent / Common
Intactness	Complete ----- <u>+</u> -----Remnant
Condition	Excellent / Good / <u>Declining</u> / Poor / Derelict
Fragility	Robust ----- <u>+</u> -----Delicate
Capacity for change	VERY LIMITED CAPACITY IN UNDEVELOPED STRETCHES OF COAST .
Notes	

Acknowledgements

Acknowledgements

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- Simon Michaels (White Consultants)- seascape assessment
- Lesley Cherns (Cardiff University)- geomorphology/coastal processes interpretation
- David Gwyn (Govannon) and Richard Kelly- cultural heritage interpretation
- David Reed (Mariteam Associates)- marine and coastal tourism and uses and local knowledge
- Alun Rogers (Cardiff University)- GIS and mapping

All photos are by White Consultants unless otherwise stated.