

South Devon AONB Seascape Character Assessment Feasibility Study

Purposes

If undertaken at an appropriate level of detail and scoped correctly, the Seascape Character Assessment would serve three overarching purposes:

Planning: helping to ensure that views to/from the sea are taken into consideration when planning decisions are made, and provide the baseline information to make this possible.

Nature recovery: providing local-level information on coastal, intertidal and marine habitats & their biological communities which would support and help to target onshore and offshore nature recovery and biodiversity enhancement projects. It will also provide baseline information to measure climate change impacts, as well as potential opportunities for climate change mitigation and improving resilience.

Raising public awareness of seascapes: enabling local people and visitors to understand and value the hidden world under the surface of the water, and how it can be conserved and enhanced.

Context and examples of forces for change

The local area is facing a wide range of pressures and forces for change. The Seascape Character Assessment would provide the baseline data to both respond to these issues as they arise, and to develop pro-active approaches for positive strategies and interventions in the future.

Examples of developments and land-use changes onshore include demand for housing, renewable energy sources, sand/gravel extraction and coastal defence schemes. These demands are exacerbated by the threat of coastal squeeze. Offshore, land/sea use changes include new seaweed farms (for use in cosmetics – an application has recently been submitted for a new seaweed farm off Thatcher Rock) and extraction of seawater for shellfish processing.

Coastal, intertidal and offshore habitats are threatened by a range of issues, including run-off from agriculture, illegal dumping in streams, coastal defences altering habitats, climate change and associated sea level rise, and illegal oyster and bait harvesting.

Recreation and visitor management can also be an issue, as seen by the effects of large numbers of local people/ staycationers visiting during the pandemic. Problems included path erosion, litter, wildlife disturbance and trampling of seagrass. Uncontrolled line fishing from shore can be a problem, particularly when it involves large gangs who camp on site. There is

pressure on slipways and parking due to increase demand at smaller harbours, with associated costs of maintaining slipways.

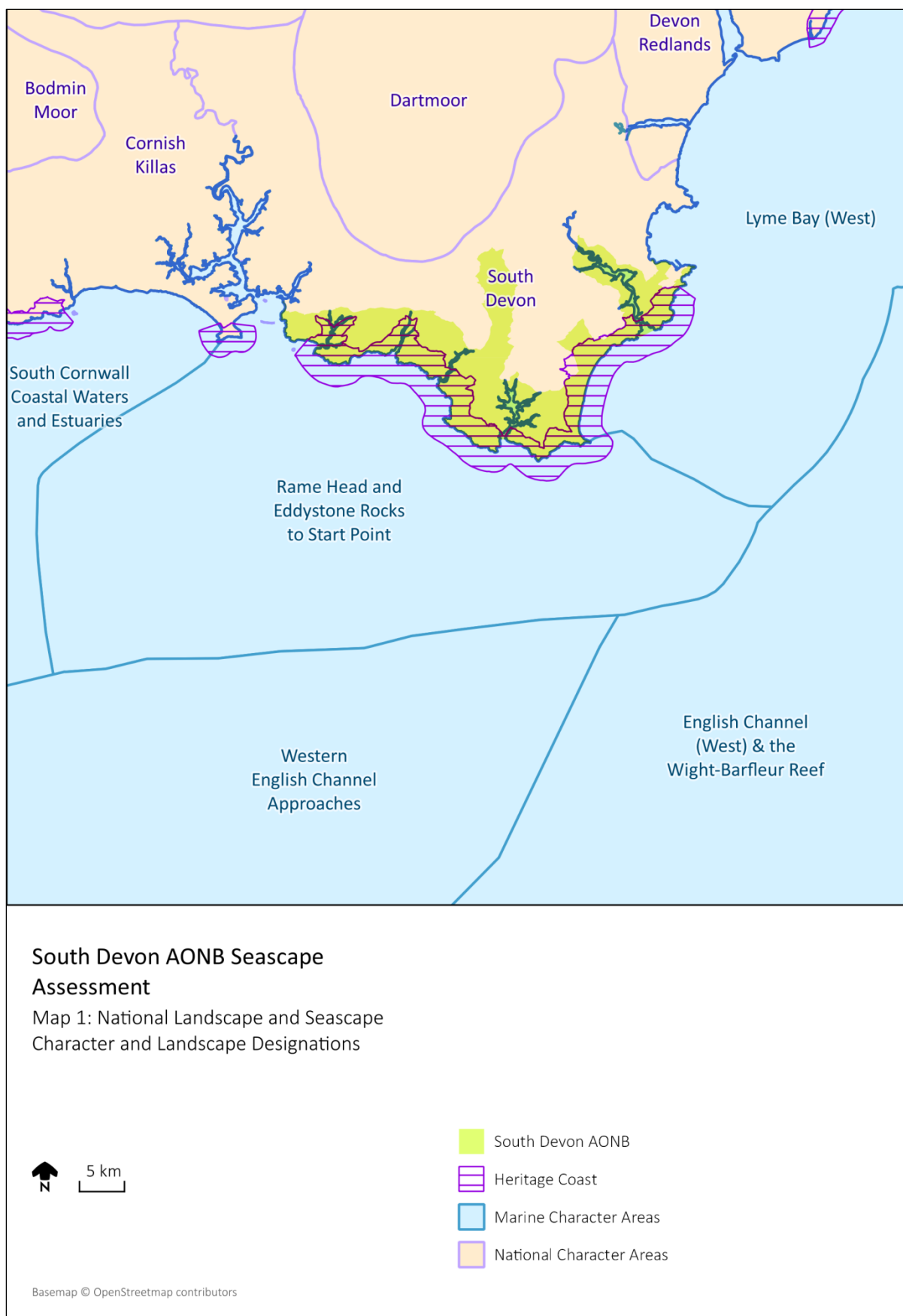
Existing landscape and seascape character context

There are a number of existing relevant studies, as shown in Maps 1 and 2. These include Landscape and Seascape Character Assessments at varying scales and levels of detail.

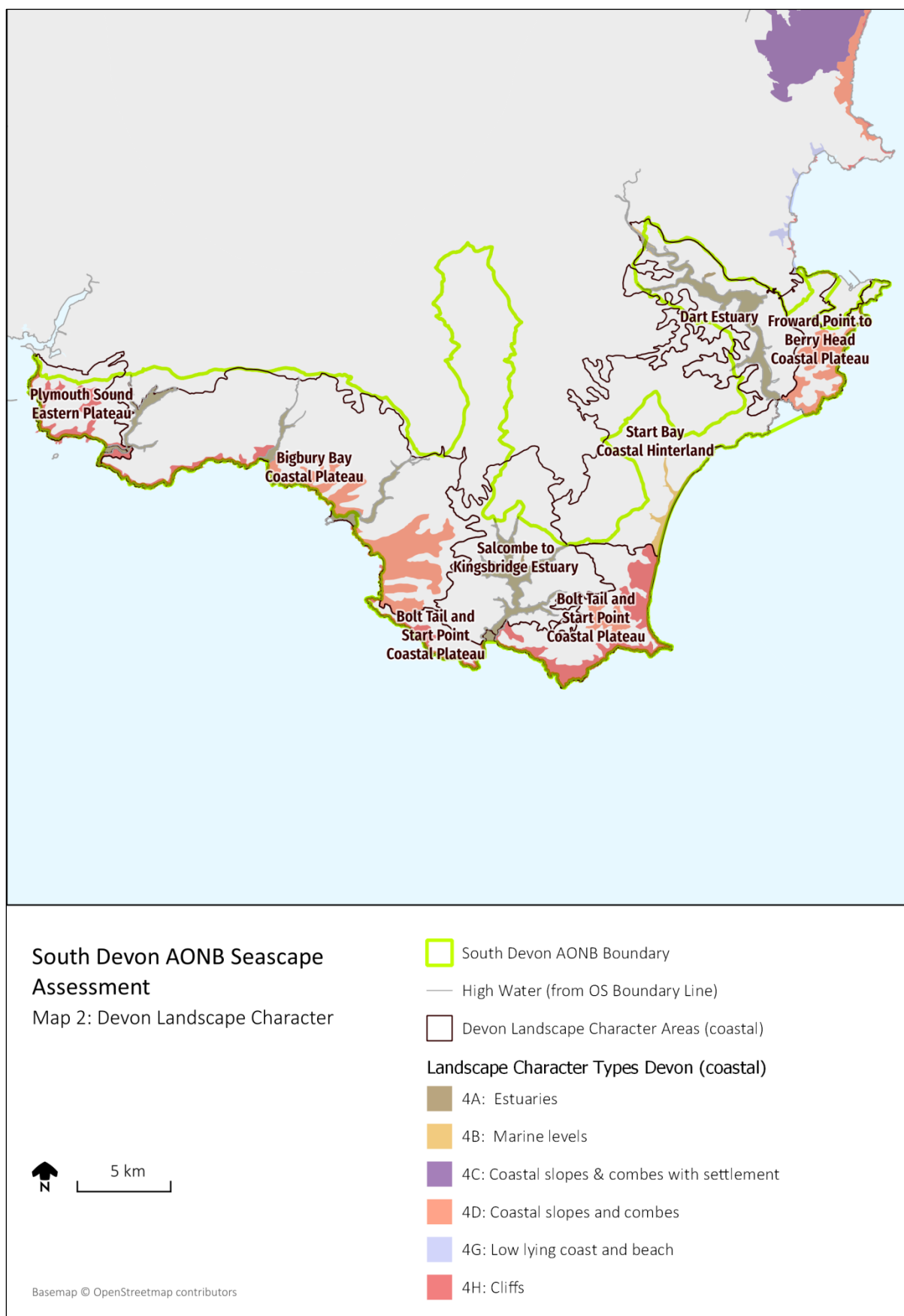
National Level (Map 1): National Character Area 151: *South Devon* covers the terrestrial parts of the South Devon AONB coast, above the high water mark. It does not include the ria-type estuaries. Two Marine Character Areas (MCAs) cover the coastal waters around the AONB - MCA 50 (*Rame Head and Eddystone Rocks to Start Point*) in the west, and MCA 1 (*Lyme Bay West*) in the east. These MCAs include areas up to the high water mark, and so include the estuaries and other tidal areas.

County Level (Map 2): Seven Devon Character Areas (DCAs) cover the coastal parts of the South Devon Coast AONB. Their coastal boundaries do not appear to be consistent: some DCAs appear to follow the NCA boundaries along the high water mark, whilst others include intertidal areas. Relevant DCAs (from west to east) are *Plymouth Sound Eastern Plateau*; *Bigbury Bay Coastal Plateau*; *Bolt Tail and Start Point Coastal Plateau*; *Salcombe to Kingsbridge Estuary*; *Start Bay Coastal Hinterland*; *Dart Estuary*; *Froward Point to Berry Head Coastal Plateau*.

There is no county-level equivalent to the DCAs for the offshore area, although the estuaries are included in the DCAs.



Map 1: National Landscape and Seascape Character



Map 2: Devon Landscape Character

District Level: The South Hams Landscape Character Assessment (updated 2018) describes the Landscape Character Types (LCTs) from the Devon Menu of LCTs found within the District. The following coastal LCTs are identified within the South Devon Coast AONB, and are shown on Map 2:

4A: *Estuaries*

4B: *Marine Levels and Coastal Plains*

4D: *Coastal Slopes and Combes*

4H: *Cliffs*

6: *Offshore Islands*

Since these LCTs were mapped, work on the North Devon Coast Seascape Character Assessment identified additional intertidal and marine LCTs which have since been included in the Devon Menu of LCTs. It is likely that several of these new LCTs also occur along the South Devon coastline. It is also likely that there are additional LCTs which are unique to the South Devon Coastline and therefore haven't been identified yet. The Devon Menu is an evolving structure so it would be possible to add new LCTs to it, but the number of new LCTs should be kept to a minimum.

There may be occasions where the names or descriptions of existing LCTs need to be adapted to reflect the circumstances of the South Devon Coast. The LCT description on the Devon Menu would also need to be updated to reflect this.

The Plymouth Landscape and Seascape Character Assessment identified offshore/ coast LCTs 4J: *Harbours, Ports and Marinas*, 4K: *Outer Harbour Approaches*, 4H: *Cliffs* and 1B: *Open Coastal Plateau* which occur around Plymouth and Plymouth Sound. They are mostly adjacent to the AONB, but occasionally overlap with it.

Landscape and Seascape Character Conclusions

The South Devon AONB Seascape Character Assessment provides an opportunity to extend coverage of LCTs out into the intertidal and marine areas beyond Plymouth Sound. This may require the identification of new LCTs or modification of existing LCTs (the 'Devon Menu' would then need to be updated accordingly). It also provides an opportunity to identify Seascape Character Areas (SCAs) at a more local scale than the national MCAs.

Available data sources

Datasets of offshore habitats are available from JNCC (UKSeaMap) and the EMODnet Seabed Habitats website (EUSeaMap). Advice from JNCC and a review of these datasets by people with local knowledge of South Devon's existing habitats suggests that the EUSeaMap data (shown on Map 3) is more reliable, and could be used, for example, in identifying areas suitable for the expansion of seagrass beds. JNCC advise that as it stands, EUSeaMap is more up to date than UKSeaMap, although it only uses the European habitat classification system, EUNIS, as opposed to the more detailed Marine Habitat Classification for Britain and Ireland. Additionally, there is a problem in EUSeaMap with some missing data very close to the coast in some parts of the country.

Other relevant datasets which are freely available are listed below.

Existing landscape and seascape studies:

- MMO Marine Character Areas (see Map 1)
- National Character Areas (see Map 1)
- Devon Character Areas (see Map 2)
- Devon Landscape Character Types (see Map 2)

Access

- South West Coast Path (and associated spreading room)
- Open Access Land
- Public Rights of Way

Nature Conservation

- UKSeamap
- EUSeaMap (See Map 3 - The biological depth zones will need to be defined for public awareness, ideally with public-friendly names or graphics)
- Benthic Survey data inventory
- Special Protection Areas (Map 4)
- Special Areas of Conservation (Map 4)
- Ramsar Sites
- SSSIs
- Local and National Nature Reserves
- Marine Conservation Zones
- Offshore Marine Protected Areas (Map 4)
- Highly Protected Marina Areas (not yet defined)

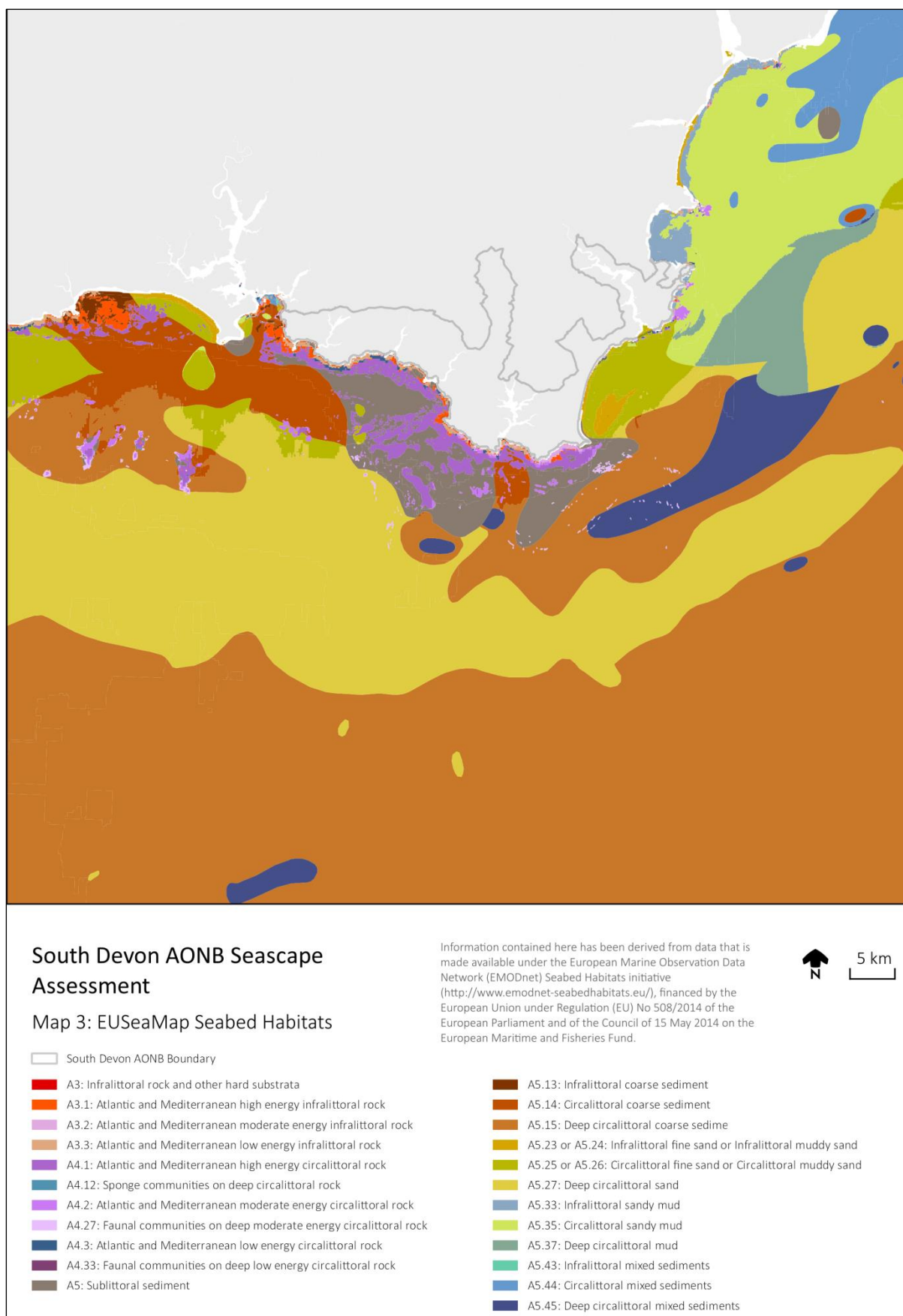
Heritage

- Scheduled Monuments
- Listed Buildings
- Conservation Areas

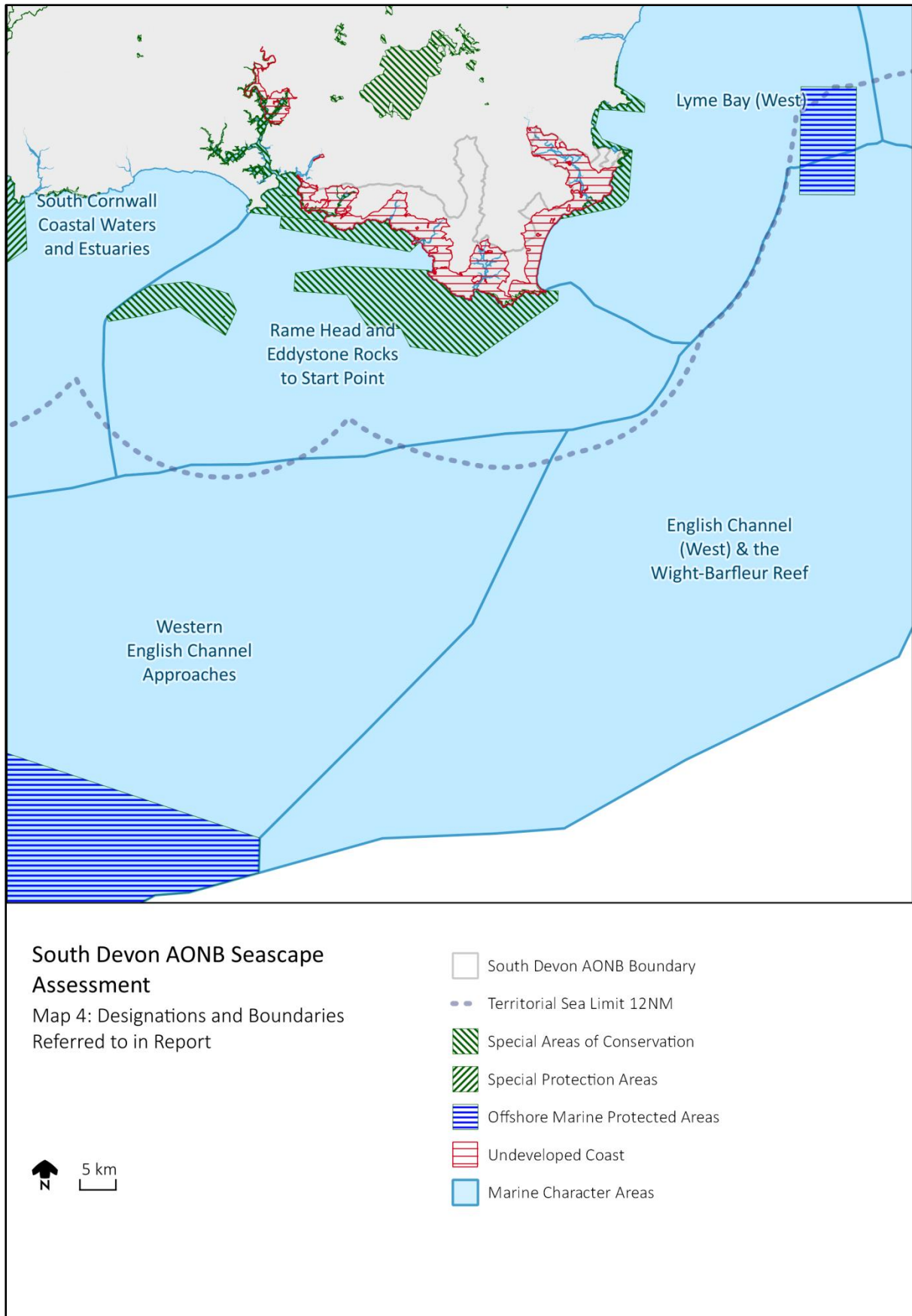
- Heritage Coast (Map 1)
- Protected wreck sites

Other marine-based data

- Marine Environmental Data and Information Network (MEDIN)
- Centre for Environment, Fisheries and Aquaculture Science (CEFAS)
- NE Seabed topography data is available depicting the coastal topography
- Charts depicting the tidal currents
- Plankton and water temperature maps
- Future 'migration' maps of seals, cetaceans, fish?



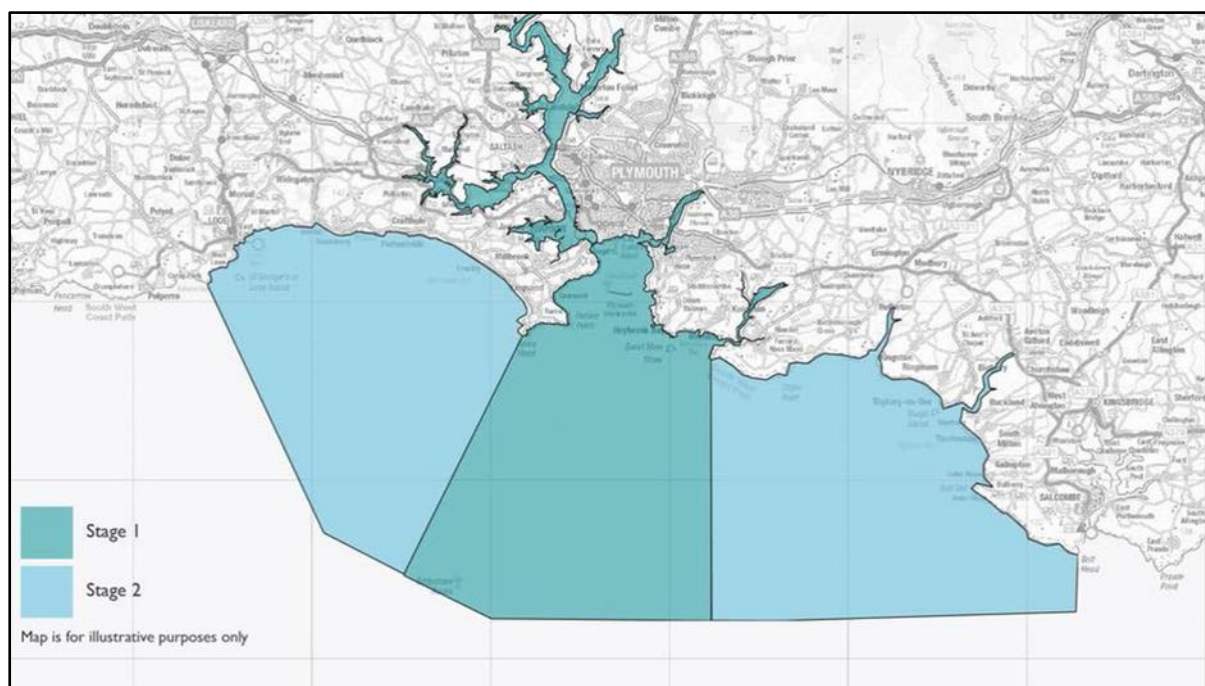
Map 3: EUSeaMap Seabed Habitats



Map 4: Designations and boundaries referred to in Report

Opportunities for collaboration

The Seascape Character Assessment provides an exciting opportunity to link with other organisations to further joint objectives. As well as furthering objectives within the South Devon AONB Estuaries Environmental Management Plan, there are opportunities to complement and enhance the work of other organisations and ventures, such as the National Marine Park based around Plymouth Sound and the Devon Maritime Forum, etc. For more information see <https://plymouthsoundnationalmarinepark.com/>



Illustrative map showing extent of Plymouth Sound Marine Park

Approach

The potential use of the study for nature recovery projects will require a suitable level of detail on marine and coastal habitats & natural communities (=biotopes). For example, it would be helpful to be able to identify areas of existing or potential seagrass habitat, or places where freshwater seepage habitats/communities may occur. The planning and public-engagement purposes will require identification of Seascape Character Areas at a scale which local people can immediately relate to, and which reflects local variation within the coastline.

Study Area

There are a number of options for defining the seaward and inland boundaries, described in the table below.

If consistency of approach with the North Devon Coast Seascape Character Assessment is desired, then the seaward boundary should be the 12nm limit, and the inland boundary

should be broadly based on Landscape Character Types. A Study Area boundary based on these parameters is shown in Map 5.

Seaward boundary

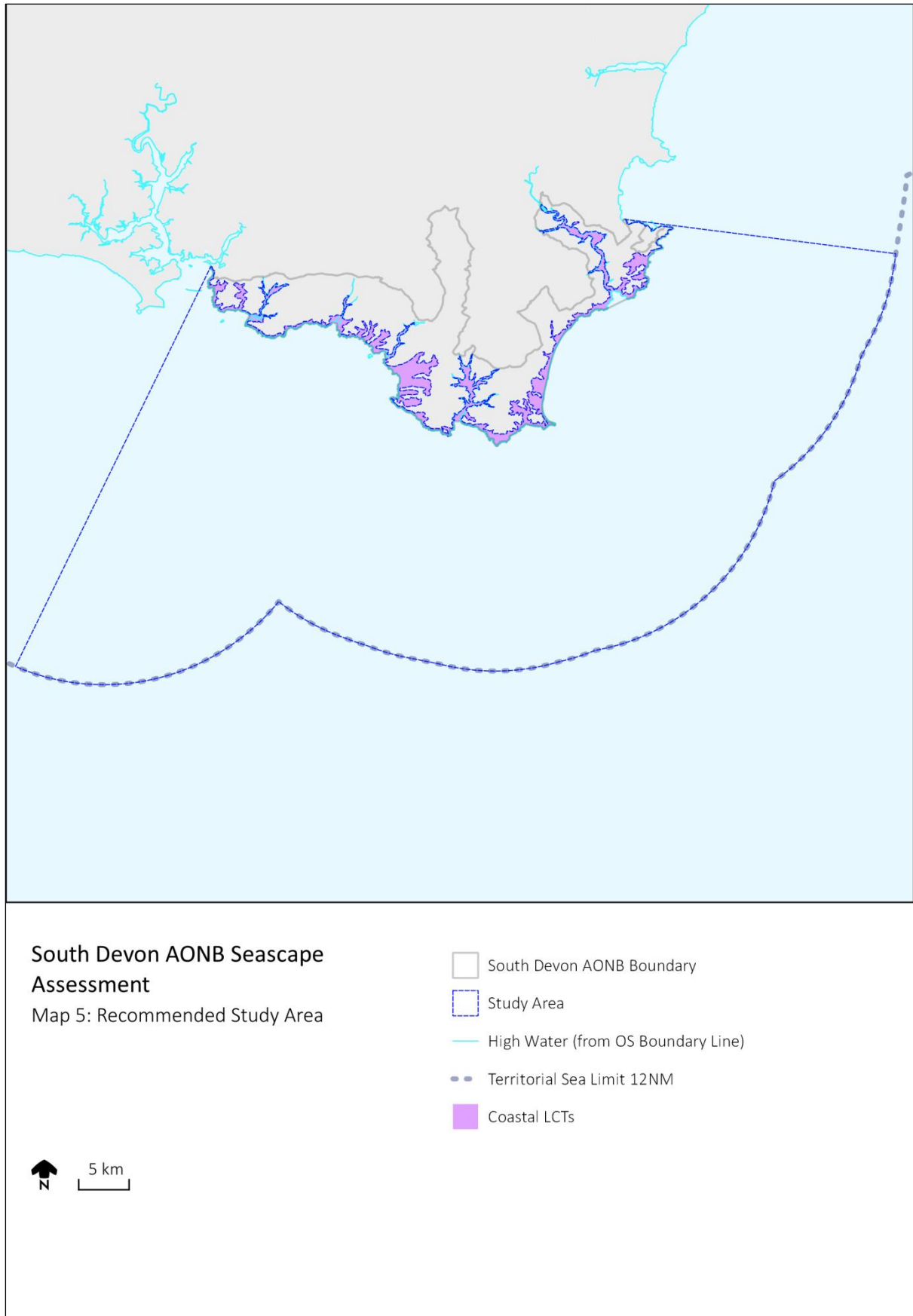
Potential seaward boundary	Options
SCA-based	The boundary could follow the seaward boundaries of MCAs 51 and 1. This would help the project to 'nest' within the MMO framework. However the outer MCA boundaries are not a consistent distance from the shore, being approx. 37km in the west and 21km in the east. They are – however similar to the 12nm territorial limit, due to the presence of the Eddystone Reef.
Bathymetry-based	The boundary could follow the 50m depth contour. This would include the most varied habitats (generally found in seas shallower than approx. 30m where light can penetrate to the seabed) and also cultural features such as the Eddystone Lighthouse. However it's not necessarily a straight line and could result in quite a 'wiggly' outer boundary. It would be close in around Start Point and exclude areas of interest.
12nm limit	<p>This is a measured line rather than a physical feature, so it looks tidy, but may be arbitrary in terms of the marine features it encompasses. It is also skewed by the presence of the Eddystone Reef. Many Seascape Character Assessments use the 12nm limit as their outer boundary.</p> <p>In this case the 12nm limit will encompass most needs and interests.</p> <p>The 12nm boundary was used in the North Devon Seascape Character Assessment, but it's not obvious because of the presence of Lundy, and the England/Wales boundary which runs up the centre of the Bristol Channel.</p>

Inland boundary

Potential inland boundary	Options
Land visible from the sea	This is not straightforward to calculate, and can result in areas a considerable distance inland being included (for example the top of Dartmoor). It is important to distinguish coastal areas from their wider setting (see note below). Nevertheless, there is a point where a viewer feels 'close to the sea'. This is often closely related to landscape, and may therefore be covered by an LCT-based approach as described below.
LCT-based (See Map 2)	<p>In this approach, the boundary would encompass all areas within the existing 'coastal' LCTs (i.e. 4A <i>Estuaries</i>; 4B <i>Marine Levels and Coastal Plains</i>; 4D <i>Coastal Slopes and Combes</i>; 4H <i>Cliffs</i>). This would be relatively straightforward and would include all areas with a sense of being 'by the sea' including estuaries. It would include tidally-flooded areas. It would however result in some duplication with the South Hams Landscape Character Assessment. It would therefore be necessary to explain in the introduction that the Landscape and Seascape Character Assessments are complementary and should be read together to get a full picture. This is what happened in the North Devon Coast Seascape Character Assessment, where there is a slight overlap between the land-based and sea-based Assessments.</p> <p>A broadly LCT-based approach was taken in the North Devon Seascape Character Assessment, where coastal LCTs were the starting-point, but occasionally additional areas were included (e.g. prominent hilltops close to the coast) or excluded (e.g. estuaries beyond clear physical barriers such as bridges).</p>
South-west coast path (and spreading room)	The coast path is a convenient line which generally separates coastal and inland areas. It follows ferry lines across the estuaries, so the seaward parts of the estuaries are included (i.e. the parts with the strongest association with the sea) but not the parts further inland. Due to the proximity of the Coast Path to the coast, there would be limited overlap with the South Hams Landscape Character Assessment. However, the Coast Path occasionally needs to be re-routed due to coastal erosion, so cannot be assumed to be a permanent line for its full length. Also the presence of the spreading room boundary could cause deviations from the path itself which could cause ambiguity.

High tide line	This boundary would exclude all ‘terrestrial’ LCTs except the estuaries, and would restrict the Study Area to places which are permanently or tidally covered by the sea. It would be consistent with the MCA boundaries and would minimise overlap with the existing Landscape Character Assessment. However it would mean that places on land which have a strong connection with the sea would be excluded. This may be less helpful from a planning or perceptual point of view.
Undeveloped coast (Policy DEV24 in Plymouth and South West Devon Joint Local Plan) https://plymswdevonplan.co.uk/policy/so11/dev24 (Shown on Map 4)	This planning designation covers a similar (but not identical) area to the South Devon AONB. It covers the coast and estuaries, and also extends inland, presumably covering the land with a strong visual relationship with the coast. As well as including all the coastal LCTs listed above, it also encompasses parts of additional land-based LCTs, namely 1B Open Plateaux; 3G River Valley Slopes and Combes, and 5A Inland Elevated Undulating Land. Using the Undeveloped Coast designation as a boundary would include the land which forms the immediate setting to the coast, but would also include land which is not predominantly coastal in character. Its large extent would result in additional work which would raise the cost of the project, and also increase overlap with the existing Landscape Character Assessment. However it is still a useful dataset and should still inform the Seascape Character Assessment (for example in terms of planning recommendations, and in understanding the setting of the coast). There may also be occasional places where it is appropriate to extend the Study Area boundary into the Undeveloped Coast (for example hill summits).
Heritage Coast (Shown on Map 1)	Using the Heritage Coast boundary would raise similar issues to using the Undeveloped Coast policy boundary. Again, it would include most areas with a strong relationship with the coast, as well as other LCTs. This would lead to some overlap with the South Hams Landscape Character Assessment. However, the Heritage Coast designation does not include the largest estuaries, nor the inland parts of the smaller estuaries, all of which should be included in the Seascape Character Assessment.

It should be remembered that the setting of the coastal area (both inland and out to sea) is likely to be more extensive than the Study Area. For example, the setting is likely to extend to the top of Dartmoor, and for a considerable distance into the Channel. The Seascape Character Assessment should therefore describe the wider setting as experienced from the various Seascape Character Areas, particularly referencing the contribution of the setting to views and sense of place.



Map 5: Recommended Study Area based on Coastal LCTs and 12nm territorial sea limit

Opportunities for public consultation and engagement

The South Devon Seascape Character Assessment provides an opportunity to engage local people through both process and outputs. As well as enhancing the project and gaining local buy-in, engaging with local people will also contribute to the third overarching purpose of the project: raising public awareness of seascapes, enabling local people and visitors to understand and value the hidden world under the surface of the water, and how it can be protected, conserved and enhanced.

Public consultation can also help to inform the outputs, particularly in relation to the perceptual qualities of landscape and seascape. For example, through identifying favourite coastal views; understanding how people respond emotionally to different parts of the coast, and understanding what it is about the seascapes which really matter to people.

There are many opportunities for presentation to the public during the consultation process and through the project outputs. These could include in-person events, tangible interpretation such as leaflets and displays, and digital interpretation such as VR, apps, and interactive mapping.

There are very exciting opportunities for the use of technology (for example drones and underwater cameras) to inform the project and assist with public engagement. In the longer term there are many potential follow-on projects (for example using citizen science to analyse drone footage to identify micro habitats). If these follow-on projects could be identified near the outset it would be easier to tailor the methodology and outputs to facilitate them.

A note of caution though – the outputs must be practical and enable all the purposes of the project to be met. The outputs which work for public engagement (interpretation, digital material, interactive maps) are not always best suited for planning uses, where clear, thorough, well-written, practical and well-illustrated reports are essential. Therefore, sufficient resources must be allocated to enable an appropriate range of outputs.

Time and resources required

Fieldwork and public consultation are better done during the spring / summer, especially as boat work will be required and doing Seascape Character Assessment fieldwork in a boat on rough seas is quite challenging. Plenty of time should be allowed for writing-up, as it often a lengthy process. Sufficient time should also be allowed for public consultation, and for the client team to review draft outputs. The ideal timetable for the project would therefore run from April through to December / January.

Based on the size of the study area, and our previous experience on similar projects, we estimate that a budget of £25k - £30k would be required, depending on the range of outputs desired. This includes a sum for expenses, including boat hire.

If the budget is very tight, it may be possible to develop an approach where more information / higher resolution data is provided for areas closer to the coast, where it is most needed and where the issues are most complex. However care would need to be taken that adequate levels of information are provided across the entire Study Area to enable the project to fulfil its purposes.

Often projects such as this are funded collaboratively by a range of organisations including Local Planning Authorities. There may perhaps also be opportunities for sponsorship by local firms.