



Hornsea Project Four: Environmental Statement (ES)

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Volume A4, Annex 6.5: Compensation EIA Annex Part 3

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7.3 Assessment

7.3.1 Identification of Impacts and Scope of Assessment

7.3.1.1 Based on the information presented in [Volume A4, Annex 6.1: Compensation Project Description](#) (and detailed in [Section 4.1.5](#)), all activities associated with the construction, implementation/O&M, and decommissioning of the new offshore artificial nesting structures Compensation Measure were defined and potential impact pathways identified.

7.3.1.2 [Table 7](#) details the impacts that were scoped out of the assessment at this stage alongside justification as to why each impact was scoped out.

7.3.1.3 All impacts considered to be scoped into the assessment are detailed in [Volume A4, Annex 6.3: Compensation Impacts Register](#).

Table 7: New Offshore Artificial Nesting Structures – Impacts Scoped Out of Assessment.

EIA Topic	Phase	Potential Impact	Justification for Scoping Out
Benthic and Intertidal Ecology	All Phases	Accidental release of pollutants (e.g. from accidental spillage/leakage) and resulting in potential effects on receptors.	The magnitude of an accidental spill incident will be limited by the size of chemical or oil inventory on construction vessels. In addition, released hydrocarbons would be subject to rapid dilution, weathering and dispersion and would be unlikely to persist in the marine environment. The likelihood of an incident will be reduced by implementation of a Project Environmental Management and Monitoring Plan (PEMMP), undertaken in accordance with CoC-OFF-7 (Volume A4, Annex 6.4: Compensation Commitments Register). This impact has therefore been scoped out of the assessment.
Fish and Shellfish Ecology			
Marine Mammals			
Offshore and Intertidal Ornithology			
Benthic and Intertidal Ecology	All Phases	Seabed disturbances leading to the release of sediment contaminants and resulting in potential effects on receptors.	Following any seabed disturbances, the majority of resuspended sediments are expected to be deposited within the immediate vicinity of the works. The release of any potential contaminants that may be present within the small proportion of fine sediments is likely to be rapidly dispersed with the tide and/or currents therefore increased bioavailability resulting in adverse ecotoxicological effects are not expected. As such and combined with the limited extent and duration of any seabed disturbances, the impact has been scoped out of the assessment.
Fish and Shellfish Ecology			
Aviation and Radar	All Phases	Creation of aviation obstacle to fixed wing and rotary aircraft operating offshore.	The locations, heights and lighting status of the offshore nesting structures will be reported to the Defence Infrastructure Organisation (DIO) and the Civil Aviation Authority (CAA) to allow inclusion on Aviation Charts in accordance with CoC-OFF-5 (Volume A4, Annex 6.4: Compensation Commitments Register). As such, the impact has been scoped out of the assessment.
Marine Archaeology	All Phases	Disturbance, removal, intrusion, compression and/or penetration of sediments containing archaeological receptors (material or contexts) leading to total or partial loss.	As a result of the implementation of a Marine Written Scheme of Archaeological Investigation (WSI) in accordance with CoC-OFF-2 and pre-construction surveys in accordance with CoC-OFF-14 (Volume A4, Annex 6.4: Compensation Commitments Register), and the impact being highly limited in extent, the impact has been scoped out of the assessment.
Marine Archaeology	Implementation/O&M	Scour, penetration, draw down and compression effects caused by the presence of the foundations, impacting archaeological receptors and exposing such material to natural, chemical or	

EIA Topic	Phase	Potential Impact	Justification for Scoping Out
Marine Archaeology	Implementation/ O&M	biological processes and causing or accelerating loss of the same. Penetration and compression effects on seabed caused by corrective and preventative operation and maintenance activities (via jack-up vessels or divers) leading to total or partial loss of archaeological receptors (material or contexts).	
Seascape, Landscape and Visual Resources	All Phases	All potential impacts on seascape, landscape and visual resources are scoped out due to lack of impact pathways.	The AoS is relatively well developed with oil and gas infrastructure. As such, the development is considered to be characteristic of the surrounding marine area and all potential impacts on seascape, landscape and visual resources from all phases of the Compensation Measure are scoped out of the assessment.
Infrastructure and Other Users	All Phases	All potential impacts on aggregate dredging activities, disposal sites, Carbon Capture and Storage (CCS) sites, cables and pipelines, Oil & Gas (O&G) activities.	In accordance with CoC-OFF-13 (Volume A4, Annex 6.4: Compensation Commitments Register), the offshore nesting structure will not be sited in immediate proximity to aggregate dredging activities, disposal sites, CCS sites, cables and pipelines, and Oil & Gas (O&G) activities. As such, all potential impacts on these receptors have been scoped out of the assessment.

7.3.2 Impact Assessment

- 7.3.2.1 [Volume A4, Annex 6.3: Compensation Impacts Register](#) identifies the potential scoped in impacts that could result from the installation/construction, implementation/O&M, and decommissioning of the new offshore artificial nesting structure Compensation Measure, relating to each technical topic under consideration in the EIA process. Each of these impacts have been considered, following the process outlined in [Section 6](#), with the MDS defined, magnitude of impact and sensitivity of receptor considered and the level of significance derived by the matrix approach. The Compensation Impacts Register is presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#).
- 7.3.2.2 As presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#), it has been concluded that that no LSE is predicted for any of the potential impacts arising from the installation/construction, implementation/O&M and decommissioning of the new offshore artificial nesting structure Compensation Measure. As such, the potential effects to all receptors are therefore **not significant** in terms of the EIA Regulations ([Volume A1, Chapter 5: Environmental Impact Assessment Methodology](#)).

8 EIA – Repurposed Offshore Artificial Nesting Structures

8.1 Introduction

8.1.1.1 This section considers the potential impacts arising from the repurposed offshore artificial nesting structures Compensation Measure. A regional environmental characterisation of the physical, biological and human environmental baseline is presented alongside the results of an assessment of potential significant effects arising from the proposed Compensation Measure. Only one AoS has been identified for the repurposed offshore artificial nesting structures Compensation Measure (A1: Southern North Sea) and as such, the baseline and assessment within this section relates to this AoS alone.

8.2 Baseline

8.2.1.1 Due to the nature of this compensation measure, the baseline environment is the same as that described for the new offshore artificial nesting structures and therefore the summary of the baseline environment for AoS A1 is described in [Table 6](#) in [Section 7.2](#) above.

8.3 Assessment

8.3.1 Identification of Impacts and Scope of Assessment

8.3.1.1 Based on the information presented in [Volume A4, Annex 6.1: Compensation Project Description](#) (and summarised in [Section 4.1.5](#)), all activities associated with the construction, implementation/O&M and decommissioning of the new offshore artificial nesting structures Compensation Measure were defined and potential impact pathways identified.

8.3.1.2 [Table 7](#) details the impacts that were scoped out of the assessment at this stage alongside justification as to why each impact was scoped out.

8.3.1.3 All impacts considered to be scoped into the assessment are detailed in [Volume A4, Annex 6.3: Compensation Impacts Register](#).

Table 8: Repurposed Offshore Artificial Nesting Structures – Impacts Scoped Out of Assessment.

EIA Topic	Phase	Potential Impact	Justification for Scoping Out
Marine Geology, Oceanography and Physical Processes	Implementation/ O&M	Scour of seabed sediments around foundation.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Benthic and Intertidal Ecology Fish and Shellfish Ecology Marine Mammals Offshore and Intertidal Ornithology	All Phases	Accidental release of pollutants (e.g. from accidental spillage/leakage) and resulting in potential effects on receptors.	The magnitude of an accidental spill incident will be limited by the size of chemical or oil inventory on construction vessels. In addition, released hydrocarbons would be subject to rapid dilution, weathering and dispersion and would be unlikely to persist in the marine environment. The likelihood of an incident will be reduced by implementation of a Project Environmental Management and Monitoring Plan (PEMMP), undertaken in accordance with CoC-OFF-7 (Volume A4, Annex 6.4: Compensation Commitments Register). This impact has therefore been scoped out of the assessment.
Benthic and Intertidal Ecology Fish and Shellfish Ecology	All Phases	Seabed disturbances leading to the release of sediment contaminants and resulting in potential effects on receptors.	Following any seabed disturbances, the majority of resuspended sediments are expected to be deposited within the immediate vicinity of the works. The release of any potential contaminants that may be present within the small proportion of fine sediments is likely to be rapidly dispersed with the tide and/or currents therefore increased bioavailability resulting in adverse eco-toxicological effects are not expected. As such and combined with the limited extent and duration of any seabed disturbances, the impact has been scoped out of the assessment.
Offshore and Intertidal Ornithology	Implementation/ O&M	The impact of physical displacement from an area around the structures may result in effective habitat loss and reduction in survival or fitness rates.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Offshore and Intertidal Ornithology		The impact of barrier effects caused by the physical presence of the structures may prevent clear transit of birds between foraging and breeding sites, or on migration.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Offshore and Intertidal Ornithology		The impact of attraction to lit structures by migrating birds in particular may cause disorientation, reduction in fitness and possible mortality.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.

EIA Topic	Phase	Potential Impact	Justification for Scoping Out
Marine Mammals Offshore and Intertidal Ornithology	All Phases	Increased vessel traffic resulting in disturbance to receptors	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Commercial Fisheries	Implementation/ O&M	Increased vessel traffic within fishing grounds as a result of changes to shipping routes and maintenance vessel traffic from the structure leading to interference with fishing activity.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Shipping & Navigation	Installation/ Construction	Structure will create powered and drifting allision risk for all vessels.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Shipping & Navigation	Implementation/ O&M	Presence of structure may cause vessels to be deviated leading to increased encounters and therefore increased vessel to vessel collision risk for all vessel in all weather conditions.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Shipping & Navigation	Implementation/ O&M	Maintenance activities may cause vessels to be deviated leading to increased encounters and therefore may also lead to increased vessel to vessel collision risk for all vessels in all weather conditions.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Aviation and Radar	All Phases	Continuation of aviation obstacle to fixed wing and rotary aircraft operating offshore.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Marine Archaeology	All Phases	Disturbance, removal, intrusion, compression and/or penetration of sediments containing archaeological receptors (material or contexts) leading to total or partial loss.	As a result of the implementation of a Marine Written Scheme of Archaeological Investigation (WSI) in accordance with CoC-OFF-2 and pre-construction surveys in accordance with CoC-OFF-14 (Volume A4, Annex 6.4: Compensation Commitments Register), and the impact being highly limited in extent, the impact has been scoped out of the assessment.
Marine Archaeology	Implementation/ O&M	Scour, penetration, draw down and compression effects caused by the presence of the foundations, impacting archaeological receptors and exposing such material to natural, chemical or biological	

EIA Topic	Phase	Potential Impact	Justification for Scoping Out
		processes and causing or accelerating loss of the same.	
Marine Archaeology	Implementation/ O&M	Penetration and compression effects on seabed caused by corrective and preventative operation and maintenance activities (via jack-up vessels or divers) leading to total or partial loss of archaeological receptors (material or contexts).	
Seascape, Landscape and Visual Resources	All Phases	All potential impacts on seascape, landscape and visual resources are scoped out due to lack of impact pathways.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.
Infrastructure and Other Users	All Phases	All potential impacts on aggregate dredging activities, disposal sites, Carbon Capture and Storage (CCS) sites, cables and pipelines, Oil & Gas (O&G) activities, recreational craft, and recreational fishing vessels.	Existing structure forms part of the baseline environment. As such, this impact has been scoped out of the assessment.

8.3.2 Impact Assessment

- 8.3.2.1 [Volume A4, Annex 6.3: Compensation Impacts Register](#) identifies the potential scoped in impacts that could result from the installation/construction, implementation/O&M, and decommissioning of the repurposed offshore artificial nesting structures Compensation Measure, relating to each technical topic under consideration in the EIA process. Each of these impacts have been considered, following the process outlined in [Section 6](#), with the MDS defined, magnitude of impact and sensitivity of receptor considered and the level of significance derived by the matrix approach. The Compensation Impacts Register is presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#).
- 8.3.2.2 As presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#), it has been conclude that no LSE is predicted for any of the potential impacts arising from the installation/construction, implementation/O&M and decommissioning of the repurposed offshore artificial nesting structures Compensation Measure. As such, the potential effects to all receptors are therefore **not significant** in terms of the EIA Regulations ([Volume A1, Chapter 5: Environmental Impact Assessment Methodology](#)).

9 EIA – New Onshore Artificial Nesting Structures

9.1 Introduction

- 9.1.1.1 This section considers the potential impacts arising from the new onshore artificial nesting structures Compensation Measure. A regional environmental characterisation of the physical, biological and human environmental baseline is presented alongside the results of an assessment of potential significant effects arising from the proposed Compensation Measure. Two AoS has been identified for the new onshore artificial nesting structures Compensation Measure: B1 (Clayton Bay to Newbiggin by the Sea) and B2 (Suffolk Coast).

9.2 Baseline

- 9.2.1.1 [Table 9](#) provides a summary of the baseline environment for AoS B1 (Clayton Bay to Newbiggin by the Sea) and [Table 10](#) provides a summary of the baseline environment for AoS B2 (Suffolk Coast).
- 9.2.1.2 [Figure 15](#) to [Figure 23](#) identify statutory, non-statutory and historic environment designations within each of the two AoS (where spatial data is publicly available). Due to the scale of AoS B1, the figures have been split into north and south.

Table 9: Summary of baseline environment in relation to the Area of Search (Clayton Bay to Blyth) for new onshore nesting structures.

Topic	Summary of Baseline Environment
Geology and Ground Conditions	<ul style="list-style-type: none"> The Bedrock Aquifer Designation ranges from predominately Principal north of Hartlepool to Secondary B and Secondary (undifferentiated) between Hartlepool to Redcar. The remainder to the south is Secondary A. The Superficial Drift Aquifer Designation is predominately Secondary (undifferentiated) within the entirety of the AoS.
Hydrology and Flood Risk	<ul style="list-style-type: none"> The majority of coastline is within Flood Zone 3 and there are several main rivers within the AoS including the River Tyne, River Wear, River Tees and River Esk.
Historic Environment	<ul style="list-style-type: none"> 2506 Listed Buildings 70 Scheduled Monuments One World Heritage Site within the AoS (<i>Frontiers of the Roman Empire (Hadrian's Wall)</i>) One Registered Battlefield (<i>Battle of Newburn Ford 1640</i>)
Ecology	<ul style="list-style-type: none"> 39 Local Nature Reserves 31 SSSIs Four SACs (<i>Beast Cliff-Whitby (Robin Hood's Bay), Castle Eden Dene, Durham Coast and North York Moors</i>) Four SPAs (<i>North York Moors, Northumberland Marine, Northumbria Coast and Teesmouth and Cleveland Coast</i>) Two Ramsar sites (<i>Northumbria Coast and Teesmouth and Cleveland Coast</i>) One RSPB Reserve (<i>Saltholme</i>) and two RSPB Important Bird Areas (<i>North Yorkshire Moors, Northumbria Coast and Teesmouth and Cleveland Coast</i>)
Landscape and Visual	<ul style="list-style-type: none"> No AONBs within AoS This AoS includes several National Character Areas
Land Use and Agriculture	<ul style="list-style-type: none"> Land use is predominately rural. However, there are urbanised and industrialised cities within the AoS such as Newcastle Upon Tyne, Sunderland and Hartlepool. The majority of AoS is Agricultural Land Classification Grade 3.
Traffic and Transport	<ul style="list-style-type: none"> No baseline information been collated due to the scale of the AoS, however the road network includes those within Newcastle upon Tyne, Sunderland, Hartlepool and Middlesbrough as well as a number of routes in parallel with the coastline.
Noise and Vibration	<ul style="list-style-type: none"> Defra strategic noise map data identifies a number of Noise Important Areas along the length of the AoS. These are predominately located along roads within urban areas such as Scarborough, Coatham, Sunderland, South Shields and Newcastle. Baseline noise levels are highest along major roads within the previously mentioned locations. Baseline noise levels are low within the AoS in rural locations where the nesting structure is likely to be located.
Air Quality	<ul style="list-style-type: none"> There are several Air Quality Management Areas (AQMAs) within the AoS (Scarborough AQMA – declared for Particulate Matter PM₁₀ and several within the urban areas of Newcastle Upon Tyne)
Socio-Economic	<ul style="list-style-type: none"> The AoS contains a wide range of economic activities including agriculture, tourism and industrial. Parts of the AoS in south Northumberland, North Tyneside, Newcastle upon Tyne, Sunderland, Hartlepool, Middlesbrough, Redcar and North Yorkshire include areas within the most 10% economically deprived neighbourhoods in England.
Health	<ul style="list-style-type: none"> Parts of the AoS in south Northumberland, North Tyneside, Newcastle upon Tyne, Sunderland, Hartlepool, Middlesbrough, Redcar and North Yorkshire include areas within the most 10% health deprived neighbourhoods in England.

Table 10: Summary of baseline environment in relation to the Area of Search (Suffolk coast) for new onshore nesting structures.

Topic	Suffolk coast: New Onshore Nesting Structures
Geology and Ground Conditions	<ul style="list-style-type: none"> The Bedrock Aquifer Designation is Principal within the entirety of the AoS. The Superficial Drift Aquifer Designation is Secondary A and Secondary (undifferentiated) in the areas surrounding Great Yarmouth and Lowestoft.
Hydrology and Flood Risk	<ul style="list-style-type: none"> The majority of coastline is within Flood Zone 3 and there are several main river within the AoS including <i>the River Blyth, River Waveney and River Yare.</i>
Historic Environment	<ul style="list-style-type: none"> 428 Listed Buildings Seven Scheduled Monuments There are no World Heritage Sites within the AoS.)
Ecology	<ul style="list-style-type: none"> Three Local Nature Reserves (<i>Gunton Warren and Corton Woods, Gunton Wood and The Haven, Aldeburgh</i>) Six SSSIs Three SACs (<i>Benacre to Easton Bavents Lagoons, Minsmere to Walberswick Heaths & Marshes and Southern North Sea</i>) Five SPAs (<i>Great Yarmouth North Denes, Minsmere-Walberswick, Outer Thames Estuary and Sandlings</i>) One Ramsar site (<i>Minsmere-Walberswick</i>) Five RSPB Reserves (<i>Alde - Ore Estuary, Benacre to Easton Bavents, Great Yarmouth North Denes, Minsmere – Walberswick and Suffolk Sandlings</i>) and three RSPB Important Bird Areas (<i>Dingle Marshes, Minsmere, North Warren</i>)
Landscape and Visual	<ul style="list-style-type: none"> One AONB (<i>Suffolk Coast and Heaths</i>) The majority of the AoS falls within the <i>Suffolk Coast and Heaths</i> National Character Area (ref: 82)
Land Use and Agriculture	<ul style="list-style-type: none"> Land use is predominately rural. However, there are urbanised and industrialised cities within the AoS such as Lowestoft and Great Yarmouth. The majority of AoS is Agricultural Land Classification Grade 4 or Non-agricultural.
Traffic and Transport	<ul style="list-style-type: none"> The most significant road networks within the AoS are the urban roads within Lowestoft and Great Yarmouth.
Noise and Vibration	<ul style="list-style-type: none"> Defra strategic noise map data identifies Noise Important Areas along the length of the AoS. These are found within the urban areas of Lowestoft and Great Yarmouth. Baseline noise levels are highest along major roads within the previously mentioned locations. Baseline noise levels are low within the AoS in rural locations where the nesting structure is likely to be located.
Air Quality	<ul style="list-style-type: none"> There are no AQMAs within the AoS.
Socio-Economic	<ul style="list-style-type: none"> The AoS includes a number of tourism locations, with agriculture also present outside of the urban areas. Both Lowestoft and Great Yarmouth include areas within the most 10% economically deprived neighbourhoods in England.
Health	<ul style="list-style-type: none"> Both Lowestoft and Great Yarmouth include areas within the most 10% health deprived neighbourhoods in England.

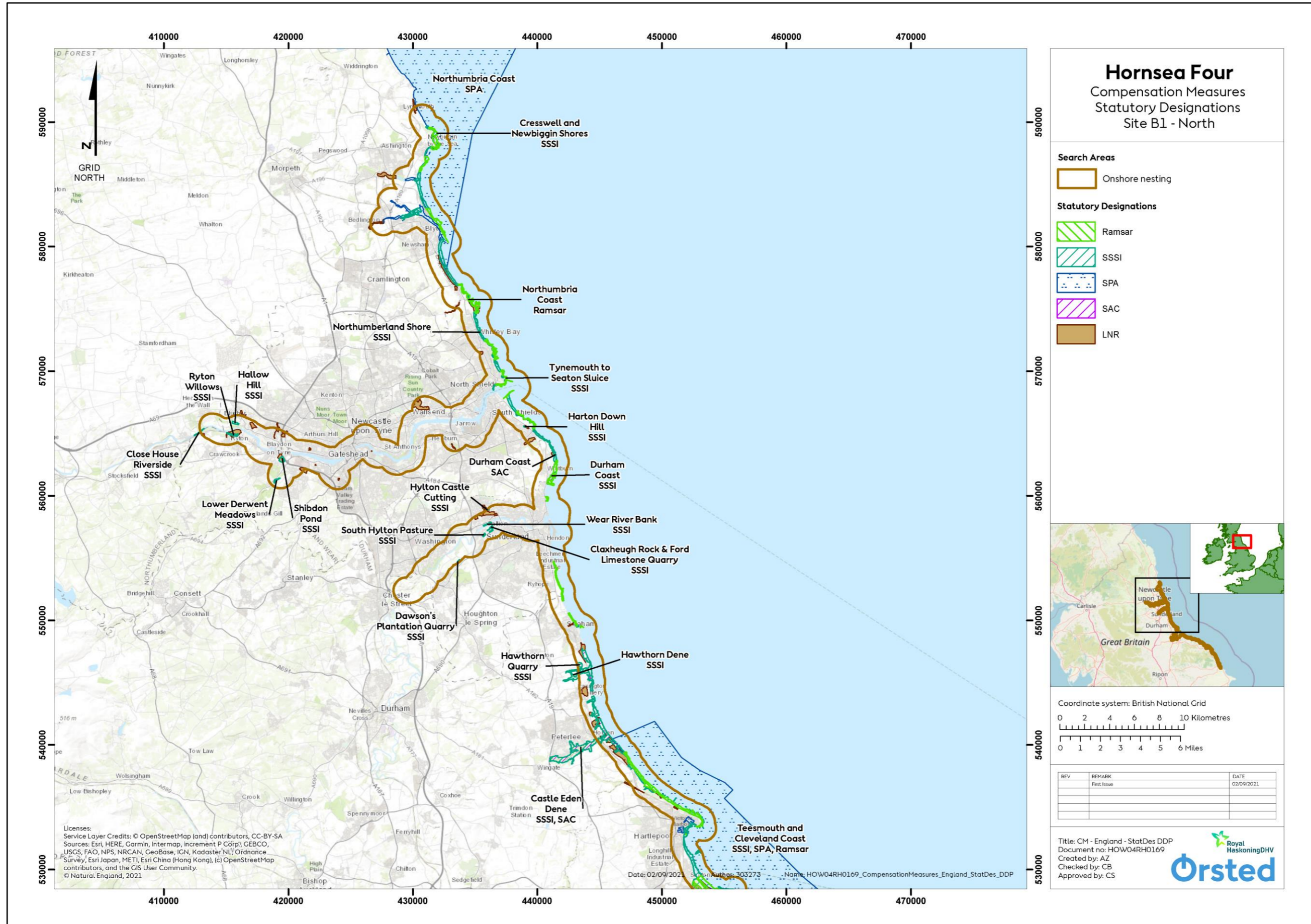


Figure 15: Baseline statutory designation for AoS B1 North (Clayton Bay to Newbiggin by the Sea).

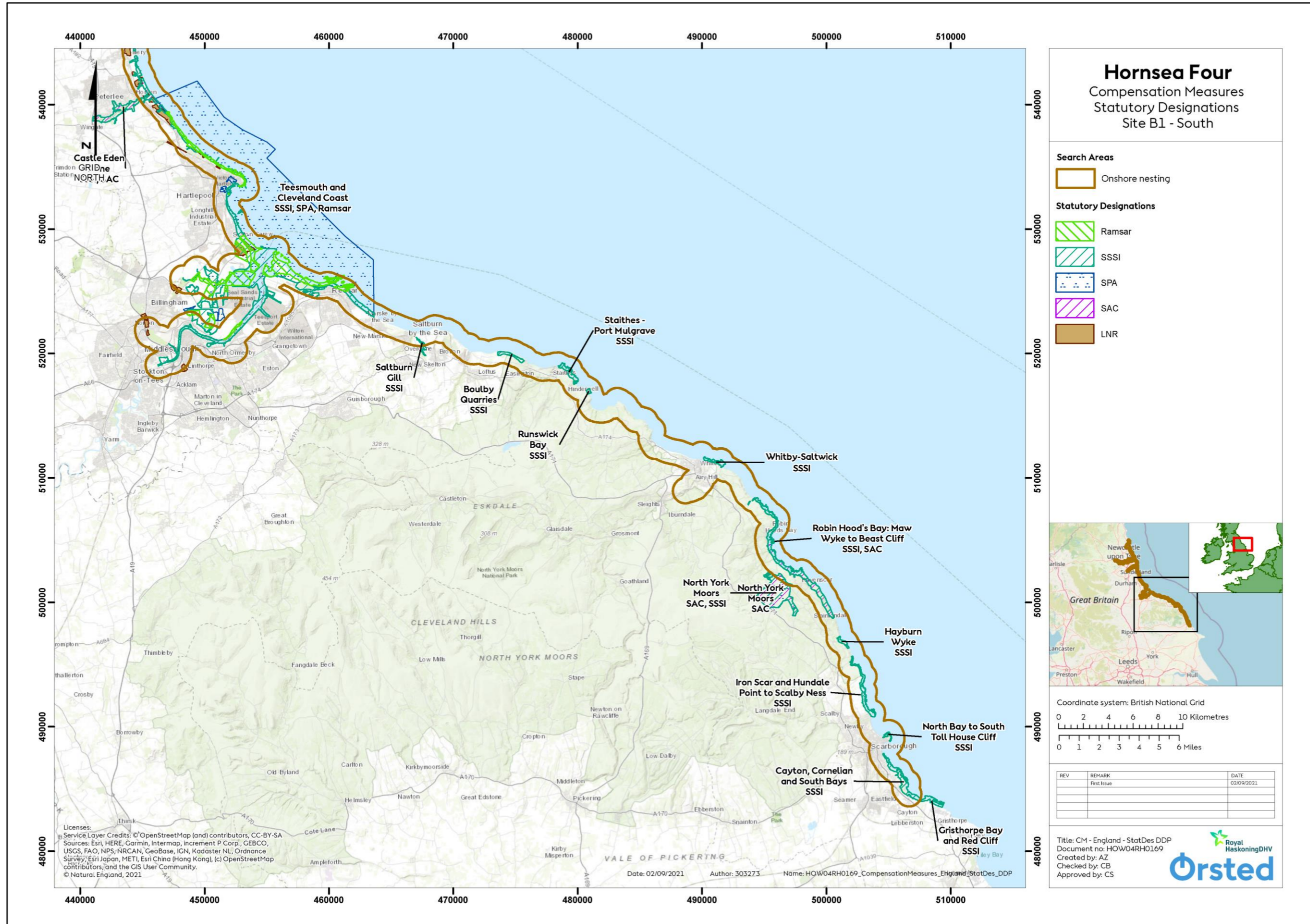


Figure 16: Baseline statutory designation for AoS B1 South (Clayton Bay to Newbiggin by the Sea).



Figure 17: Baseline non-statutory designation for AoS B1 North (Clayton Bay to Newbiggin by the Sea).

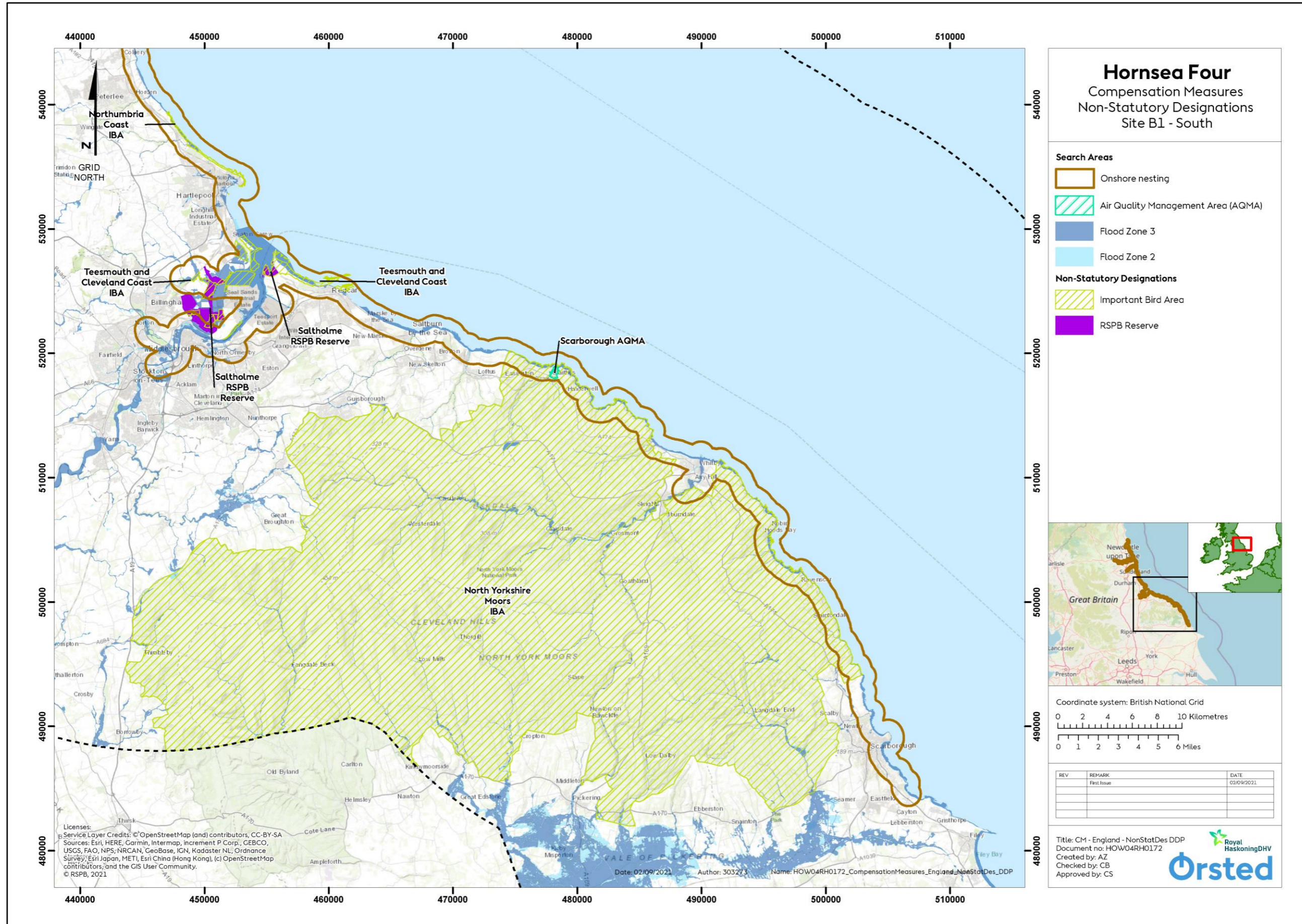


Figure 18: Baseline non-statutory designation for AoS B1 South (Clayton Bay to Newbiggin by the Sea).

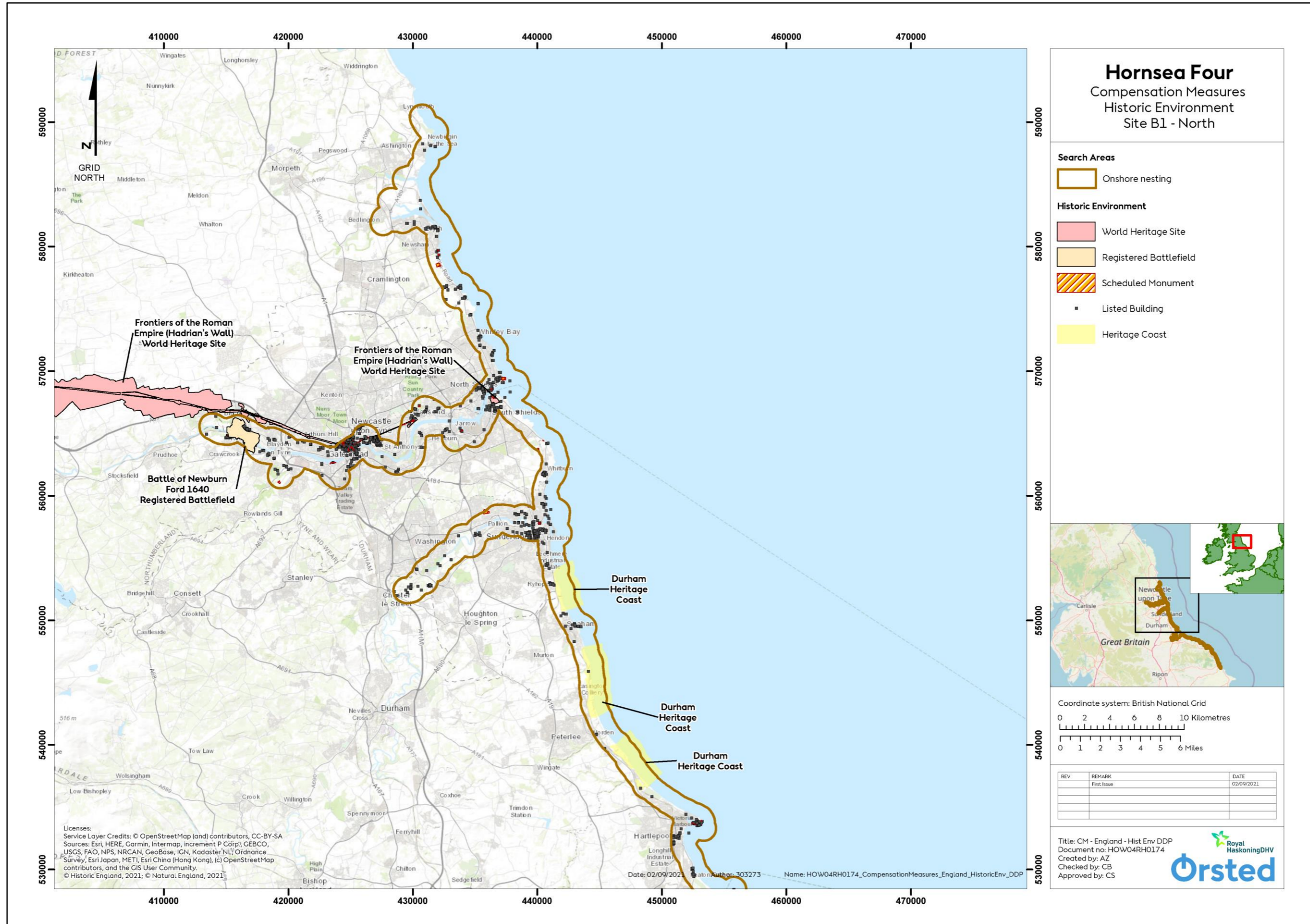


Figure 19: Baseline historic environment designation for AoS B1 North (Clayton Bay to Newbiggin by the Sea).

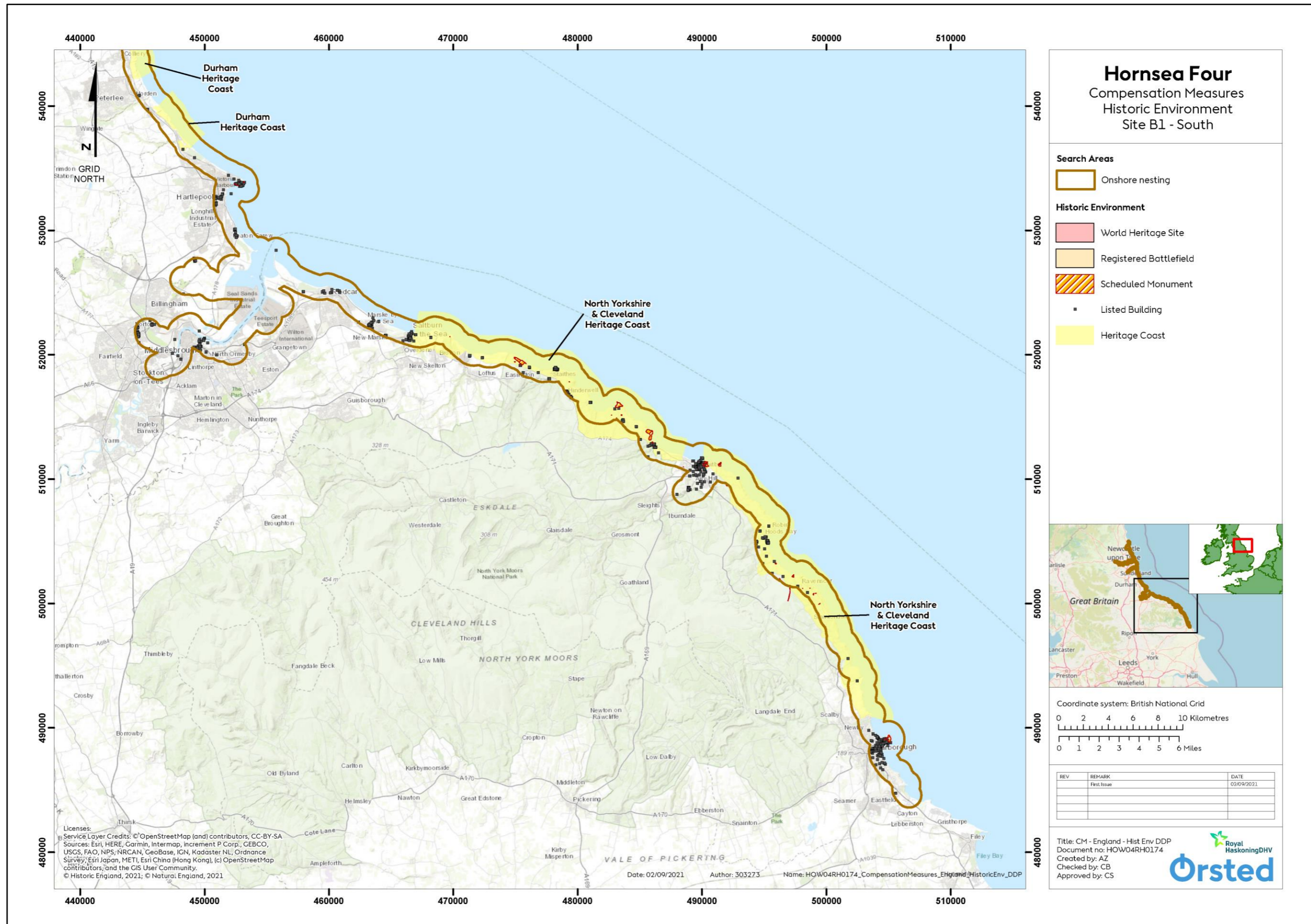


Figure 20: Baseline historic environment designation for AoS B1 South (Clayton Bay to Newbiggin by the Sea).

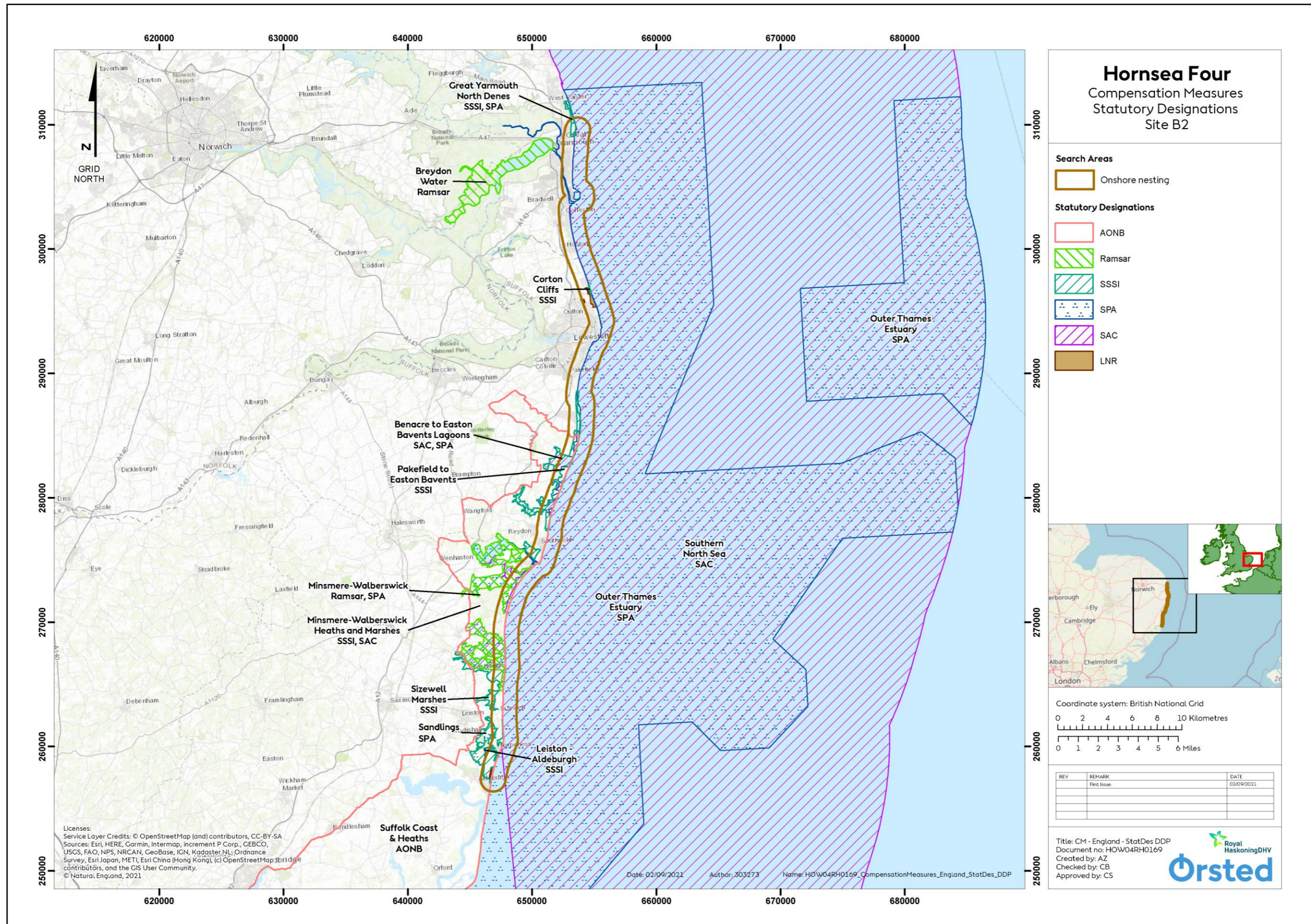


Figure 21: Baseline statutory designation for AoS B2 (Suffolk Coast).

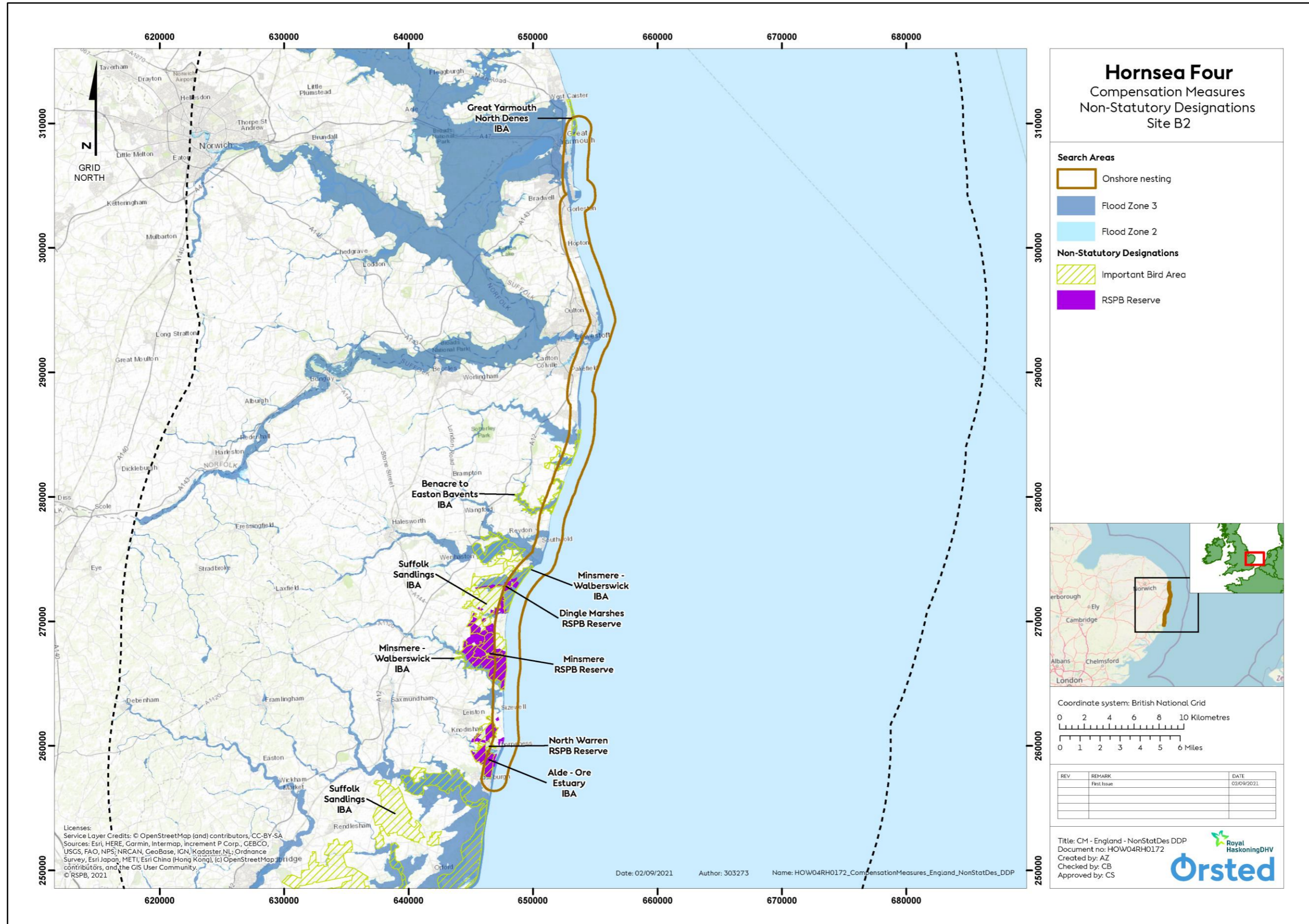


Figure 22: Baseline non-statutory designation for AoS B2 (Suffolk Coast).

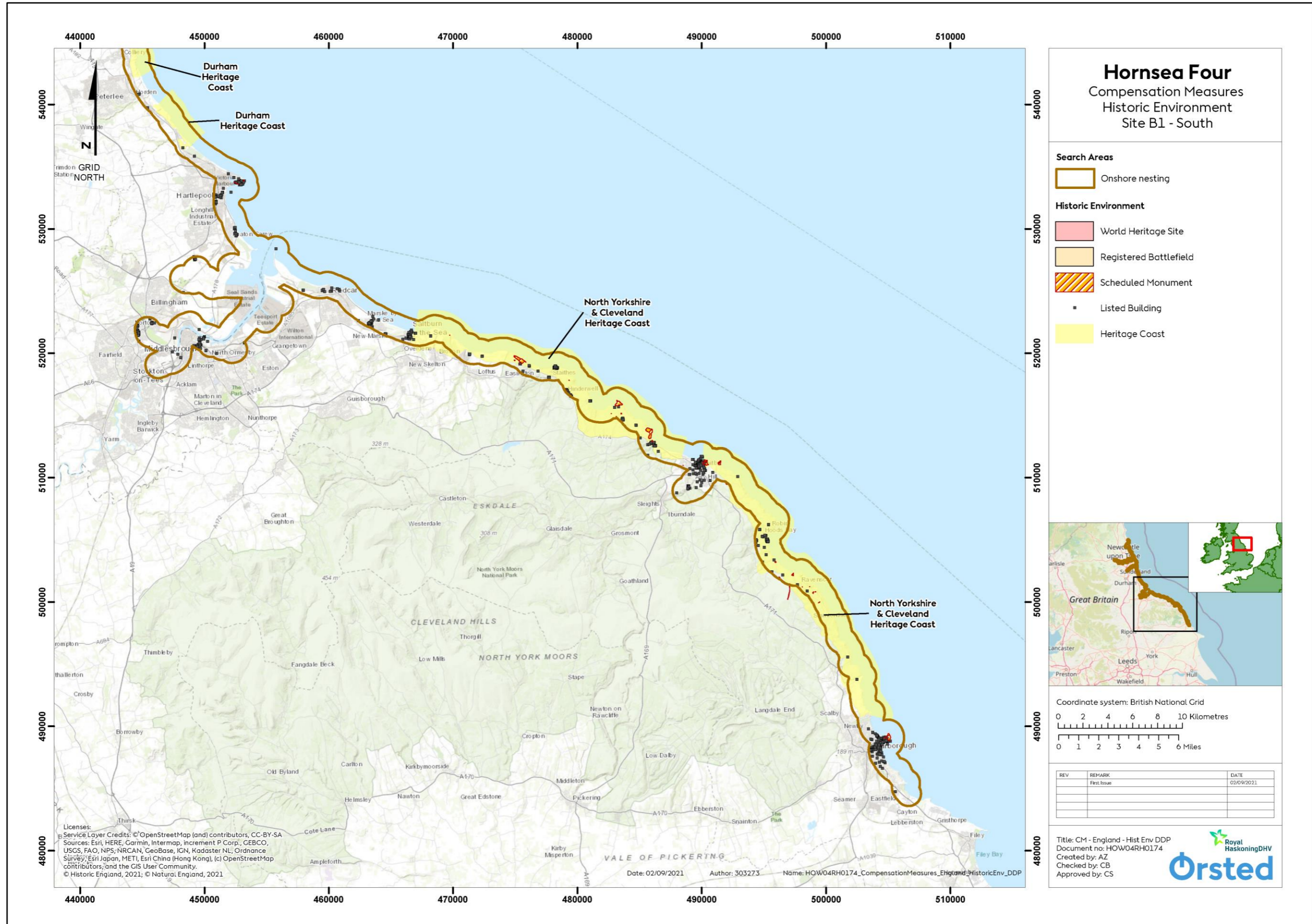


Figure 23: Baseline historic environment designation for AoS B2 (Suffolk Coast).

9.3 Assessment

9.3.1 Identification of Impacts and Scope of Assessment

9.3.1.1 Based on the information presented in [Volume A4, Annex 6.1: Compensation Project Description](#) (and summarised in [Section 4.1.6](#)), all activities associated with the construction, implementation/O&M and decommissioning of the new onshore artificial nesting structures Compensation Measure were defined and potential impact pathways identified.

9.3.1.2 All impacts considered to be scoped into the assessment are detailed in [Volume A4, Annex 6.3: Compensation Impacts Register](#). No impacts were scoped out of the assessment.

9.3.2 Impact Assessment

9.3.2.1 [Volume A4, Annex 6.3: Compensation Impacts Register](#) identifies the potential scoped in impacts that could result from the installation/construction, implementation/operation, and decommissioning of the new onshore nesting structure Compensation Measure, relating to each technical topic under consideration in the EIA process. Each of these impacts have been considered, following the process outlined in [Section 6](#), with the MDS defined, magnitude of impact and sensitivity of receptor considered and the level of significance derived by the matrix approach. The Compensation Impacts Register is presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#).

9.3.2.2 No impacts are identified in the 'Onshore Nesting Structure' tab of [Volume A4, Annex 6.3: Compensation Impacts Register](#) as having potential for LSE in relation to the installation/construction, implementation/operation, and decommissioning of the predator eradication Compensation Measure.

9.4 Summary: New Onshore Artificial Nesting Structures EIA

9.4.1.1 As outlined above, no impacts are identified as having potential for LSE in relation to the installation/construction, implementation/operation, and decommissioning of the Onshore Artificial Nesting Structures Compensation Measure. Further assessment is required at a later stage for impacts relating to currently unknown MDS parameters.

10 EIA – Bycatch Reduction Technology

10.1 Introduction

10.1.1.1 This section considers the potential impacts arising from the bycatch reduction technology Compensation Measure. Two AoS have been identified for the bycatch reduction technology Compensation Measure (the Thames Estuary and the South coast of England from Broadstairs, Kent down to Plymouth, Devon).

10.2 Assessment and Baseline

10.2.1.1 As detailed in [Section 6.5](#), the scope of baseline characterisation has been made relevant to the scope of the EIA in that if a specific EIA topic has been scoped out of the assessment in relation to particular Compensation Measure, then the baseline for that particular topic is not presented. Based on the information presented in [Volume A4, Annex 6.1: Compensation Project Description](#) (and detailed in [Section 4.1.7](#)), all activities associated with the

construction, implementation/O&M, and decommissioning of the bycatch reduction technology Compensation Measure were defined and potential impact pathways identified. As presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#), no impact pathways have been identified, therefore there are no impacts to be assessed and no baseline characterisation is required.

11 EIA – Predator Eradication

11.1 Introduction

11.1.1.1 This section considers the potential impacts arising from the predator eradication Compensation Measure. A regional environmental characterisation of the physical, biological and human environmental baseline is presented alongside the results of an assessment of potential significant effects arising from the proposed Compensation Measure. Four AoS have been identified for the Predator Eradication Compensation Measure D1 (Isles of Scilly), D2 (Rathlin Island, Northern Island), D3 (Torquay Devon) and D4 (Guernsey and Alderney).

11.2 Baseline

11.2.1.1 [Table 11](#) provides a summary of the baseline environment for AoS D1 (Isles of Scilly), AoS D2 (Rathlin Island, Northern Island), AoS D3 (Torquay Devon) and AoS D4 (Guernsey and Alderney).

11.2.1.2 [Figure 24](#) to [Figure 31](#) identify statutory, non-statutory and historic environment designations within each of the four AoS (where spatial data is publicly available).

Table 11: Summary of baseline environment in relation to the D1 (Isles of Scilly), D2 (Rathlin Island, Northern Island), D3 (Torquay Devon) and D4 (Guernsey and Alderney) Areas of Search for predator eradication.

Predator Eradication				
Topic	AoS D1 (Isles of Scilly)	AoS D2 (Rathlin Island, Northern Island)	AoS D3 (Torquay, Devon)	AoS D4 (Guernsey and Alderney)
Geology and Ground Conditions	<ul style="list-style-type: none"> The Bedrock Aquifer Designation is Secondary A. The Superficial Drift Aquifer Designation is Secondary A and Secondary (undifferentiated). 	<ul style="list-style-type: none"> There are two geological features of outstanding interest on the island, the first at Maddygalla on the south east coast 1 km north of Rue Point, the second at Doon Point and Portdonaghy, the southern and northern extremes of Arkill Bay⁴ 	<ul style="list-style-type: none"> The Bedrock Aquifer Designation is Principal and Secondary A. The Superficial Drift Aquifer Designation is unproductive. 	<ul style="list-style-type: none"> Geology and ground conditions baseline information has not been collated to date due to a lack of easily obtainable publicly available information.
Hydrology and Flood Risk	<ul style="list-style-type: none"> The risk from fluvial and pluvial flooding is considered to be extremely low. There have been no significant past local events from surface water and groundwater. The water reservoirs on the islands are all significantly below the risk threshold size. The only significant threat of flooding to the Islands is from coastal flooding. There is the potential for coastal flooding when the tides are particularly high and if they coincide with bad weather conditions such as high winds and wave surges. Properties at or below sea level are most at risk. ⁵ 	<ul style="list-style-type: none"> No Flood information is available for Rathlin Island on the Department for Infrastructure Flood Map⁶ 	<ul style="list-style-type: none"> The Torbay peninsula is predominately in Flood Zone 1. However, an area of land east of Manor Gardens is within Flood Zone 2 and 3. 	<ul style="list-style-type: none"> Flood risk or hydrogeology. baseline information has not been collated to date due to a lack of easily obtainable publicly available information.
Historic Environment	<ul style="list-style-type: none"> 129 Listed Buildings 238 Scheduled Monuments 	<ul style="list-style-type: none"> There are 84 historic wrecks within the search area 	<ul style="list-style-type: none"> 71 Listed Buildings Two Scheduled Monuments (<i>Kent's Cavern, Torquay and Prehistoric field system at Walls Hill</i>) 	<ul style="list-style-type: none"> The States of Guernsey Protected Trees, Buildings & Monuments Webmap⁷ identifies a high number of protected monuments and buildings in the AoS

⁴ [Rathlin Island \(habitas.org.uk\)](http://habitas.org.uk)

⁵ [Emergency Planning \(scilly.gov.uk\)](http://Emergency.Planning.scilly.gov.uk)

⁶ [Flood Maps NI | Department for Infrastructure \(infrastructure-ni.gov.uk\)](http://Flood.Maps.NI.Department.for.Infrastructure.infrastructure-ni.gov.uk)

⁷ [Environment : Protected Trees, Buildings and Monuments Webmap. \(gov.gg\)](http://Environment.Protected.Trees.Buildings.and.Monuments.Webmap.(gov.gg))

Predator Eradication

Topic	AoS D1 (Isles of Scilly)	AoS D2 (Rathlin Island, Northern Island)	AoS D3 (Torquay, Devon)	AoS D4 (Guernsey and Alderney)
Ecology	<ul style="list-style-type: none"> No Local Nature Reserves 26 SSSIs One SAC (<i>Isles of Scilly Complex</i>) One SPA (<i>Isles of Scilly</i>) One Ramsar site (<i>Isles of Scilly</i>) One RSPB Important Bird Area (<i>Isles of Scilly</i>) 	<ul style="list-style-type: none"> Three NIEA SACs (<i>Rathlin Island, North Antrim Coast and Skerries and Causeway</i>) Two NIEA SPAs (<i>Sheep Island and Rathlin Island</i>) One Scottish SPA (<i>The Oa</i>) One Scottish SSSI (<i>The Oa</i>) 	<ul style="list-style-type: none"> No Local Nature Reserves Six SSSIs One SAC (<i>Lyme Bay and Torbay</i>) Two SPA with Marine Components (<i>Lyme Bay and Torbay</i>) 	<ul style="list-style-type: none"> Two Ramsar (<i>Gouliot Caves and Headland and Herm, Jethou and The Humps</i>) Ten SSSIs Many areas are designated Areas of Biodiversity Importance.
Landscape and Visual	<ul style="list-style-type: none"> One AONB (<i>Isles of Scilly</i>) The Isles of Scilly are a group of approximately 200 low-lying granite islands and rocks that cover approximately 1600ha. The entire island group is also designated as a Conservation Area and a Heritage Coast. 	<ul style="list-style-type: none"> Two AONBs (<i>Causeway Coast and Antrim Coast and Glens</i>) No Heritage Coasts 	<ul style="list-style-type: none"> No AONBs No Heritage Coasts 	<ul style="list-style-type: none"> No AONBs No Heritage Coasts
Land Use and Agriculture	<ul style="list-style-type: none"> Land use is predominately agricultural; particularly on the islands of St Mary's, St. Agnes and Tresco. A large area of St Mary's island is Agricultural Land Classification Grade 2. 	<ul style="list-style-type: none"> Land use includes some areas used for agricultural. 	<ul style="list-style-type: none"> Land use is predominately residential. 	<ul style="list-style-type: none"> Land use is predominately agricultural.
Traffic and Transport	<ul style="list-style-type: none"> Traffic and transport baseline information has not been collated to date due to a lack of easily obtainable publicly available information. Higher traffic levels are expected around tourist locations and ports. 	<ul style="list-style-type: none"> Traffic and transport baseline information has not been collated to date due to a lack of easily obtainable publicly available information. Levels of traffic are expected to be very low. Transport to the island is via ferry docking at Rathlin Island Ferry Port. 	<ul style="list-style-type: none"> Traffic and transport baseline information has not been collated to date due to a lack of easily obtainable publicly available information. Levels of traffic are expected to be low/moderate. 	<ul style="list-style-type: none"> Traffic and transport baseline information has not been collated to date due to a lack of easily obtainable publicly available information. Levels of traffic are expected to be low.
Noise and Vibration	<ul style="list-style-type: none"> Defra strategic noise map data identifies Noise Important Areas along Babbacombe Road within the AoS. Baseline noise levels are highest along major roads. Baseline noise levels are low within the AoS in rural locations where the nesting structure is likely to be located. Noise and vibration baseline conditions are likely to be as expected for a quiet rural location. 	<ul style="list-style-type: none"> Noise and vibration baseline conditions are likely to be as expected for a quiet rural location. 	<ul style="list-style-type: none"> Defra strategic noise map data identifies Noise Important Areas along Babbacombe Road within the AoS. Baseline noise levels are highest along major roads. Baseline noise levels are low within the AoS in rural locations where the nesting structure is likely to be located. 	<ul style="list-style-type: none"> Noise and vibration baseline conditions are likely to be as expected for a quiet rural location in most areas, however some noisier areas are within the AoS (inc. St. Peter Port and the airport)

Predator Eradication				
Topic	AoS D1 (Isles of Scilly)	AoS D2 (Rathlin Island, Northern Island)	AoS D3 (Torquay, Devon)	AoS D4 (Guernsey and Alderney)
Air Quality	<ul style="list-style-type: none"> There are no AQMAs within the AoS. Air pollution is expected to be very low. 	<ul style="list-style-type: none"> There are no AQMAs within the AoS. Air pollution is expected to be very low. 	<ul style="list-style-type: none"> There are no AQMAs within the AoS. Air pollution is expected to be consistent with sub-urban areas located near a coast. 	<ul style="list-style-type: none"> Air quality baseline information has not been collated to date due to a lack of easily obtainable publicly available information. Air pollution is expected to be very low.
Socio-Economic	<ul style="list-style-type: none"> The AoS includes a number of tourism locations, with agriculture also present outside of the urban areas. 	<ul style="list-style-type: none"> The AoS has a small population of approx. 150 people⁸. The island includes a number of tourism locations including the Rathlin West Light Seabird Centre. 	<ul style="list-style-type: none"> The AoS includes a number of tourism locations, with agriculture also present outside of the urban areas. 	<ul style="list-style-type: none"> The AoS includes a number of tourism locations, with agriculture also present outside of the urban areas. Urban areas in Guernsey are situated around St. Peters Port and around St. Anne in Alderney.
Health	<ul style="list-style-type: none"> Health baseline information has not been collated to date due to a lack of available information. 	<ul style="list-style-type: none"> Health baseline information has not been collated to date due to a lack of publicly available information. 	<ul style="list-style-type: none"> Torbay is the most deprived local authority area in the South West region. Within Torbay around one-in-three of the population live in areas in the top 20% most deprived in England⁹. 	<ul style="list-style-type: none"> Health baseline information has not been collated to date due to a lack of publicly available information.

⁸ [About Rathlin | Rathlin Community](#)
⁹ [Population overview - Torbay Council](#)

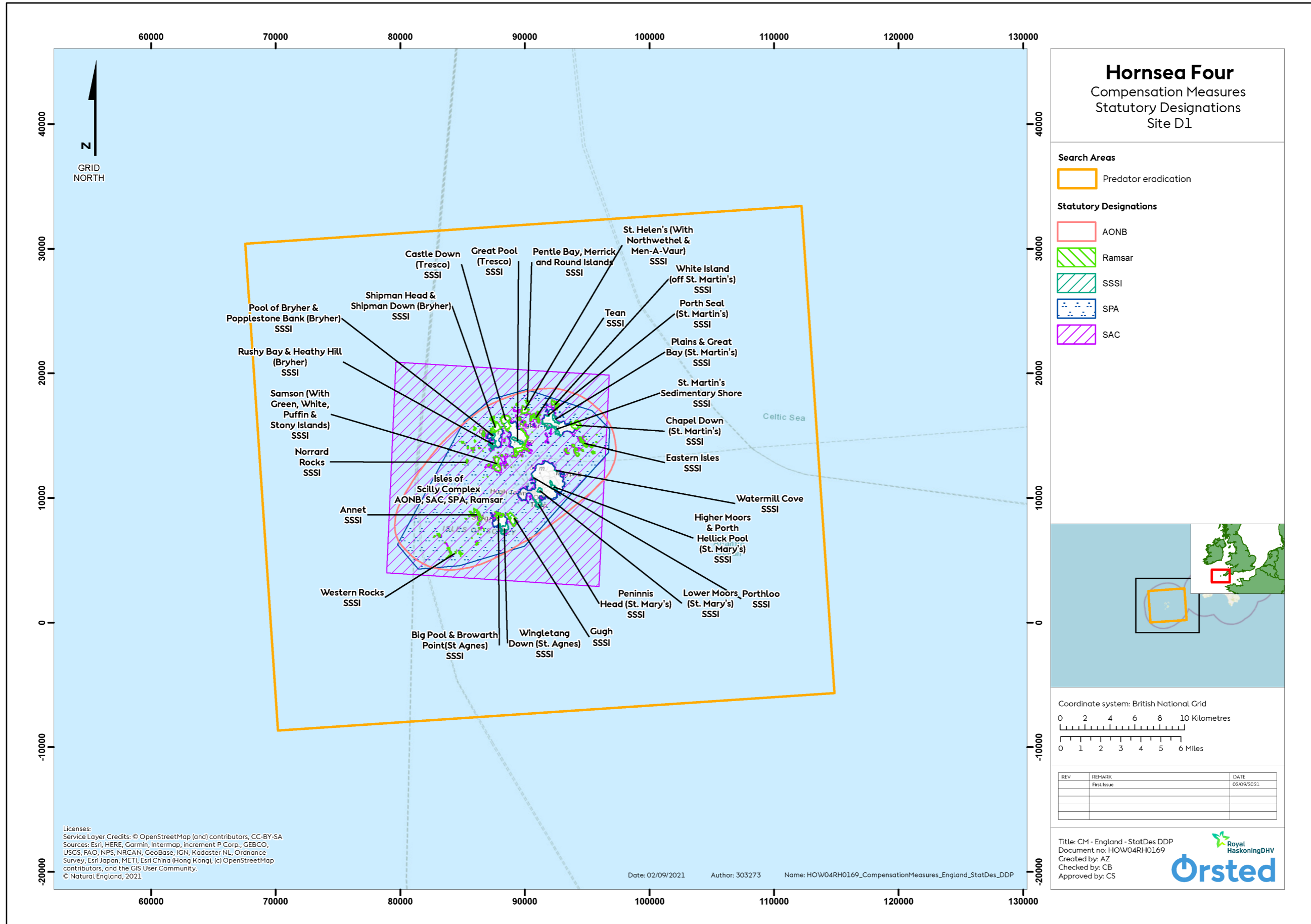


Figure 24: Baseline statutory designation for AoS D1 (Isles of Scilly).

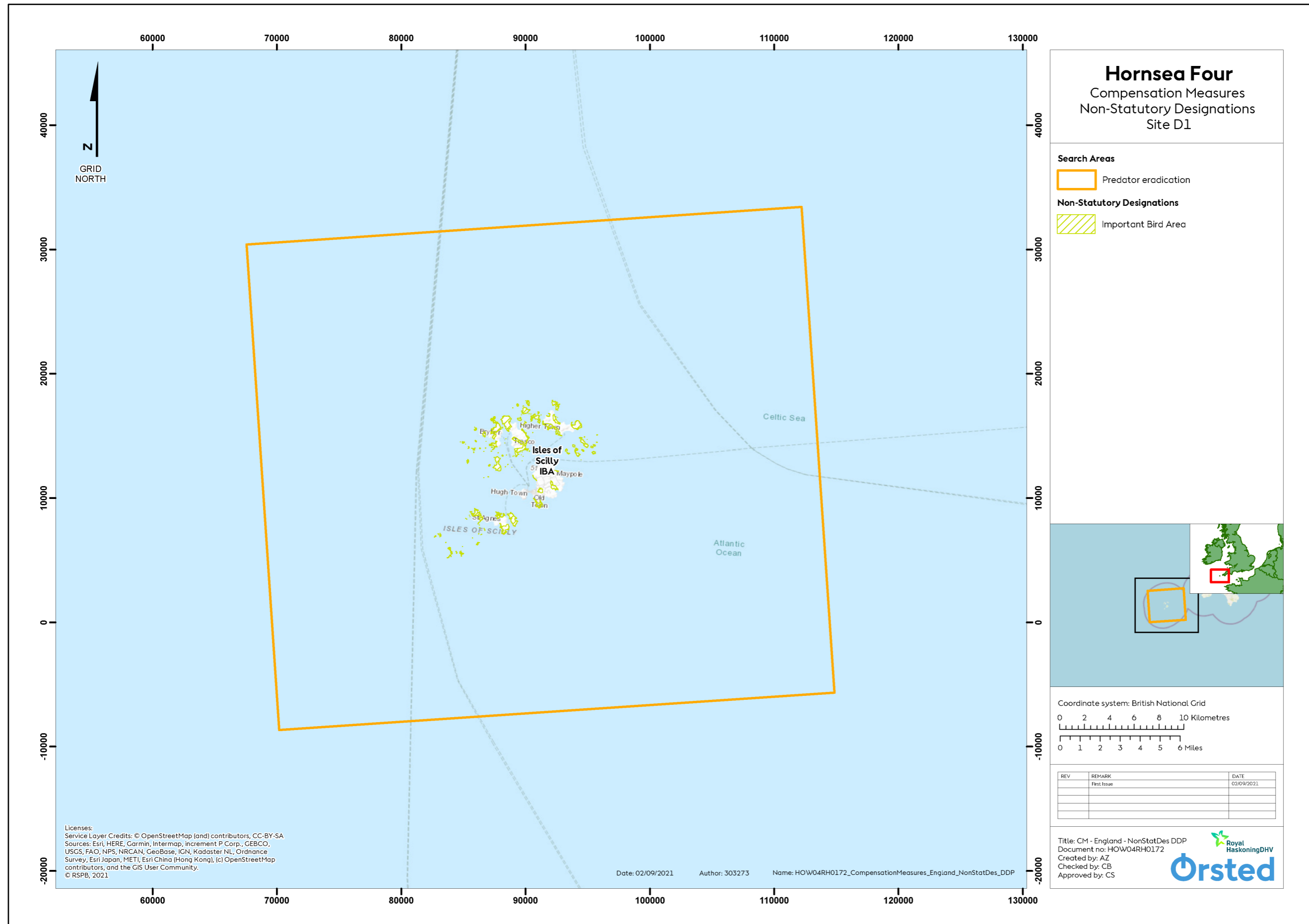


Figure 25: Baseline non-statutory designations for AoS D1 (Isles of Scilly).

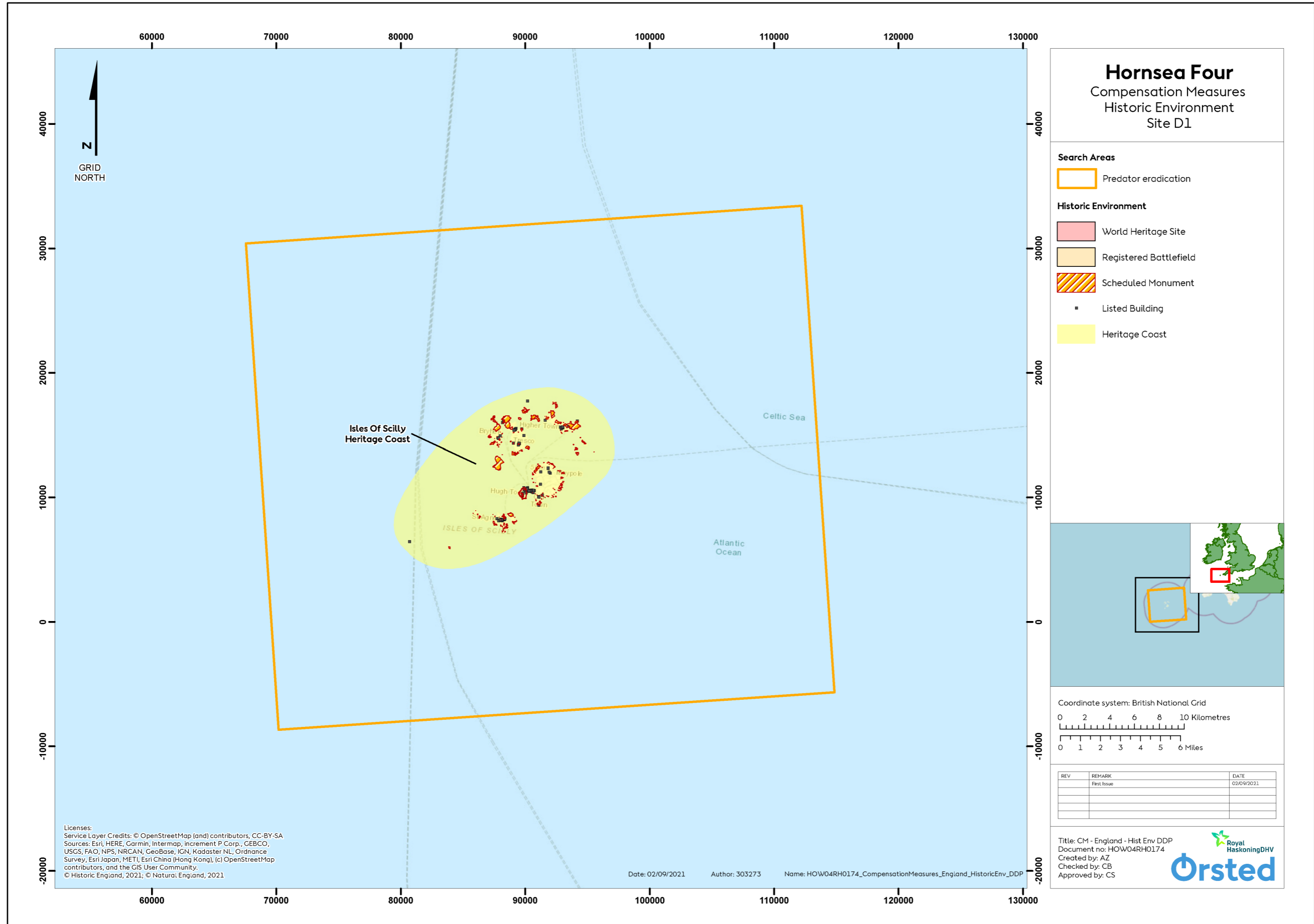


Figure 26: Baseline historic environment designations for AoS D1 (Isles of Scilly).

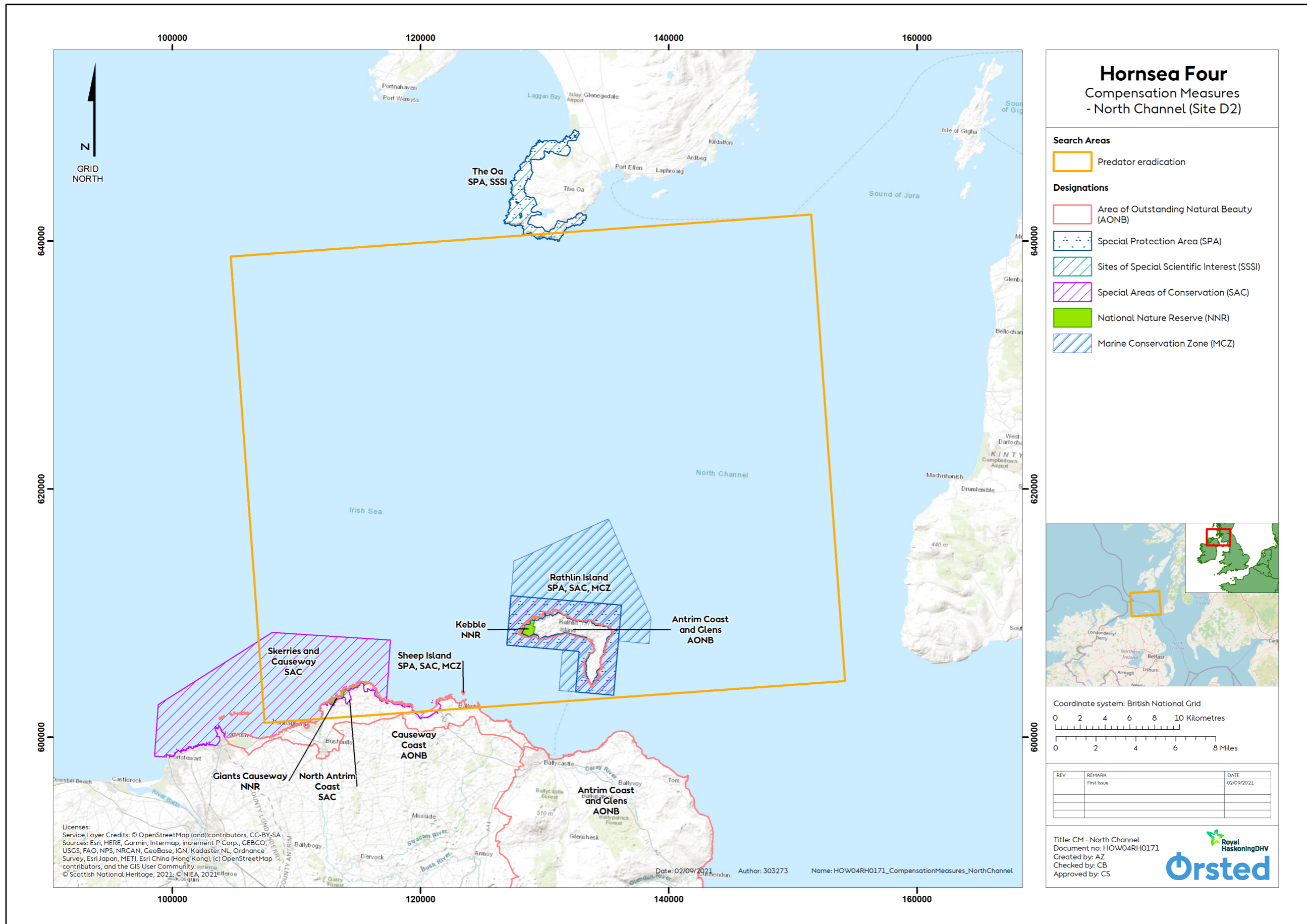


Figure 27: Baseline statutory and non-statutory designations for AoS D2 (Rathlin Island, Northern Island).

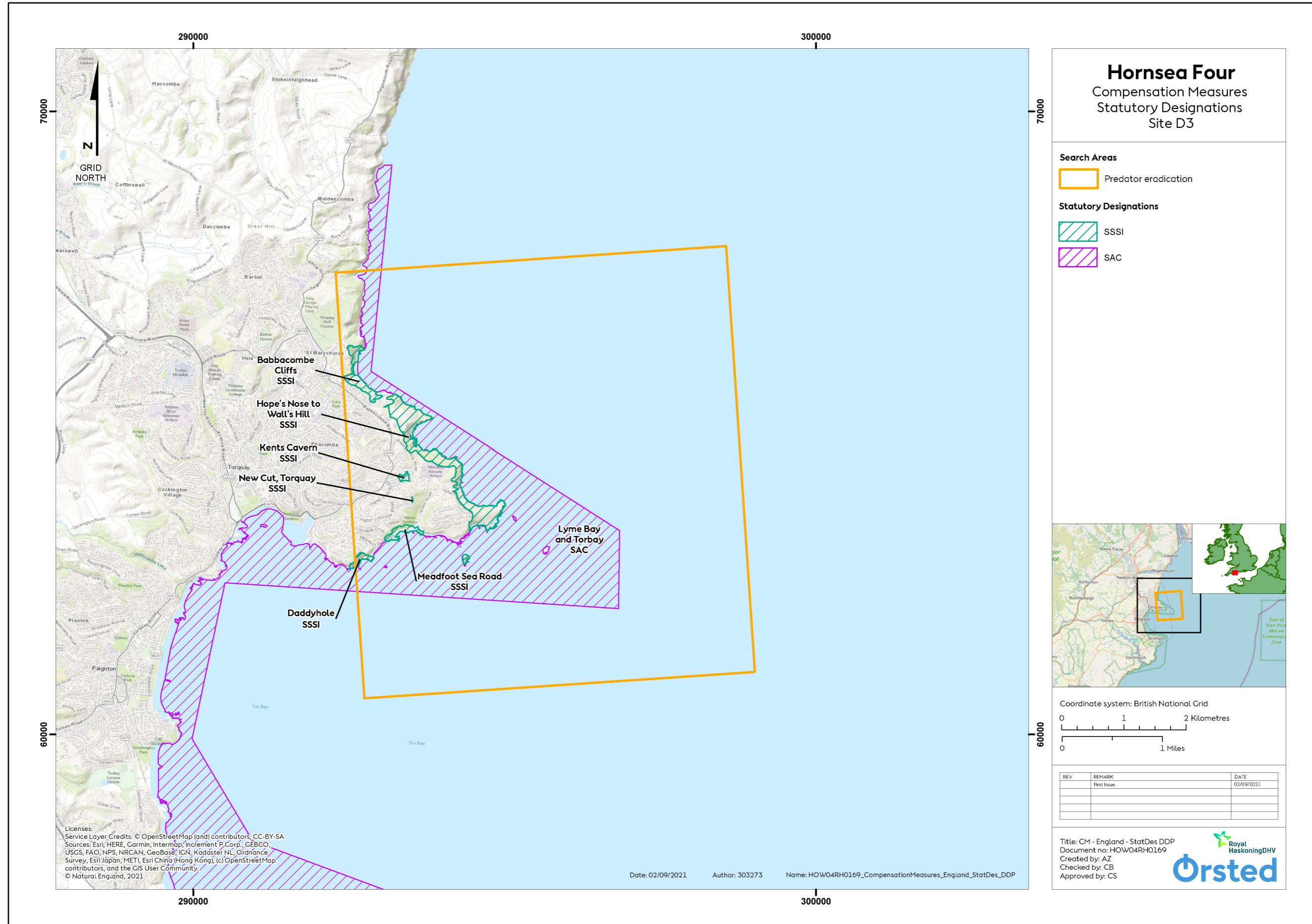


Figure 28: Baseline statutory designation for AoS D3 (Torquay Devon).

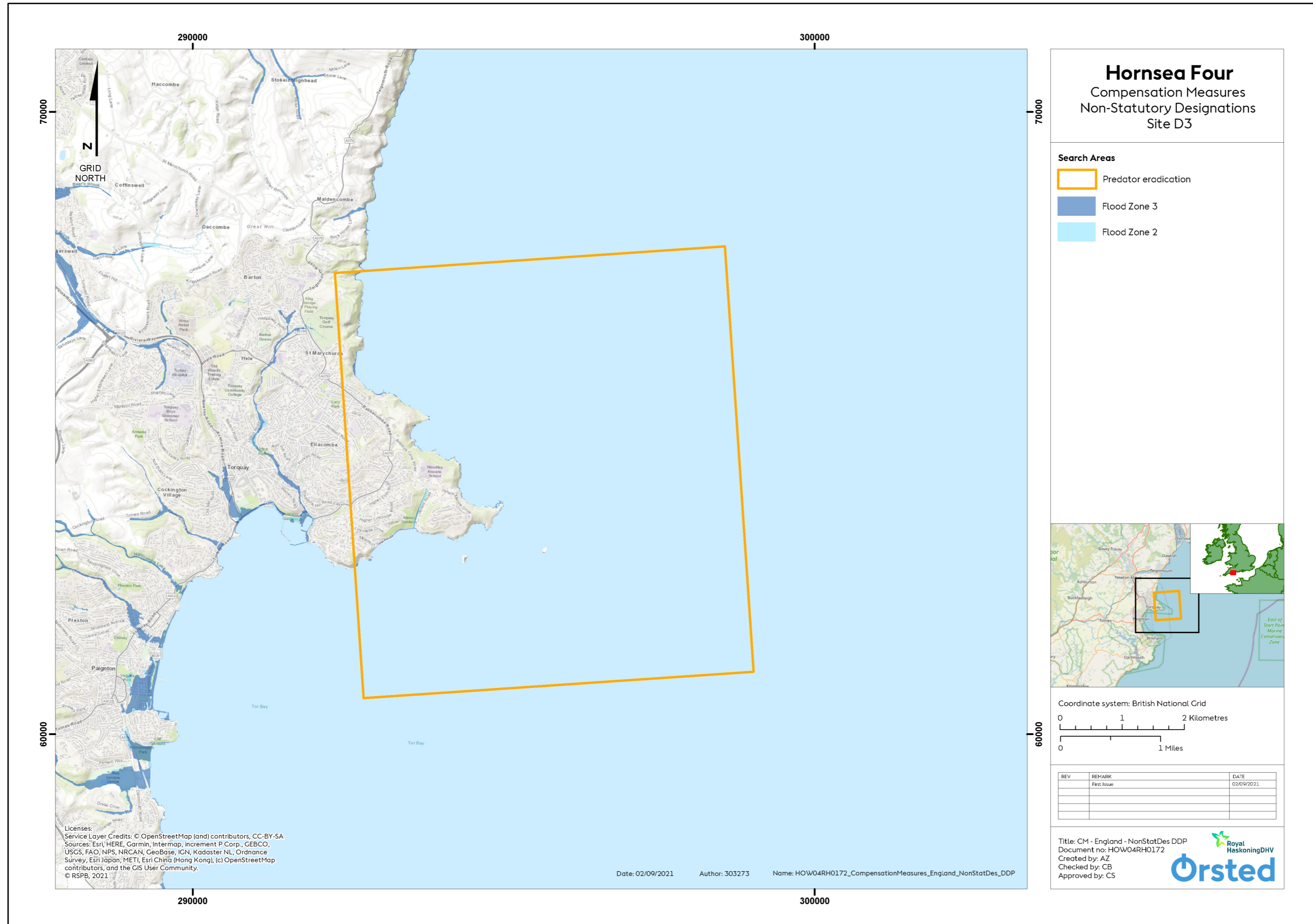


Figure 29: Baseline non-statutory designations for AoS D3 (Torquay Devon).

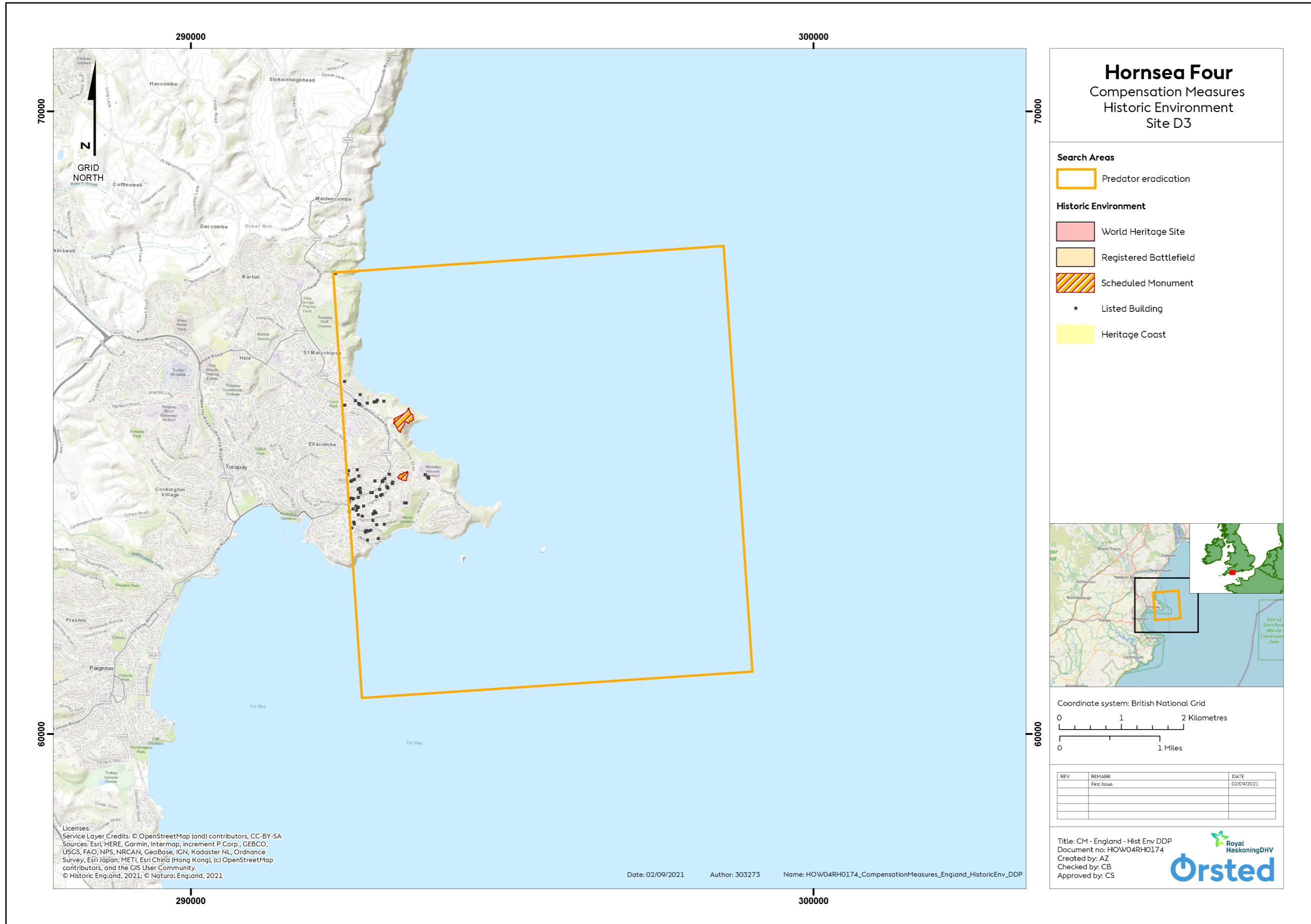


Figure 30: Baseline historic environment designations for AoS D3 (Torquay Devon).

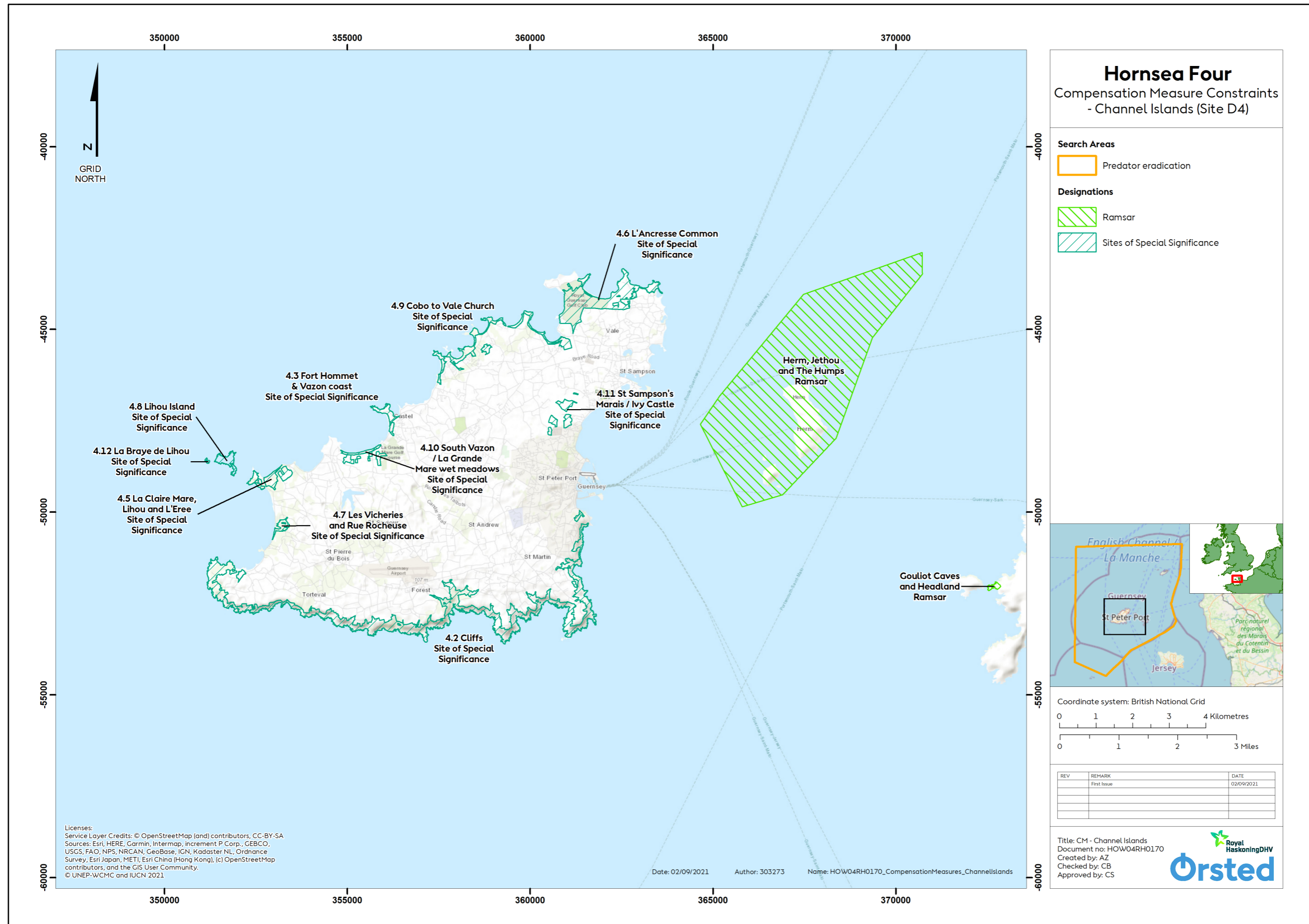


Figure 31: Baseline designation for AoS D4 (Guernsey and Alderney).

11.3 Assessment

11.3.1 Identification of Impacts and Scope of Assessment

11.3.1.1 Based on the information presented in [Volume A4, Annex 6.1: Compensation Project Description](#) (and summarised in [Section 4.1.8](#)) all activities associated with the construction, operation and decommissioning of the predator eradication Compensation Measure were defined and potential impact pathways identified.

11.3.1.2 All impacts considered to be scoped into the assessment are detailed in [Volume A4, Annex 6.3: Compensation Impacts Register](#). No impacts were scoped out of the assessment.

11.3.2 Impact Assessment

11.3.2.1 [Volume A4, Annex 6.3: Compensation Impacts Register](#) identifies the potential scoped in impacts that could result from the installation/construction, implementation/operation, and decommissioning of the new predator eradication Compensation Measure, relating to each technical topic under consideration in the EIA process. Each of these impacts have been considered, following the process outlined in [Section 6](#), with the MDS defined, magnitude of impact and sensitivity of receptor considered and the level of significance derived by the matrix approach. The Compensation Impacts Register is presented in [Volume A4, Annex 6.3: Compensation Impacts Register](#).

11.3.2.2 No impacts are identified in the 'Predator Eradication' tab of [Volume A4, Annex 6.3: Compensation Impacts Register](#) as having potential for LSE in relation to the installation/construction, implementation/operation, and decommissioning of the Predator Eradication Compensation Measure.

11.4 Summary: Predator Eradication EIA

11.4.1.1 As outlined above, no impacts are identified as having potential for LSE in relation to the installation/construction, implementation/operation, and decommissioning of the predator eradication Compensation Measure. Further assessment is required at a later stage for impacts relating to currently unknown MDS parameters.

12 EIA – Resilience Measure – Fish Habitat Enhancement (Seagrass)

12.1 Introduction

12.1.1.1 This section considers the potential impacts arising from the resilience measure – fish habitat enhancement (seagrass). A regional environmental characterisation of the physical, biological and human environmental baseline is presented alongside the results of an assessment of potential significant effects arising from the proposed Resilience Measure. Seven AoS have been identified for the resilience measure – fish habitat enhancement (seagrass).

- E1 - Rathlin Island, Northern Island;
- E2 – Isles of Scilly;
- E3 – Celtic Sea, Wales;
- E4 - Plymouth Sound to Helford River, Cornwall;
- E5 – The Solent;
- E6 – Essex Estuaries; and

- E7 – Humber Estuary.

12.2 Baseline

12.2.1.1 [Table 12](#) to [Table 18](#) provide a summary of the baseline environment for the seven AoS.