European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Supporting documentation for the
conservation status assessment for the habitat:

H1110 - Sandbanks which are slightly covered by sea water all the time

ENGLAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this habitat is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was only relevant at UK-level (sections 10 Future prospects and 11 Conclusions).
- For technical reasons, the country-level future trends for Range, Area covered by habitat and Structure and functions are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK (England information only)**
1.2 Habitat code	**1110 - Sandbanks which are slightly covered by sea water all the time**

2. Maps

2.1 Year or period	
2.3 Distribution map	Yes
2.3 Distribution map Method used	
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Marine Atlantic (MATL)**
3.2 Sources of information	ABP Marine Environment Research Ltd. 2011. River Hamble Maintenance Dredge Plan. ABP Research and Consultancy Ltd. 2000. The Marine Environmental Impact Identification and Evaluation TS/ME2. ABP Southampton: Dibden Terminal, Associated British Ports, Southampton: ABP Research and Consultancy Ltd. ADAS Ltd. 2015. Solent Harbours Nitrogen Management Investigation: ADAS Ltd. Allen, C., Axelsson, M., Dewey, S. and Wilson, J. 2014. Fal and Helford SAC maerl drop-down video and dive survey 2013: Seastar Survey. Allen, J. H. and Proctor, N. V. 2003. Monitoring Subtidal Sandbanks of the Isles of Scilly and the Fal and Helford Special Areas of Conservation: Institute of Estuarine and Coastal Studies (ICES), University of Hull. APEM. 2013. Analysis of Invertebrate Communities and Sediment Composition of the Subtidal Sandbanks of The Wash and North Norfolk Coast.: APEM. Associated British Ports (ABP). 2011. Environmental Statement for Port of Southampton: Berth 201 / 202 Works updated by Further Information Associated British Ports. Bailey, M. 2005. Wash littoral grab survey report 1991, 1993, 1999, 2002 Peterborough: Natural England. Bakare, A.-M., Simons, R., Morley, J. and Guillas, S. 2011. MORPHOLOGICAL EVOLUTION OF THE GREAT YARMOUTH SANDBANK & CHANNEL SYSTEM. Coastal Engineering Proceedings,, 1, 72.https://icce-ojs-tamu.tdl.org/icce/index.php/icce/article/view/1104 Ball, J., Hill, C., Thomas, N., Kenny, A., Collins, K., Mallinson, J., Sheader, M. and Jenson, A. 2000. Solent and South Wight Mapping of Intertidal and Subtidal Marine cSACs: GeoData Institute. Bedford, K. and Rees-Jones, S. 2004. Habitats Directive Stage 3 Review of Consents Technical Report. The Solent European Marine Site. The Impacts of Toxic Compounds in Effluents on Sediments.: Environment Agency. Black & Veatch Ltd. 2010. Baseline Document for Maintenance Dredging in Plymouth Sound and Estuaries European Marine Site.https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/331063/mdp.pdf Black, G. and Kochanowska, D. 2004. Inventory of Eelgrass Beds in Devon and Dorset: Devon Biodiversity Records Centre.

Blanchard, M. 1997. Spread of the slipper limpet crepidula fornicata (L.1758) in Europe. Current state and consequences. Scientia Marina, 61, 109-118.http://www.vliz.be/imisdocs/publications/227177.pdf
British Oceanographic Data Centre. 2014. CSEM assessment using data extracted from MERMAN on 1 September 2014 [Online]. [Accessed 02/02/2017].https://www.bodc.ac.uk/projects/data_management/uk/merman/assessments_and_data_access/csemp/
Centre for Environment Fisheries and Aquaculture Sciences (Cefas). 2009. Habitat mapping of the Fal and Helford SAC: Centre for Environment, Fisheries and Aquaculture Sciences (Cefas),.
Centre for Environment Fisheries and Aquaculture Sciences (Cefas). 2013. Benthic Survey of Inner Dowsing, Race Bank and North Ridge cSAC, and of Haisborough, Hammond and Winterton cSAC: Natural England (NE),.
Centre for Environment Fisheries and Aquaculture Sciences (Cefas). 2017. Sediment contaminant analysis from dredge disposal samples collected within Solent Maritime SAC from 2010 - 2016. CEFAS data provided to Natural England.: Centre for Environment Fisheries & Aquaculture (Cefas),.
Centrica Energy. 2009. Race Bank Offshore Windfarm Environmental Statement Volume 1 Offshore: Centrica Energy.
Channel Coastal Observatory (CCO). 2004. Annual Report 2004 Isle of Wight: Channel Coastal Observatory.http://www.channelcoast.org/data_management/online_data_catalogue/metadata/search/index2.php?action=view_metadata&id=114091
Channel Coastal Observatory (CCO). 2004. Annual Report 2004 West Solent.: Channel Coastal Observatory.http://www.channelcoast.org/data_management/online_data_catalogue/metadata/search/index2.php?action=view_metadata&id=71397
Channel Coastal Observatory (CCO). 2004. Annual Survey Report 2004 Selsey Bill to Southampton Water: Channel Coastal Observatory.http://www.channelcoast.org/data_management/online_data_catalogue/metadata/search/index2.php?action=view_metadata2&id=114092&atb=add
Channel Coastal Observatory (CCO). 2015. Annual Survey Report 2015 Isle of Wight: Channel Coastal Observatory.http://www.channelcoast.org/data_management/online_data_catalogue/metadata/search/index2.php?action=view_metadata&id=428027
Channel Coastal Observatory (CCO). 2015. Annual Survey Report 2015 Selsey Bill to Southampton Water: Channel Coastal Observatory.http://www.channelcoast.org/data_management/online_data_catalogue/metadata/search/index2.php?action=view_metadata&id=427950
Channel Coastal Observatory (CCO). 2015. Annual Survey Report 2015 Southampton Water to Hurst Spit: Channel Coastal Observatory.http://www.channelcoast.org/data_management/online_data_catalogue/metadata/search/index2.php?action=view_metadata&id=428028
Collins, K. 2008. Cowes Harbour entrance seagrass surveys Aug-Sept 08, Final report to Cowes Harbour Commissioners & ABPmer.: Collins.http://www.dassh.ac.uk/dataDelivery/filestore/1/9/5_57a14c4ea9c23be/195_a702f04785556d1.pdf
Collins, K. and Sym, E. 2016. Seagrass surveys off East Cowes July/August 2016. Report to the Homes and Community Agency and Cowes Outer Harbour Commission.: Collins & Sym.
Cook, K. J. 1999. Fal Estuary: Expedition Report Maerl and Seagrass Dive Survey: Coral Cay Conservation Sub-Aqua Club (CCC-SAC),.

Cooper, K., Boyd, S., Aldridge, J. and Rees, H. 2007. Cumulative impacts of aggregate extraction on seabed macro-invertebrate communities in an area off the east coast of the United Kingdom. Journal of Sea Research, 57, 288-302.http://www.sciencedirect.com/science/article/pii/S1385110106001468
Cooper, W. S., Townend, I. H. and Balson, P. S. 2008. A synthesis of current knowledge on the genesis of the Great Yarmouth and Norfolk Bank Systems. London: The Crown Estate.https://www.thecrownestate.co.uk/media/5745/gy_norfolk_bank_systems.pdf
Cope, S. N. and Wilkinson, C. 2014. Evolution of Coastal Sediment Stores and Sinks across the SCOPAC region.http://www.scopac.org.uk/sediment-sinks.html
Cornwall Wildlife Trust (CWT). 2004. Cornwall Zostera beds map.
Curtis, L. A. 2012. Plymouth Sound and Estuaries SAC seagrass condition assessment: Ecospan Environmental Limited.
Curtis, L. A. 2015. Fal and Helford SAC: Subtidal Seagrass Condition Assessment 2015: Ecospan Environmental Ltd.
Dare, P. J., Bell, M. C., Walker, P. and Bannister, R. C. A. 2004. Historical and current status of cockle and mussel stocks in The Wash. Lowestoft: CEFAS.
Davies, J. and Sotheran, I. 1995. Mapping the distribution of benthic biotopes in Falmouth Bay and the lower Fal Ruan Estuary.: English Nature; BioMar Project.http://publications.naturalengland.org.uk/publication/62066?category=47017
Debut. 2007. Tamar Estuary Literature Review on Estuarine Processes: Debut Services (South West) Ltd with Westminster Dredging Co. and Black & Veatch.
Downie, A. J. and Gilliland, P. M. 1997. Broad scale biological mapping of Plymouth Sound and Estuaries: Posford Duvivier Environment.
EMODnet. 2016. EUSeaMap 2016 with JNCC Rock Layer Incorporated.
Emu Limited. 2007. Survey of the Subtidal Sediments of the Solent Maritime SAC. Unpublished report to Natural England, Lyndhurst.: Natural England.
ENTEC UK. 2008. SAC Selection Assessment: Outer Wash Sandbanks. Contract FST 20-18-030 Acquisition of survey data and preparation of site specific briefing statements for draft marine SACs.: ENTEC report to Natural England, Contract FST 20-18-030.
Environment Agency (EA), 2011, The Wash and North Norfolk Coast SAC North Norfolk Coast. Peterborough: Environment Agency.
Environment Agency (EA), 2015, The Wash and North Norfolk Coast SAC North Norfolk Coast subtidal 2015 grab data. Peterborough: Environment Agency.
Environment Agency (EA). 2013. Solent Maritime SAC grab survey data. Peterborough: Environment Agency.
Environment Agency (EA). 2014. TraC Dissolved Oxygen tool-level classifications (at water body level, aggregated to MPA). Peterborough: Environment Agency.
Environment Agency (EA). 2014. TraC Winter Dissolved Inorganic Nitrogen tool-level classifications (at water body level, aggregated to MPA).
Environment Agency (EA). 2015, EA guidance and data for assessment of IQI and water quality attributes - MPA Infaunal Quality Index IQI Assessments FINAL 2015 v2. Peterborough: Environment Agency.
Environment Agency (EA). 2015. Catchment Planning System - Water Framework Directive Water Bodies in England: 2015 status and objectives for the update to the river basin management plans - Cycle 2.https://ea.sharefile.com/share/view/s0faa355450243538?_k=4895s2
Environment Agency (EA). 2015-2018. EA Catchment Data Explorer [Online]. https://environment.data.gov.uk/catchment-planning/
Environment Agency (EA). 2016. EA guidance and data for assessment of IQI and

water quality attributes - MPA Infaunal Quality Index IQI Assessments for Plymouth Sound & Estuaries SAC, 2008-2015 - Results Spreadsheet. Peterborough: Environment Agency.
Environment Agency (EA). 2018, EA guidance and data for assessment of IQI and water quality attributes - MPA Infaunal Quality Index IQI Assessments FINAL 2018 v2. Peterborough: Environment Agency.
European Commission (EC). 2017. ENERGY Projects of common interest - Interactive map [Online]. http://ec.europa.eu/energy/infrastructure/transparency_platform/map-viewer/main.html
European Marine Observation and Data Network (EMODnet). 2012. EUSeaMap.
Field, M. D. R. 2012. Plymouth Sound and Estuaries SAC: Kelp Forest Condition Assessment 2012. Final report: Ecospan Environmental Limited.
Foster-Smith, R. L. and Sotheran, I. 1999. Broad scale remote survey and mapping of sub-littoral habitats and biota of The Wash and the Lincolnshire and the North Norfolk coasts: Natural England.
GB Non-Native Species Secretariat (GBNNSS). 2015-2018. Non-Native Species Secretariat website [Online]. http://www.nonnativespecies.org
Godsell, N., Fraser, M. and Jones, N. 2016. Yarmouth to Cowes rMCZ Survey Report (C5784A): Environment Agency.
Goodchild, R. and Brutto, D. 2015. Solent Maritime SAC subtidal sandbanks mapping and condition assessment: MESL Marine Ecological Surveys Ltd.,.
Griffiths, C. A., Langmead, O. A., Readman, J. A. J. and Tillin, H. M. 2017. Anchoring and Mooring Impacts in English and Welsh Marine Protected Areas: Reviewing sensitivity, activity, risk and management: Defra.
Hamshire and Isle of Wight Wildlife Trust. 2013. Solent EMS Eelgrass 2013 Surveys 2013-14 Final Report.
Helmer, L. 2017. Grab data from Langstone Harbour to survey Crepidula fornicata and Ostrea edulis densities: University of Portsmouth.
Hiscock, K. and Moore, J. 1986. Surveys of harbours, rias and estuaries in southern Britain: Plymouth area including the Yealm. Volume 1: Field Studies Council Oil Pollution Research Unit.
Howson, C., Bunker, F. and Mercer, T. 2004. Fal and Helford European Marine Site Sublittoral Monitoring 2002: Aquatic Survey & Monitoring Ltd.
HR Wallingford, CEFAS/UEA, Posford Haskoning and D'Olie, D. 2002. Southern North Sea Sediment Transport Study, Phase 2. Sediment Transport Report: Great Yarmouth Borough Council.http://www.sns2.org/Output files/EX4526-SNS2-main report-ver2.pdf
Institute of Estuarine and Coastal Studies (IECS). 1995. Marine environmental baseline survey and assessment, Race Bank, east coast, UK. IECS unpublished report to the Environment Agency.: Institute of Estuarine and Coastak Studies (IECS).
Institute of Estuarine and Coastal Studies (IECS). 1999. Biological baseline survey of Inner Dowsing (Area 439) & North Dowsing (Area 400). Report prepared for Entec UK for Hanson Aggregates Marine Ltd.: Institute of Estuarine and Coastak Studies (IECS).
Irving, R. 2006. Subtidal survey of habitats and species within Chichester Harbour, West Sussex.: Sea-Scope.
Irving, R. A., Cole, H. and Jackson, E. 2007. Mapping eelgrass Zostera marina within Plymouth Sound and Estuaries Special Area of Conservation: Sea-Scope Marine Environmental Consultants.
Isle of Wight Council. 2010. Isle of Wight Shoreline Management Plan 2 - Appendix C: Baseline Process Understanding: Isle of Wight Council.

Jackson, E. L., Griffiths, C. A. and Durkin, O. 2013. A guide to assessing and managing anthropogenic impact on marine angiosperm habitat - Part 1: Literature review.: Natural England.http://publications.naturalengland.org.uk/publication/3665058
Jenkins G., Murphy J., Sexton D., Lowe J. 2009, UK Climate Projections: Briefing Report. Met Office Hadley Centre, Exeter. Available at http://ukclimateprojections.metoffice.gov.uk/22535
Johnson, G., Burrows, F., Crabtree, R. and Warner, I. 2017. Fal and Helford SAC Subtidal Sediment Data Analysis: MarineSpace Ltd., Natural England.
Joint Nature Conservation Committee (JNCC) and Natural England (NE). 2010. 2010 Special Area of Conservation (SAC): Inner Dowsing, Race Bank and North Ridge SAC Selection Assessment: Joint Nature Conservation Committee (JNCC) //Natural England (NE),.
Joint Nature Conservation Committee (JNCC) and Natural England (NE). 2010. Haisborough, Hammond and Winterton SAC Selection Assessment: Version 6.0: Joint Nature Conservation Committee, Natural England.http://jncc.defra.gov.uk/pdf/HHW_SAC_SAD_v6.0.pdf
Ke, X., Evans, G. and Collins, M. B. 1996. Hydrodynamics and sediment dynamics of The Wash embayment, eastern England. Sedimentology, 43, 157-174.
Kendell, M. 2006. Fal eelgrass bed drop down video survey report: Cycleau Project - Plymouth Marine Laboratories.
Kenyon, N. H. and Cooper, B. 2005. Sand banks, sand transport and offshore wind farms: Kenyon MarineGeo, ABPMer.http://www.vliz.be/imisdocs/publications/253773.pdf
Klein, A. 2006. Identification of submarine banks in the North Sea and the Baltic Sea with the aid of TIN modelling. In: Nordheim, H., Boedeker, D. and Krause, J. (eds.) Progress in Marine Conservation in Europe. Springer Berlin Heidelberg.http://dx.doi.org/10.1007/3-540-33291-X_6
Knollys, M. 2015. HMNB Devonport Maintenance Dredging and Disposal Marine Licence Application - Information to Support the Baseline Document.
Lafarge Tarmac Marine Dredging Ltd. 2013. Defining the margin of the Newarp Sand Bank within the Haisborough, Hammond and Winterton SAC.: Lafarge Tarmac Marine Dredging Ltd.
Langston, W. J., Chesman, B. S., Burt, G. R., Hawkins, S. J., Readman, J. and Worsfold, P. 2003. Characterisation of European Marine Sites - Plymouth Sound and Estuaries SAC and SPA: Marine Biological Association (MBA).
Marine Management Organisation (MMO). 2017-2018. Marine Information System [Online]. http://defra.maps.arcgis.com/apps/webappviewer/index.html?id=3dc94e81a22e41a6ace0bd327af4f346
Marsden, A. L. 2015. Solent EMS Seagrass Surveys 2014-15, Final Report for Natural England: Hampshire and Isle of Wight Wildlife Trust.
Marsden, A. L. 2016. Solent EMS Seagrass Surveys 2015-16, Final Report for Natural England.: Hampshire & Isle of Wight Wildlife Trust.
Marsden, A. L. and Chesworth, J. C. 2014. Inventory of eelgrass beds in Hampshire and the Isle of Wight (Version 6) Section One: Hampshire and Isle of Wight Wildlife Trust.
Marsden, A. L. and L, S. A. 2015. Inventory of eelgrass beds in Hampshire and the Isle of Wight 2014, Section Two: Data: Hampshire and Isle of Wight Wildlife Trust.
McIlwaine, P., Rance., J. and Frojan, C. B. 2014. Continuation of Baseline Monitoring of Reef Features in the Wash and North Norfolk Coast Special Area of Conservation (SAC): Cefas.
Meadows, B. and Frojan, C. 2012. Baseline monitoring survey of large shallow

inlet and bay for The Wash and North Norfolk.
Moore, J., Smith, J. and Northen, K. O. 1999. Marine Nature Conservation Review: Sector 8. Inlets in the western English Channel : area summaries Peterborough: Joint Nature Conservation Committee (JNCC).
Murray, E. 2001. Plymouth Sound cSAC Sediment Monitoring Trials 1998-1999: English Nature.
National Biodiversity Network Atlas, 2012-2018, NBN Gateway - species data [Online]. https://nbnatlas.org/
National Biodiversity Network Gateway. 2012. Environment Agency Non-native Species records v1. [Online]. [Accessed 16-Jul-15].https://data.nbn.org.uk/Datasets/GA000955
National Biodiversity Network Gateway. 2012. Mollusc (marine) data for Great Britain and Ireland [Online]. [Accessed 16-Jul-15].https://data.nbn.org.uk/Datasets/GA000321
National Biodiversity Network Gateway. 2012. RISC and ALERT Marine Non-Native Species (Chinese Mitten Crab, Wakame and Carpet Sea Squirt) Record [Online]. [Accessed 16-Jul-15].https://data.nbn.org.uk/Datasets/GA001160
National Biodiversity Network Gateway. 2012. RSPB reserves breeding bird surveys [Online]. [Accessed 16-Jul-15].https://data.nbn.org.uk/Datasets/GA000447
Natural England (NE) and Environment Agency (EA). 2015. Natural England Tamar contaminant sampling and Environment Agency Plymouth Sound contaminant sampling.
Natural England (NE). 2015. Fal & Helford Pacific Oyster Surveys 2014 & 2015: Natural England.
Natural England (NE). 2015. Plymouth Sound day grab survey - IQI data.
Natural England (NE). 2017. Fal & Helford Pacific Oyster Surveys 2016 & 2017: Natural England.
Natural England 2018. NE INNS GI Layer [accessed 10/04/2018].
Natural England, 2012, North Norfolk Coastal Trend Analysis
Natural England, 2013, Sandbanks evaluation spreadsheet
Natural England, 2018, marine GI database 2018
Natural England, 2016, Natural England Conservation Advice for Marine Protected Areas, Essex Estuaries UK0013690, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013690&SiteName=Essex Estuaries&countyCode=&responsiblePerson=
Natural England, 2017, Natural England Conservation Advice for Marine Protected Areas, Fal and Helford UK0013112, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013112&SiteName=fal and&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2018, Natural England Conservation Advice for Marine Protected Areas, Haisborough, Hammond and Winterton UK0030369, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030369&SiteName=hais&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2017, Natural England Conservation Advice for Marine Protected Areas, Humber Estuary UK0030170, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030170&SiteName=humber&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2018, Natural England Conservation Advice for Marine

Protected Areas, Inner Dowsing, Race Bank and North Ridge UK0030370, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030370&SiteName=inner dows&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2017, Natural England Conservation Advice for Marine Protected Areas, Lundy UK0013114, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013114&SiteName=lundy&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2018, Natural England Conservation Advice for Marine Protected Areas, Margate and Long Sands UK0030371, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030371&SiteName=margate&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2018, Natural England Conservation Advice for Marine Protected Areas, Morecambe Bay UK0013027, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013027&SiteName=morecambe&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2017, Natural England Conservation Advice for Marine Protected Areas, Plymouth Sound and Estuaries UK0013111, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013111&SiteName=plymouth&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2018, Natural England Conservation Advice for Marine Protected Areas, Shell Flat and Lune Deep UK0030376, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030376&SiteName=shell flat&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Natural England, 2018, Natural England Conservation Advice for Marine Protected Areas, Solent Maritime UK0030059, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030059&SiteName=solent&countyCode=&responsiblePerson=
Natural England, 2017, Natural England Conservation Advice for Marine Protected Areas, The Wash and North Norfolk Coast UK0017075, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0017075&SiteName=the wash and&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
New Forest District Council (NFDC). 2010. North Solent Shoreline Management Plan - Appendix C: Baseline Process Understanding: New Forest District Council.
PMA. 2004. A desk study to assess the impact of dredging activity on the Tamar Estuary: PMA Applications Ltd.
Robins P. E., Skov M. W., Lewis M. J., Gimenez Luis, Davies A. G., Malham S. K., Neill S. P., McDonald J. E., Whitton T. A., Jackson S. E. , Jago C. F. 2016. Impact of climate change on UK estuaries: A review of past trends and potential projections, Estuarine, Coastal and Shelf Science, 169, 119-135,
Rostron, D. 1987. Surveys of Harbours, rias and estuaries in southern Britain: the Helford River., Nature Conservancy Council (NCC).
Rostron, D. and Nature Conservancy Council 1986. Survey of Harbours, Rias and Estuaries in Southern Britain: Falmouth ; Volume 1 Report, Nature Conservancy Council (NCC).http://books.google.co.uk/books?id=znMxMwEACAAJ
Roy, H. E., Bacon, J., Beckmann, B., Harrower, C. A., Hill, M. O., Isaac, N. J. B., Preston, C. D., Rathod, B., Rorke, S. L., Marchant, J. H., Musgrove, A., Noble, D.,

Sewell, J., Seeley, B., Sweet, N., Adams, L., Bishop, J., Jukes, A. R., Walker, K. J. and Pearman, D. 2012. Non-Native Species in Great Britain: establishment, detection and reporting to inform effective decision making.: Defra.www.nonnativespecies.org/downloadDocument.cfm?id=753
Sheahan, D., Brook, S., Raffo, A., Smedley, C. and Law, R. 2007. A Review of Contaminant Status of SEA 8 covering the Western Approaches, Celtic Sea and English Channel: Centre for Environment, Fisheries and Aquaculture Science (Cefas).https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197007/SEA8_TechRep_Contaminants.pdf
Sheehan, E. V., Bridger, D., Cousens, S. L. and Attrill, M. J. 2015. Testing the resilience of dead maerl infaunal assemblages to the experimental removal and re-lay of habitat. Marine Ecology Progress Series, 535, 117-128.http://www.int-res.com/abstracts/meps/v535/p117-128/
Sutton, A., Tompsett, P. E. and Helford Voluntary Marine Conservation Area Group 2000. Helford River Survey: Eelgrass (Zostera Spp.) Project 1995-1998, Helford Voluntary Marine Conservation Area Group.https://books.google.co.uk/books?id=T0wtMwEACAAJ
Tappin, D. R., Pearce, B., Fitch, S., Dove, D., Gearey, B., Hill, J. M., Chambers, C., Bates, R., Pinnion, J., Diaz Doce, D., Green, M., Gallyot, J., Georgiou, L., Brutto, D., Marzialetti, S., Hopla, E., Ramsay, E. and Fielding. 2011. The Humber Regional Environmental Characterisation: Marine Aggregate Levy Sustainability Fund.
The Crown Estate, 2017, Marine Aggregates Capability & Portfolio 2017, https://www.thecrownestate.co.uk/media/2483/marineplusaggregates_2017_web.pdf
The Crown Estate, 2018, Offshore wind operational report January - December 2017, https://www.thecrownestate.co.uk/media/2400/offshore-wind-operational-report_digital.pdf
The Crown Estate, 2018, The Crown Estate Integrated Annual Report and Accounts 2017/18, https://www.thecrownestate.co.uk/media/2589/the_crown_estate_annual_report_2018.pdf
The Crown Estate, 2018, The Crown Estate Offshore Activity [Online] https://www.thecrownestate.co.uk/media/2633/ei-all-offshore-activity-a4.pdf
Unsworth, R. K. F., Williams, B., Jones, B. L. and Cullen-Unsworth, L. C. 2017. Rocking the Boat: Damage to Eelgrass by Swinging Boat Moorings. Frontiers in Plant Science, 8.https://www.frontiersin.org/article/10.3389/fpls.2017.01309
URS. 2014. Estuary Characterisation Report, Solent Maritime Estuaries. Report by URS for Natural England, RP1661.: URS.
Ware, S. and Meadows, B. 2011. Monitoring of Plymouth Sound and Estuaries SAC: CEFAS.
Ware, S. and Meadows, B. 2012. Monitoring of Fal and Helford SAC 2011: Centre for Environment, Fisheries, and Aquaculture Science (CEFAS).
White, A. 2004. Marine Ecological Survey of the Fal Estuary: Effects of Maerl Extraction.: Royal Haskoning,.
Yarmouth Harbour (Isle of Wight) Commissioners and Isle of Wight Estuaries Project. 2004. Western Yar Estuary Baseline Document Volume I - 2011 Maintenance Dredging Protocol 2004.

4. Range

4.1 Surface area (in km²)	24224	
4.2 Short-term trend Period		
4.3 Short-term trend Direction		
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum

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4.5 Short-term trend Method used			
4.6 Long-term trend Period			
4.7 Long-term trend Direction			
4.8 Long-term trend Magnitude	a) Minimum	b) Maximum	
4.9 Long-term trend Method used			
4.10 Favourable reference range	a) Area (km²) b) Operator c) Unknown No d) Method		
4.11 Change and reason for change in surface area of range	No change The change is mainly due to:		
4.12 Additional information			

5. Area covered by habitat

5.1 Year or period			
5.2 Surface area (in km²)	a) Minimum 4257	b) Maximum 4257	c) Best single value 4257
5.3 Type of estimate			
5.4 Surface area Method used			
5.5 Short-term trend Period			
5.6 Short-term trend Direction			
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used			
5.9 Long-term trend Period			
5.10 Long-term trend Direction			
5.11 Long-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used			
5.13 Favourable reference area	a) Area (km²) b) Operator c) Unknown No d) Method		
5.14 Change and reason for change in surface area of range	No change The change is mainly due to:		
5.15 Additional information			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 1518.84952	Maximum 1518.84952
	b) Area in not-good condition (km²)	Minimum 1249.25749	Maximum 1249.25749
	c) Area where condition is not known (km²)	Minimum 1491.21534	Maximum 1491.21534
6.2 Condition of habitat Method used	Based mainly on extrapolation from a limited amount of data		

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

6.3 Short-term trend of habitat area in good condition Period	2007-2018
6.4 Short-term trend of habitat area in good condition Direction	Stable (0)
6.5 Short-term trend of habitat area in good condition Method used	Based mainly on expert opinion with very limited data
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period? No
6.7 Typical species Method used	
6.8 Additional information	A combination of methods has been used to come up with the area of the feature in 'good' and 'not good' condition. This has been a mixture of data from: 1) full condition assessments from SACs using monitoring data to assess condition against a number of attributes at the sub-feature level, before aggregating this for feature condition. Across the feature different areas may be allocated to different condition categories based on sub-feature condition and the resolution of available data. 2) Proxy condition assessments to assign condition for sites for which there is no full condition assessment. A model was used to calculate the proxy condition of the feature based on the activities that are occurring within a site and the vulnerability of features to activities they are exposed to. This output was evaluated and the percentage of the feature in unfavourable condition was estimated from the model output. The data from these two sources was then aggregated up to a national level, giving an area value for 'good' and 'not good' condition for each annex 1 feature. Comparison of the results from these two sources suggests that they may differ in their ability to identify 'unfavourability' with full condition assessments being more likely to identify unfavourable condition than other methods. Short term trend of area in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been, on balance, broadly stable over this period. In the case of sandbanks, management within MPAs has led to improvements in condition, but this is considered to be balanced by displacement of fishing effort and an increase in pressure (and decrease in condition) on sandbanks outside MPAs.

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	H
Wind, wave and tidal power, including infrastructure (D01)	H
Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (G01)	H
Marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats (G03)	H
Mixed source marine water pollution (marine and coastal) (J02)	M
Sea-level and wave exposure changes due to climate change (N04)	M
Transmission of electricity and communications (cables) (D06)	M

Shipping lanes, ferry lanes and anchorage infrastructure (e.g. canalisation, dredging) (E03)	M
Other invasive alien species (other then species of Union concern) (I02)	M
Sports, tourism and leisure activities (F07)	M

Threat	Ranking
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	H
Wind, wave and tidal power, including infrastructure (D01)	H
Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (G01)	H
Marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats (G03)	H
Mixed source marine water pollution (marine and coastal) (J02)	M
Sea-level and wave exposure changes due to climate change (N04)	M
Transmission of electricity and communications (cables) (D06)	M
Shipping lanes, ferry lanes and anchorage infrastructure (e.g. canalisation, dredging) (E03)	M
Sports, tourism and leisure activities (F07)	M
Oil and gas pipelines (D07)	M

7.2 Sources of information

7.3 Additional information

C01: Sandbanks are dredged for aggregates, causing a loss of habitat. Whilst this is regulated within protected sites and dredging only occurs within protected sites where no long term impacts are shown, especially as the activity will only be occurring over a small area within the sandbank at any one time, there is lots of pressure from this activity outside of sites and this is likely to increase in the future.
D01: Sandbanks are sensitive to pressures from wind, wave and tidal power activities. There may be a loss of habitat from infrastructure installation, although this is subject to an Environmental Impact Assessment. The infrastructure installations are likely to increase over the next 12 years, with more renewable installations being planned (Crown Estate, 2017) as well as the possible installation of tidal lagoons. Whilst the installation of infrastructure would be a one off impact, the area and volume can be large and recovery could take some time.
G01: The removal of species which make up a functional component of the sandbank community from fishing activities will affect the condition of the sandbank. There is no management of fishing activity outside of marine protected areas for Annex I sandbanks, and inshore fishing activities are unlikely to decrease over the next twelve years. The UK is set to introduce a Fisheries Bill next year, that will explictly provide for the MMO to manage fishing anywhere in UK waters for nature conservation reasons.
G03: Whilst management measures have been brought in to prevent loss of habitat to sandbank features within some marine protected areas, many

areas are still recovering from the pressure from demersal fishing which caused damage. These activities are still occurring outside of marine protected areas, and inshore fishing activity is unlikely to decrease over the next twelve years.
J02: This is a broad pressure that covers all pollution pressures in the marine environment: agriculture, waste water, transport, as well as unknown sources. Annex I sandbank features are sensitive to pressures from marine pollution. This can cause shifts in community composition and potentially the loss or decline of important native keystone species. There are various management measures in place that regulate pollutants but it unlikely they can be fully eliminated.
N04: Sea levels have risen 1-3mm over the last century (Robins et al., 2016). This pressure is already acting on Annex I sandbank and sea level rise is predicted to increase with climate change. There is also the likely effect of increased wave damage from storms causing biological communities to be removed or disturbed, and the smothering of communities from sediment suspension and movement during storms, which may be more frequent in the future.
D06: Sandbank features are sensitive to pressures from the installation and maintenance of cables. Impacts vary from one off events with quick recovery, to affecting large areas and volumes of feature where recovery could take some time. In addition, some cables are protected by rock armour which causes a loss of habitat to the sandbank feature. The infrastructure is likely to increase over the next 12 years, with more cables being planned (Crown Estate, 2017).
E03: Navigational dredging is occurring at a high level within inshore waters, and affects inshore sandbanks many of which are inside SACs. Whilst the effects of maintenance dredging may be temporary, dredging is repeated up to several times a year in some locations, causing a repeated disturbance to communities and small loss of habitat. The amount of shipping is likely to increase in the future.
I02: Sandbanks are sensitive to pressures from non-native species, such as Crepidula fornicata and Sargassum muticum which are prevalent in certain locations, and are becoming more widespread (GB NNSS, 2018). Currently there is little management in place to address the further spread of these species in the future.
F07: Subtidal seagrass beds (sometimes a subfeature of sandbanks) are sensitive to the pressures from moorings and anchoring associated with recreational boating. Management measures to prevent damage to the feature have been brought in with some success within some marine protected areas, but further management is required in the future as the intensity of this activity is unlikely to drop.
D07: The decommissioning of infrastructure associated with oil and gas represents a future threat to sandbanks, which are sensitive to the pressures from this activity. Whilst this may be a one off impact for each decommissioning project from which recovery may be relatively quick, the area and volume can be large and recovery could take some time.

8. Conservation measures

8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken

8.2 Main purpose of the measures taken	Restore the habitat of the species (related to 'Habitat for the species')
8.3 Location of the measures taken	Both inside and outside Natura 2000
8.4 Response to the measures	Medium-term results (within the next two reporting periods, 2019-2030)
8.5 List of main conservation measures	

Adapt/manage extraction of non-energy resources (CC01)

Adapt/manage renewable energy installation, facilities and operation (CC03)

Reduce impact of service corridors and networks (CC06)

Reduce impact of transport operation and infrastructure (CE01)

Management of professional/commercial fishing (including shellfish and seaweed harvesting) (CG01)

Reduce/eliminate marine pollution from agricultural activities (CA13)

Reduce impact of outdoor sports, leisure and recreational activities (CF03)

Reduce/eliminate marine pollution from industrial, commercial, residential and recreational areas and activities (CF07)

Reduce/eliminate marine contamination with litter (CF08)

Control/eradication of illegal killing, fishing and harvesting (CG04)

8.6 Additional information	Conservation measures such as fisheries byelaws that have prevented demersal trawling on sandbanks are already having an effect, with recovery of communities. Other management measures, such as the marine licensing and EIA process are enabling the protection of Annex I sandbank within marine protected areas. Some other measures, such as addressing the impact of anchoring from recreational boating on subtidal seagrass will have longer term results.

9. Future prospects

9.1 Future prospects of parameters	a) Range b) Area c) Structure and functions
9.2 Additional information	An increase in pressures to which this feature is sensitive means that even though management measures are being delivered within MPAs, across the sandbank resource as a whole including areas outside MPAs there is likely to be a decrease of more than 1% per year in the area of this habitat as a result of climate change, offshore renewables and aggregate extraction (Crown Estate, 2017). Additionally, fisheries managed in sandbank MPAs will in all likelihood be displaced onto similar habitats outwith the MPA network. It is expected that this pressure will increase once the Article 11 common fisheries policy process concludes, affecting sandbank sites where non-UK vessels operate. Overall the structure and function of the feature is likely to change by less than 1% per year and the range will remain stable as within marine protected areas management means that the condition of the feature is believed to be improving. There are significant uncertainties relating to how pressures from inshore fishing activities may change over the next twelve years; although there may be changes in distribution of effort and potentially more effort inshore, this needs to be considered in the context of other potential management changes outlined in the UK Government's fisheries white paper. The range should remain stable over the next two reporting cycles. There are a number of uncertainties affecting this judgement of future prospects; these include the application and interpretation

of EU Caselaw to small scale developments within European Sites.

10. Conclusions

10.1. Range	
10.2. Area	
10.3. Specific structure and functions (incl. typical species)	
10.4. Future prospects	
10.5 Overall assessment of Conservation Status	
10.6 Overall trend in Conservation Status	
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status No change The change is mainly due to:
10.8 Additional information	

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value	3141 3141 3141
11.2 Type of estimate		
11.3 Surface area of the habitat type inside the network Method used		
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)	
11.5 Short-term trend of habitat area in good condition within network Method used	Based mainly on expert opinion with very limited data	
11.6 Additional information	The pressures acting on Annex I sandbanks within MPAs have been broadly similar over the last reporting cycle. Within Natura 2000 sites, management measures such as fisheries byelaws have been brought in and enforced to protect sandbank features. However we still await the Common Fisheries Policy Article 11 process to actually deliver any management where EU commercial fishing vessels are potentially damaging our SAC sandbank features between 6 and 12nm.	

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	English sandbanks are often productive fishing grounds, and are, especially those

in the Southern North Sea, heavily targeted by UK and EU vessels primarily using demersal mobile gear e.g. Beam Trawling. In England the UK government has a specific programme aimed at reconciling commercial fishing with the SAC conservation objectives known as the Revised Approach. This has largely been successful at making commercial fishing compatible with Sandbank Objectives for those SACs in the 0-6nm. However for those sites beyond 6nm (and for JNCC beyond 12nm) we have European vessels (especially Dutch, French and Danish, but not exclusively) operating in our sandbank MPAs and having an impact. The impact of these vessels is managed via the CFP Article 11 Process which requires us to gain agreement from Other Member States to commercial fisheries management. It has taken considerably longer than hoped to gain agreement that achieves a balance between meeting conservation objectives and enabling sustainable fisheries to continue. The process is in need of review; it is unwieldy and far too slow as well as being open to OMS pressure to retain fishing effort even where it is hindering the Habitats Directive sandbank conservation objectives.

Distribution Map

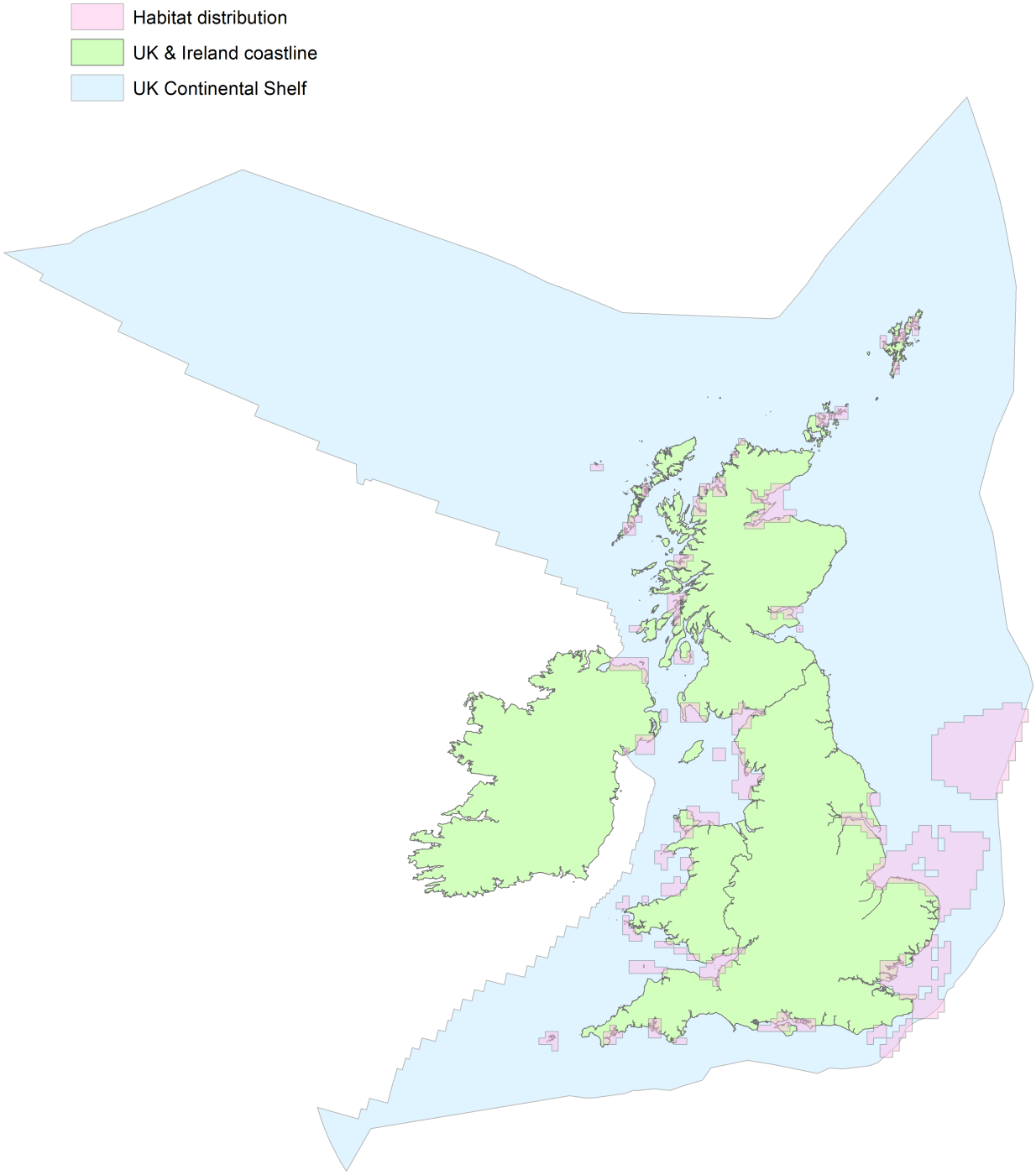

Figure 1: UK distribution map for H1110 - Sandbanks which are slightly covered by sea water all the time.

The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period. For further details see the 2019 Article17 UK Approach document.

Range Map

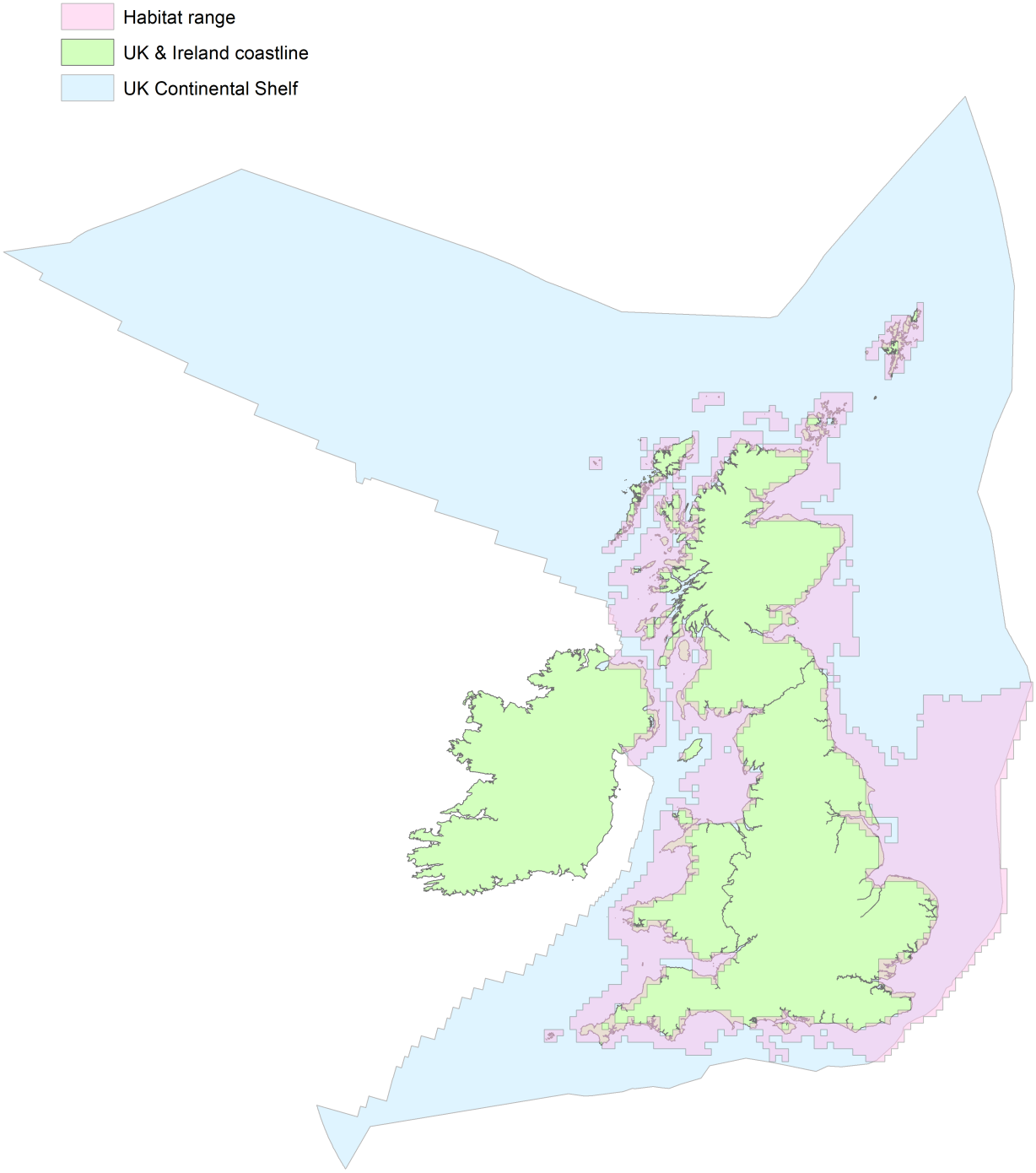

Figure 2: UK range map for H1110 - Sandbanks which are slightly covered by sea water all the time.

Range was calculated by JNCC using mapped surface area of the habitat in addition to the area of sloping sandy sediment habitat down to 60m and connected to a sandbank in less than 20m of water. The 60m limit is equivalent to the deepest known sandbank contour (found at Dogger Bank SAC). Mapped data of the habitat has been created by combining existing data (i.e. sandbanks already mapped within SACs) with an analysis of bathymetric depth, slope and aspect and sediment data across UK waters' and is based on current best available evidence (JNCC, 2018a).

Explanatory Notes

Habitat code: 1110 Region code: MATL

Field label	Note
6.1 Condition of habitat	A combination of methods has been used to come up with the area of the feature in 'good' and 'not good' condition. This has been a mixture of data from: 1) full condition assessments from SACs using monitoring data to assess condition against a number of attributes at the sub-feature level, before aggregating this for feature condition. Across the feature different areas may be allocated to different condition categories based on sub-feature condition and the resolution of available data. 2) Proxy condition assessments to assign condition for sites for which there is no full condition assessment. A model was used to calculate the proxy condition of the feature based on the activities that are occurring within a site and the vulnerability of features to activities they are exposed to. This output was evaluated and the percentage of the feature in unfavourable condition was estimated from the model output. The data from these two sources was then aggregated up to a national level, giving an area value for 'good' and 'not good' condition for each annex 1 feature. Comparison of the results from these two sources suggests that they may differ in their ability to identify 'unfavourability' with full condition assessments being more likely to identify unfavourable condition than other methods. Short term trend of area in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been, on balance, broadly stable over this period. In the case of sandbanks, management within MPAs has led to improvements in condition, but this is considered to be balanced by displacement of fishing effort and an increase in pressure (and decrease in condition) on sandbanks outside MPAs.
6.2 Condition of habitat; Method used	A combination of methods has been used to come up with the area of the feature in 'good' and 'not good' condition. This has been a mixture of data from: 1) full condition assessments from SACs using monitoring data to assess condition against a number of attributes at the sub-feature level, before aggregating this for feature condition. Across the feature different areas may be allocated to different condition categories based on sub-feature condition and the resolution of available data. 2) Proxy condition assessments to assign condition for sites for which there is no full condition assessment. A model was used to calculate the proxy condition of the feature based on the activities that are occurring within a site and the vulnerability of features to activities they are exposed to. This output was evaluated and the percentage of the feature in unfavourable condition was estimated from the model output. The data from these two sources was then aggregated up to a national level, giving an area value for 'good' and 'not good' condition for each annex 1 feature. Comparison of the results from these two sources suggests that they may differ in their ability to identify 'unfavourability' with full condition assessments being more likely to identify unfavourable condition than other methods. Short term trend of area in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been, on balance, broadly stable over this period. In the case of sandbanks, management within MPAs has led to improvements in condition, but this is considered to be balanced by displacement of fishing effort and an increase in pressure (and decrease in condition) on sandbanks outside MPAs.

6.3 Short term trend of habitat area in good condition; Period	A combination of methods has been used to come up with the area of the feature in 'good' and 'not good' condition. This has been a mixture of data from: 1) full condition assessments from SACs using monitoring data to assess condition against a number of attributes at the sub-feature level, before aggregating this for feature condition. Across the feature different areas may be allocated to different condition categories based on sub-feature condition and the resolution of available data. 2) Proxy condition assessments to assign condition for sites for which there is no full condition assessment. A model was used to calculate the proxy condition of the feature based on the activities that are occurring within a site and the vulnerability of features to activities they are exposed to. This output was evaluated and the percentage of the feature in unfavourable condition was estimated from the model output. The data from these two sources was then aggregated up to a national level, giving an area value for 'good' and 'not good' condition for each annex 1 feature. Comparison of the results from these two sources suggests that they may differ in their ability to identify 'unfavourability' with full condition assessments being more likely to identify unfavourable condition than other methods. Short term trend of area in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been, on balance, broadly stable over this period. In the case of sandbanks, management within MPAs has led to improvements in condition, but this is considered to be balanced by displacement of fishing effort and an increase in pressure (and decrease in condition) on sandbanks outside MPAs.
6.4 Short term trend of habitat area in good condition; Direction	A combination of methods has been used to come up with the area of the feature in 'good' and 'not good' condition. This has been a mixture of data from: 1) full condition assessments from SACs using monitoring data to assess condition against a number of attributes at the sub-feature level, before aggregating this for feature condition. Across the feature different areas may be allocated to different condition categories based on sub-feature condition and the resolution of available data. 2) Proxy condition assessments to assign condition for sites for which there is no full condition assessment. A model was used to calculate the proxy condition of the feature based on the activities that are occurring within a site and the vulnerability of features to activities they are exposed to. This output was evaluated and the percentage of the feature in unfavourable condition was estimated from the model output. The data from these two sources was then aggregated up to a national level, giving an area value for 'good' and 'not good' condition for each annex 1 feature. Comparison of the results from these two sources suggests that they may differ in their ability to identify 'unfavourability' with full condition assessments being more likely to identify unfavourable condition than other methods. Short term trend of area in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been, on balance, broadly stable over this period. In the case of sandbanks, management within MPAs has led to improvements in condition, but this is considered to be balanced by displacement of fishing effort and an increase in pressure (and decrease in condition) on sandbanks outside MPAs.

6.5 Short term trend of habitat area in good condition; Method used	A combination of methods has been used to come up with the area of the feature in 'good' and 'not good' condition. This has been a mixture of data from: 1) full condition assessments from SACs using monitoring data to assess condition against a number of attributes at the sub-feature level, before aggregating this for feature condition. Across the feature different areas may be allocated to different condition categories based on sub-feature condition and the resolution of available data. 2) Proxy condition assessments to assign condition for sites for which there is no full condition assessment. A model was used to calculate the proxy condition of the feature based on the activities that are occurring within a site and the vulnerability of features to activities they are exposed to. This output was evaluated and the percentage of the feature in unfavourable condition was estimated from the model output. The data from these two sources was then aggregated up to a national level, giving an area value for 'good' and 'not good' condition for each annex 1 feature. Comparison of the results from these two sources suggests that they may differ in their ability to identify 'unfavourability' with full condition assessments being more likely to identify unfavourable condition than other methods. Short term trend of area in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been, on balance, broadly stable over this period. In the case of sandbanks, management within MPAs has led to improvements in condition, but this is considered to be balanced by displacement of fishing effort and an increase in pressure (and decrease in condition) on sandbanks outside MPAs.
7.1 Characterisation of pressures/ threats	G01: The removal of species which make up a functional component of the sandbank community from fishing activities will affect the condition of the sandbank. There is no management of fishing activity outside of marine protected areas for Annex I sandbanks, and inshore fishing activities are unlikely to decrease over the next twelve years. The UK is set to introduce a Fisheries Bill next year, that will explictly provide for the MMO to manage fishing anywhere in UK waters for nature conservation reasons.
7.1 Characterisation of pressures/ threats	D01: Sandbanks are sensitive to pressures from wind, wave and tidal power activities. There may be a loss of habitat from infrastructure installation, although this is subject to an Environmental Impact Assessment. The infrastructure installations are likely to increase over the next 12 years, with more renewable installations being planned (Crown Estate, 2017) as well as the possible installation of tidal lagoons. Whilst the installation of infrastructure would be a one off impact, the area and volume can be large and recovery could take some time.
7.1 Characterisation of pressures/ threats	G03: Whilst management measures have been brought in to prevent loss of habitat to sandbank features within some marine protected areas, many areas are still recovering from the pressure from demersal fishing which caused damage. These activities are still occurring outside of marine protected areas, and inshore fishing activity is unlikely to decrease over the next twelve years.
7.1 Characterisation of pressures/ threats	J02: This is a broad pressure that covers all pollution pressures in the marine environment: agriculture, waste water, transport, as well as unknown sources. Annex I sandbank features are sensitive to pressures from marine pollution. This can cause shifts in community composition and potentially the loss or decline of important native keystone species. There are various management measures in place that regulate pollutants but it unlikely they can be fully eliminated.
7.1 Characterisation of pressures/ threats	N04: Sea levels have risen 1-3mm over the last century (Robins et al., 2016). This pressure is already acting on Annex I sandbank and sea level rise is predicted to increase with climate change. There is also the likely effect of increased wave damage from storms causing biological communities to be removed or disturbed, and the smothering of communities from sediment suspension and movement during storms, which may be more frequent in the future.

7.1 Characterisation of pressures/ threats	D06: Sandbank features are sensitive to pressures from the installation and maintenance of cables. Impacts vary from one off events with quick recovery, to affecting large areas and volumes of feature where recovery could take some time. In addition, some cables are protected by rock armour which causes a loss of habitat to the sandbank feature. The infrastructure is likely to increase over the next 12 years, with more cables being planned (Crown Estate, 2017).
7.1 Characterisation of pressures/ threats	E03: Navigational dredging is occurring at a high level within inshore waters, and affects inshore sandbanks many of which are inside SACs. Whilst the effects of maintenance dredging may be temporary, dredging is repeated up to several times a year in some locations, causing a repeated disturbance to communities and small loss of habitat. The amount of shipping is likely to increase in the future.
7.1 Characterisation of pressures/ threats	I02: Sandbanks are sensitive to pressures from non-native species, such as Crepidula fornicata and Sargassum muticum which are prevalent in certain locations, and are becoming more widespread (GB NNSS, 2018). Currently there is little management in place to address the further spread of these species in the future.
7.1 Characterisation of pressures/ threats	F07: Subtidal seagrass beds (sometimes a subfeature of sandbanks) are sensitive to the pressures from moorings and anchoring associated with recreational boating. Management measures to prevent damage to the feature have been brought in with some success within some marine protected areas, but further management is required in the future as the intensity of this activity is unlikely to drop.
7.1 Characterisation of pressures/ threats	D07: The decommissioning of infrastructure associated with oil and gas represents a future threat to sandbanks, which are sensitive to the pressures from this activity. Whilst this may be a one off impact for each decommissioning project from which recovery may be relatively quick, the area and volume can be large and recovery could take some time.
7.1 Characterisation of pressures/ threats	C01: Sandbanks are dredged for aggregates, causing a loss of habitat. Whilst this is regulated within protected sites and dredging only occurs within protected sites where no long term impacts are shown, especially as the activity will only be occurring over a small area within the sandbank at any one time, there is lots of pressure from this activity outside of sites and this is likely to increase in the future.
8.1 Status of measures	Conservation measures such as fisheries byelaws that have prevented demersal trawling on sandbanks are already having an effect, with recovery of communities. Other management measures, such as the marine licensing and EIA process are enabling the protection of Annex I sandbank within marine protected areas. Some other measures, such as addressing the impact of anchoring from recreational boating on subtidal seagrass will have longer term results.
8.2 Main purpose of the measures taken	Conservation measures such as fisheries byelaws that have prevented demersal trawling on sandbanks are already having an effect, with recovery of communities. Other management measures, such as the marine licensing and EIA process are enabling the protection of Annex I sandbank within marine protected areas. Some other measures, such as addressing the impact of anchoring from recreational boating on subtidal seagrass will have longer term results.
8.3 Location of the measures taken	Conservation measures such as fisheries byelaws that have prevented demersal trawling on sandbanks are already having an effect, with recovery of communities. Other management measures, such as the marine licensing and EIA process are enabling the protection of Annex I sandbank within marine protected areas. Some other measures, such as addressing the impact of anchoring from recreational boating on subtidal seagrass will have longer term results.

8.4 Response to the measures	Conservation measures such as fisheries byelaws that have prevented demersal trawling on sandbanks are already having an effect, with recovery of communities. Other management measures, such as the marine licensing and EIA process are enabling the protection of Annex I sandbank within marine protected areas. Some other measures, such as addressing the impact of anchoring from recreational boating on subtidal seagrass will have longer term results.
9.1 Future prospects of parameters	An increase in pressures to which this feature is sensitive means that even though management measures are being delivered within MPAs, across the sandbank resource as a whole including areas outside MPAs there is likely to be a decrease of more than 1% per year in the area of this habitat as a result of climate change, offshore renewables and aggregate extraction (Crown Estate, 2017). Additionally, fisheries managed in sandbank MPAs will in all likelihood be displaced onto similar habitats outwith the MPA network. It is expected that this pressure will increase once the Article 11 common fisheries policy process concludes, affecting sandbank sites where non-UK vessels operate. Overall the structure and function of the feature is likely to change by less than 1% per year and the range will remain stable as within marine protected areas management means that the condition of the feature is believed to be improving. There are significant uncertainties relating to how pressures from inshore fishing activities may change over the next twelve years; although there may be changes in distribution of effort and potentially more effort inshore, this needs to be considered in the context of other potential management changes outlined in the UK Government's fisheries white paper. The range should remain stable over the next two reporting cycles. There are a number of uncertainties affecting this judgement of future prospects; these include the application and interpretation of EU Caselaw to small scale developments within European Sites.
11.4 Short term trend of habitat area in good condition within the network; Direction	The pressures acting on Annex I sandbanks within MPAs have been broadly similar over the last reporting cycle. Within Natura 2000 sites, management measures such as fisheries byelaws have been brought in and enforced to protect sandbank features. However we still await the Common Fisheries Policy Article 11 process to actually deliver any management where EU commercial fishing vessels are potentially damaging our SAC sandbank features between 6 and 12nm.
11.5 Short term trend of habitat area in good condition within the network; Method used	The pressures acting on Annex I sandbanks within MPAs have been broadly similar over the last reporting cycle. Within Natura 2000 sites, management measures such as fisheries byelaws have been brought in and enforced to protect sandbank features. However we still await the Common Fisheries Policy Article 11 process to actually deliver any management where EU commercial fishing vessels are potentially damaging our SAC sandbank features between 6 and 12nm.
12.2 Other relevant information	English sandbanks are often productive fishing grounds, and are, especially those in the Southern North Sea, heavily targeted by UK and EU vessels primarily using demersal mobile gear e.g. Beam Trawling. In England the UK government has a specific programme aimed at reconciling commercial fishing with the SAC conservation objectives known as the Revised Approach. This has largely been successful at making commercial fishing compatible with Sandbank Objectives for those SACs in the 0-6nm. However for those sites beyond 6nm (and for JNCC beyond 12nm) we have European vessels (especially Dutch, French and Danish, but not exclusively) operating in our sandbank MPAs and having an impact. The impact of these vessels is managed via the CFP Article 11 Process which requires us to gain agreement from Other Member States to commercial fisheries management. It has taken considerably longer than hoped to gain agreement that achieves a balance between meeting conservation objectives and enabling sustainable fisheries to continue. The process is in need of review; it is unwieldy and far too slow as well as being open to OMS pressure to retain fishing effort even where it is hindering the Habitats Directive sandbank conservation objectives.