Metadata Elements

Title *	Living England Habitat Map Phase 4
Alternative Title	Satellite-based habitat classification
Dataset Language *	eng
Abstract *	The Living England project, led by Natural England, is a multi-year programme delivering a satellite-derived national habitat layer in support of the Environmental Land Management (ELM) System and the Natural Capital and Ecosystem Assessment (NCEA) Pilot. The project uses a machine learning approach to image classification, developed under the Defra Living Maps project (SD1705 – Kilcoyne et al., 2017). The method first clusters homogeneous areas of habitat into segments, then assigns each segment to a defined list of habitat classes using Random Forest (a machine learning algorithm). The habitat probability map displays modelled likely broad habitat classifications, trained on field surveys and earth observation data from 2021 as well as historic data layers. This map is an output from Phase IV of the Living England project, with future work in Phase V (2022-23) intending to standardise the methodology and Phase VI (2023-24) to implement the agreed standardised methods.
Resource Locator	Amazon Web Services
Data Format	shp, tab, file geodatabase
Resource Type *	dataset
Unique Resource Identifier	1

Classification of Spatial Data & Services

Topic Category *	biota
INSPIRE Themes	Habitat and biotopes
Spatial Data Service Type	n/a
Coupled Resource	n/a

Keyword

Keyword	Geographic Information
Originating Controlled Vocabulary	Natural England Corporate Vocabulary

Geographic Location

Extent *	England
West Bound Longitude *	-7.05
East Bound Longitude *	2.07
North Bound Longitude *	55.81
South Bound Longitude *	49.86
Vertical Minimum Extent	0
Vertical Maximum Extent	0
Spatial Reference System *	British National Grid

Temporal Reference

Temporal Extent - Start Date of Data Capture *	2017
Temporal Extent - End Date of Data Capture *	2021
Date of Creation *	2022-03-31
Date of Last Revision *	2022-03-31
Dataset Reference Date *	2022-03-31
Dataset Reference Type *	creation

Quality & Validity

Lineage *	Process Description: A number of data layers are used to inform the model to provide a habitat probability map of England. The main sources layers are Sentinel-2 and Sentinel-1 satellite data from the ESA Copericus programme. Additional datasets were incorporated into the model (as detailed below) to aid the segmentation and classification of specific habitat classes. Datasets used: Agri-Environment Higher Level Stewardship (HLS) Monitoring, British Geological Survey Bedrock Mapping 1:50k, Coastal Dune Geomatics Mapping Ground Truthing, Crop Map of England (RPA), Dark Peak Bog State Survey, Desktop Validation and Manual Points, EA Integrated Height Model 10m, EA Saltmarsh Zonation and Extent, Field Unit NEFU, Living England Collector App NEFU/EES, Long Term Monitoring Network (LTMN), Lowland Heathland Survey, National Forest Inventory (NFI), National Grassland Survey, National Plant Monitoring Scheme, NEFU Surveys, Northumberland Border Mires, OS Vector Map District , Priority Habitats Inventory (PHI) B Button, European Space Agency (ESA) Sentinel-1 and Sentinel-2 , Space2 Eye Lens: Ainsdale NNR, Space2 Eye Lens: State of the Bog Bowland Survey, Space2 Eye Lens: State of the Bog Dark Peak Condition Survey, Space2 Eye Lens: State of the Bog (MMU) Mountain Hare Habitat Survey Dark Peak, Uplands Inventory, West Pennines Designation NVC Survey, Wetland Inventories, WorldClim - Global Climate Data
Spatial Resolution	20 - 50 m square
Additional Information Source	Sentinel Imagery downloaded from Earth Observation Data Service (EODS) JNCC/ Google Earth Engine (GEE)
Frequency of Update *	not Planned
Equivalent Scale	n/a

Conformity

Specification	0
Degree	conformant
Explanation	conformant

Constraints Related To Access & Use

Use Constraints *	No Conditions Apply
	n/a
Limitations on Public Use *	Publically Accessible
Licence*	Publicly accessible: OGL
	n/a

| Copyright* | "Contains data supplied by ©Natural England ©Centre for Ecology and Hydrology, Natural England Licence No. 2011/052 British Geological Survey © NERC. All rights reserved., © Environment Agency copyright and/or database right 2015. All rights reserved. ©Natural England © Crown copyright and database right [2014], © Rural Payments Agency, © Natural England © 1995–2020 Esri, Contains Environment Agency information © Environment Agency and/or database rights. Some information used in this product is © Bluesky International Ltd/Getmapping PLC. Contains freely available data supplied by Natural Environment Research Council (Centre for Ecology & Hydrology; British Antarctic Survey; British Geological Survey). Contains OS data © Crown copyright [and database right] (2014), © Environment Agency copyright and/or database right 2015. All rights reserved., Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP, and the GIS User Community, Contains Ordnance Survey data © Crown copyright and database right 2021., EODS / CEDA ARD: ESA Copernicus: 'Contains modified Copernicus Sentinel data [2021]', © Carlos Bedson Manchester Metropolitan University, © Copyright 2020, worldclim.org"

Fick, S.E. and R.J. Hijmans, 2017. WorldClim 2: new 1km spatial resolution climate surfaces for global land areas. International Journal of Climatology 37 (12): 4302-4315.

Pescott, O.L.; Walker, K.J.; Day, J.; Harris, F.; Roy, D.B. (2020). National Plant Monitoring Scheme survey data (2015-2019). NERC Environmental Information Data Centre. https://doi.org/10.5285/cdb8707c-eed7-4da7-8fa3-299c65124ef2 © UK Centre for Ecology & Hydrology © Joint Nature Conservation Committee © Plantlife © Botanical Society of Britain and Ireland The following acknowledgement is required for use of this dataset: The National Plant Monitoring Scheme (NPMS) is organised and funded by the UK Centre for Ecology & Hydrology, Botanical Society of Britain and Ireland, Plantlife and the Joint Nature Conservation Committee. The NPMS is indebted to all volunteers who contribute data to the scheme. |

Responsible Organisation

Contact Title *	Evidence Earth Observation Service (EEOS)
Organisation Name *	Natural England
Postal Address *	4th Floor, Foss House, Kings Pool, 1-2 Peasholme Green, York, YO1 7PX
Tel No:	Enquiries: 0300 060 3900
E-Mail: *	earth.observation@naturalengland.org.uk
Web URL:	www.gov.uk/natural-england
Responsible Party Role *	custodian

Metadata on Metadata

Metadata Point of Contact *	Evidence Earth Observation Service (EEOS)
Organisation Name *	Natural England
Postal Address *	4th Floor, Foss House, Kings Pool, 1-2 Peasholme Green, York, YO1 7PX
Tel No:	Enquiries: 0300 060 3900
E-Mail: *	earth.observation@naturalengland.org.uk
Web URL:	www.gov.uk/natural-england
Responsible Party Role *	custodian
Metadata Date *	21/02/2022
Metadata Language *	eng

Data Management Information

NE Point of Contact	Sophie Potter
Data Manager	Sukhy Toora