

A guide to Forestry Commission's Sensitivity Maps for Woodland Creation

The Forestry Commission has developed a series of sensitivity maps, based on nationally available and consistent datasets, to indicate where there are likely to be fewer sensitivities to woodland creation.

These maps will help to indicate to landowners whether there is likely to be potential to establish new woodland on their land, and where there may be sensitivities that would preclude woodland creation.

The maps do not indicate that, where there is a low sensitivity to new woodland being created, that planting will be agreed by the Forestry Commission, the regulator for woodland and forestry projects in England. However, the low sensitivity areas have fewest identified constraints to address, and it should be easier to agree creating new woodland here than in other areas.

Likewise, creation of new woodland, particularly of native woodland, may be appropriate outside 'low sensitivity' areas, but the appropriateness of proposals in these areas will again be determined by the Forestry Commission, including through responding to the views of Natural England, Environment Agency, Historic England, the Local Authority and other stakeholders, where relevant.

The Sensitivity Maps exclude all land that is unsuitable for planting, including urban areas, existing (and assumed) woodland and habitats that are considered too wet, too rocky, and too salty to support the growth of trees. This is achieved through restricting the Sensitivity Maps to the following land covers, based on the most recent update of Landcover Map (2020):

- Acid grassland
- Arable and horticulture
- Calcareous grassland
- Heather
- Heather grassland
- Improved grassland
- Neutral grassland

The spatial datasets and individual layers of those datasets that define land as unsuitable and low, medium, or high sensitivity for woodland creation in the Full Sensitivity Map version 3.0 are set out at Annex A. The national Full Sensitivity Map v3.0 and the associated Low Sensitivity Map are presented at Annex B.

The lineage of data inputs used to create the Full Sensitivity Map v3.0 and all variants are presented in Annex C. Data inputs, footnotes and acknowledgements are presented in Annex D. Overview maps for England, showing each variant, are presented in Annex E.

Variants of the Low and Full Sensitivity Maps

Three variants of the Full Sensitivity Map v3.0 and associated Low Sensitivity Map v3.0 have also been developed, which assign low sensitivity status to either

or both of two datasets that are treated as medium sensitivity in the Full Sensitivity Map at Annex B, as set out below:

England Woodland Creation Low Sensitivity Map v3.0 - variant 1

- Agricultural land Class 3a: low sensitivity
- Protected landscapes (National Parks, the Broads and AONBs): low sensitivity

England Woodland Creation Low Sensitivity Map v3.0 - variant 2

- Agricultural land Class 3a: medium sensitivity
- Protected landscapes (National Parks, the Broads and AONBs): low sensitivity

England Woodland Creation Low Sensitivity Map v3.0 - variant 3

- Agricultural land Class 3a: low Sensitivity
- Protected landscapes (National Parks, the Broads and AONBs): medium sensitivity

The variants of the Full and Low Sensitivity Maps have been developed because, in the case of agricultural land quality, the decision to plant on the best and most versatile land is largely an economic decision made by the landowner; variants 1 and 3 reveal underlying sensitivities of ALC3a land. For Protected Landscapes where woodland creation may be desirable, particularly of native woodland, variants 1 and 2 reveal sensitivities to woodland creation other than Protected Landscape status.

Relationship with the Low-Risk Map for woodland creation

The Low Sensitivity Map v3.0 is a development of the Low-Risk Map for woodland creation, as defined in the Environmental Impact (Forestry) Regulations (2017), with the main differences set out below:

- All areas of peat included in Natural England's England peat map are excluded from the Low Sensitivity Map (and its variants), with deep peat classified as high sensitivity and shallow peat and other soils with peaty pockets classified as medium sensitivity.
- Areas of land included in the Wader Zonal Maps for curlew and golden plover as strata 2 to 5 are excluded from the Low Sensitivity Map (and its variants), with strata 4 and 5 treated as high sensitivity and strata 2 and 3 as medium sensitivity.
- Amended buffers are, in some cases, applied to Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and RAMSAR sites. Details of the buffer that applies to each are set out in Annex A.

The Low-Risk Map for woodland creation will continue to be used for meeting the requirements of the 2017 EIA (Forestry) regulations in terms of determining where notification may apply, rather than EIA screening; however, the Full and

Low Sensitivity Maps represent a more current view of sensitivities to woodland creation.

National breakdown of land sensitivity for woodland creation

National statistics of land sensitivity for the Full and Low Sensitivity Maps are given in Table 1 below, including for the three variants.

Table 1. National breakdown of land sensitivity for the England Woodland Creation Full Sensitivity Map v3.0, the Low Sensitivity Map v3.0 (restricted to blocks more than 2 hectares in area) derived from it, and the three variants.

Map variant	Variant description	Sensitivity	Area (ha)
Full Sensitivity Map v3.0		Unsuitable	3,294,868
		Low	3,073,998
		Medium	3,727,186
		High	2,950,320
Low Sensitivity Map v3.0	Restricted to blocks greater than 2 ha	Low	3,045,456
Full Sensitivity Map v3.0 variant 1	ALC 3a and Protected Landscapes: low sensitivity	Unsuitable	3,294,868
		Low	4,665,083
		Medium	2,136,101
		High	2,950,320
Full Sensitivity Map v3.0 variant 2	Protected Landscapes: low sensitivity	Unsuitable	3,294,868
		Low	3,723,950
		Medium	3,077,234
		High	2,950,320
Full Sensitivity Map v3.0 variant 3	ALC 3a: low sensitivity	Unsuitable	3,294,868
		Low	3,885,360
		Medium	2,915,824
		High	2,950,320

ANNEX A: DESCRIPTION OF SPATIAL LAYERS USED TO DEFINE SENSITIVITY TO WOODLAND CREATION

Land that is low sensitivity for woodland creation

Land with a **low** sensitivity for woodland creation is defined in this map layer as land with any of the following designations:

It is not:

- Unsuitable
- High sensitivity for woodland creation
- Medium sensitivity for woodland creation

And it is within/on land from the following land cover categories:

- Land Cover Map (2020) (LCM) from the UK Centre for Ecology & Hydrology (CEH): In places defined as:
 - Acid grassland
 - Arable and horticulture
 - Calcareous grassland
 - Heather
 - Heather grassland
 - Improved grassland
 - Neutral grassland
- Non-woodland interpreted forest types (IFTs) from the National Forest Inventory (NFI) woodland map (2019):
 - Agriculture land
 - Bare area
 - Grassland
 - Low density
 - Other vegetation
 - Shrub

Land that is medium sensitivity for woodland creation

Land with a **medium** sensitivity for new planting of woodland is defined in this map layer as land with the following designations:

It is not:

- Unsuitable
- High sensitivity for woodland creation

And it is within/on:

- Acid Vulnerable Catchments
- Best and Most Versatile land (Agricultural Land Class (ALC) 1, or ALC 2 or ALC 3a)

- Areas of Outstanding Natural Beauty (AONBs)
- Birdlife International Important Bird Areas
- Countryside Stewardship Higher-Tier agreements
- Public access land as defined by the Countryside Rights of Way (CROW) Act 2000 – Section 4 Conclusive Registered Common Land
- Environmental Stewardship Higher Level Scheme agreements
- Local Nature Reserves (LNRs)
- National Parks and the Broads (NPs)
- Natural England Peat Map: on shallow peaty soils and soils with peaty pockets
- Priority Habitat Inventory categories of fragmented heath, grass moorland and good quality semi-improved grassland
- Wader Zonal Map for Golden Plover and Curlew breeding wading bird species in either strata 2 or 3

Land that is high sensitivity for woodland creation

Land with a **high** sensitivity for new planting of woodland is defined in this map layer as land with any of the following designations:

It is not:

- Unsuitable

And it is on/within:

- National Nature Reserves
- Natural England Peat Map on deep peaty soils
- Priority Habitat Inventory categories OTHER THAN fragmented heath, grass Moorland, and good quality semi-improved grassland
- RAMSAR sites and within a 700 m buffer
- Registered Battlefields and within a 200 m buffer
- Registered Parks and Gardens
- Scheduled Monuments and within a 200 m buffer
- Special Protection Areas (SPAs) and within a 2,000 m buffer
- Sites of Special Scientific Interest (SSSIs) and, if above the Moorland Line, within a 1,000 m buffer
- Sites of Special Scientific Interest (SSSIs) and, if below the Moorland Line, within a 250 m buffer
- Special Areas of Conservation (SAC) and, if the land is above the Moorland Line, within a 700 m buffer
- Special Areas of Conservation (SAC) and, if the land is below the Moorland Line, within a 250 m buffer
- Wader Zonal Map for Golden Plover and Curlew breeding wading bird species in either strata 4 or 5
- World Heritage Site and within a 200 m buffer

Land that is unsuitable for woodland creation

Land that is **unsuitable** for new planting of woodland is defined in this map layer as land with any one or more of the following designations:

Land Cover Map (2020) (LCM) from the UK Centre for Ecology & Hydrology (UKCEH): In places defined as:

Type	LC Identifier
• Bog	11
• Coniferous woodland	2
• Deciduous woodland	1
• Fen	8
• Freshwater	14
• Inland rock	12
• Littoral rock	17
• Littoral sediment	18
• Saltmarsh	19
• Saltwater	13
• Suburban	21
• Supralittoral rock	15
• Supralittoral sediment	16
• Urban	20

National Forest Inventory (NFI) woodland map (2019) from Forest Research. The following Interpreted Forest Types (IFTs):

- Assumed woodland
- Broadleaved
- Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Mixed mainly broadleaved
- Mixed mainly conifer
- Open water
- Quarry
- River
- Road
- Uncertain
- Urban
- Windblown
- Young trees

All areas of England not thus defined as 'unsuitable' have gone on to be identified as either low sensitivity, medium sensitivity, or high sensitivity.

The England Woodland Creation Low Sensitivity Map v3.0

Extent: England

Format: Raster grid. Polygon format also available.

Grid resolution: 25 metres by 25 metres

This is a separate geospatial map layer based on a subset of the overall England Woodland Creation Full Sensitivity Map v3.0.

It shows land parcels that fulfil **both** of the following criteria. They each are:

- Low sensitivity for woodland creation in the England Woodland Creation Full Sensitivity Map v3.0
- **and also**
- Of an extent of 2 hectares or more (i.e., ≥ 2.0 ha)

The England Woodland Creation Low Sensitivity Map v3.0: Further three variants

Extent: England

Format: Raster grid. Polygon format also available

Grid resolution: 25 metres by 25 metres

Of an extent of 2 hectares or more (i.e., ≥ 2.0 ha)

These are a further three separate geospatial map layers based on the England Woodland Creation Low Sensitivity Map v3.0.

These subsets of the Low Sensitivity Map are as follows:

England Woodland Creation Low Sensitivity Map v3.0 - variant 1

This is the England Woodland Creation Low Sensitivity Map v3.0 **plus** areas of land that have different sensitivities assigned to them, compared to the core England woodland creation Low Sensitivity Map 3.0:

- Agricultural Land Classification 3a (ALC 3a) assigned as low sensitivity
- Areas of Outstanding Natural Beauty (AONBs) assigned as low sensitivity
- National Parks and the Broads (NPs) assigned as low sensitivity

England Woodland Creation Low Sensitivity Map v3.0 - variant 2

This is the England Woodland Creation Low Sensitivity Map v3.0 **plus** areas of land that have different sensitivities assigned compared to the core England woodland creation Low Sensitivity Map 3.0:

- Areas of Outstanding Natural Beauty (AONB) assigned as low sensitivity
- National Parks and the Broads (NPs) assigned as low sensitivity

England Woodland Creation Low Sensitivity Map v3.0 - variant 3

This is the England Woodland Creation Low Sensitivity Map v3.0 **plus** areas of land that have different sensitivities assigned compared to the core England woodland creation Low Sensitivity Map 3.0:

- Agricultural Land Classification 3a (ALC 3a) assigned as low sensitivity

ANNEX B: NATIONAL SENSITIVITY MAPS FOR WOODLAND CREATION

1. England Woodland Creation Full Sensitivity Map v3.0
2. England Woodland Creation Full Sensitivity Map v3.0: variant 1
3. England Woodland Creation Full Sensitivity Map v3.0: variant 2
4. England Woodland Creation Full Sensitivity Map v3.0: variant 3
5. England Woodland Creation Low Sensitivity Map v3.0
6. England Woodland Creation Low Sensitivity Map v3.0: variant 1
7. England Woodland Creation Low Sensitivity Map v3.0: variant 3
8. England Woodland Creation Low Sensitivity Map v3.0: variant 3

ANNEX C: NATIONAL SENSITIVITY MAPS FOR WOODLAND CREATION DATA LINEAGE

Data input name	Date stamp of data input
Acid vulnerable catchments ⁴	2019
Agricultural Land Classification (ALC) ³	12 March 2019
Areas of Outstanding Natural Beauty (AONBs)	15 May 2020
Birdlife International Important Bird Areas ⁵	February 2020
Countryside Stewardship (CS)	10 June 2021
CROW Act 2000 - S4 Conclusive Registered Common Land	24 October 2017
Environmental Stewardship Higher Level Scheme Agreements	8 January 2020
UKCEH Land Cover Map (2020) (LCM) ¹	17 January 2022
Local Nature Reserves (LNRs)	15 February 2022
National Forest Inventory (NFI) woodland map (2019)	2 March 2022
National Nature Reserves	15 March 2022
National Parks and the Broads (NPs)	15 February 2019
Natural England Peat Map ²	22 July 2021
Priority Habitat Inventory	12 June 2019
RAMSAR sites	15 September 2020
Registered Battlefields	20 August 2021
Registered parks and gardens	4 January 2022
Scheduled monuments	24 February 2022
Sites of Special Scientific Interest (SSSIs)	15 March 2022
Special Areas of Conservation (SAC)	7 December 2021
Special Protection Areas (SPAs)	7 December 2021
Wader Zonal Map	18 December 2021
World Heritage Sites	20 August 2021

ANNEX D: NATIONAL SENSITIVITY MAPS FOR WOODLAND CREATION DATA INPUT FOOTNOTES

¹UKCEH Land Cover Map



UK Centre for Ecology & Hydrology's Land Cover Maps are parcel based thematic classifications of satellite image data covering the United Kingdom. They are used in a wide range of applications by government departments & agencies, county councils, charities, and environmental management bodies.

Further details of the land cover map used for the Woodland Creation Sensitivity Maps can be found via the Digital Object Identifier (doi); Morton, R,D; Marston C.G.; O'Neil.A.W.; Rowland.C.S; (2021). Land Cover Map 2020 (land parcels, GB) NERC EDS Environmental Information Data Centre.
<https://doi.org/10.5285/0e99d57e-1757-451f-ac9d-92fd1256f02a>

²Natural England peat map



Peaty soils location: see data.gov.uk for more information on this data layer and licensing. By using this data you are accepting the terms of use of a 3rd party supplier. You will be provided with the relevant Terms of Use.; BGS, Cranfield University and OS must be acknowledged in any reports or documents produced as a result of using the Peat layer.

³Provisional Agricultural Land Classification (ALC)



The Agricultural Land Classification data-set has been further refined using the 'Likelihood of Best and Most Versatile' (BMV) layer to split class 3 land into 3a and 3b. For BMV Licence information contact data.services@naturalengland.org.uk

© Natural England copyright [2019], reproduced with the permission of Natural England, www.gov.uk/natural-england © Crown Copyright and database right [year]. Ordnance Survey licence number AC0000851168. Derived from 1:50 000 scale BGS Digital Data under Licence 2006/072 British Geological Survey. © NERC. National Soils map © Cranfield University (NSRI) © Crown Copyright and database rights [year].

⁴**Acid Vulnerable Catchments**

The Acid Vulnerable Catchments layer was created by Forest Research, utilising the following datasets published by the Environment Agency: 'WFD River Water Bodies Cycle 1', 'WFD Classification Status Cycle 2' and 'WFD Catchment Management Information England - Reasons for Failure'. See data.gov.uk for more information on these datasets. The layer is available to view on the Forest Research [website](#).

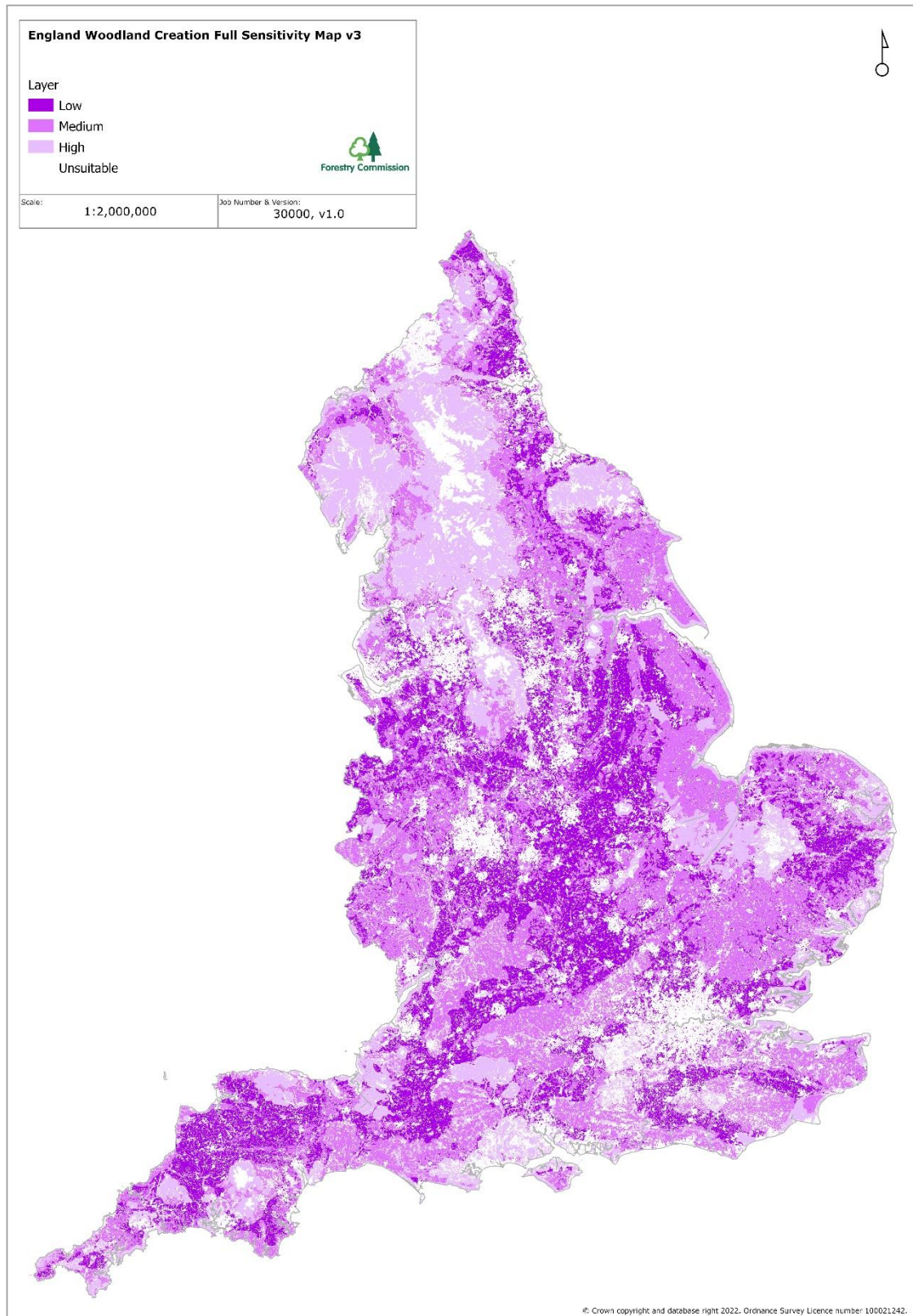
⁵**Important Bird Areas (IBA)**



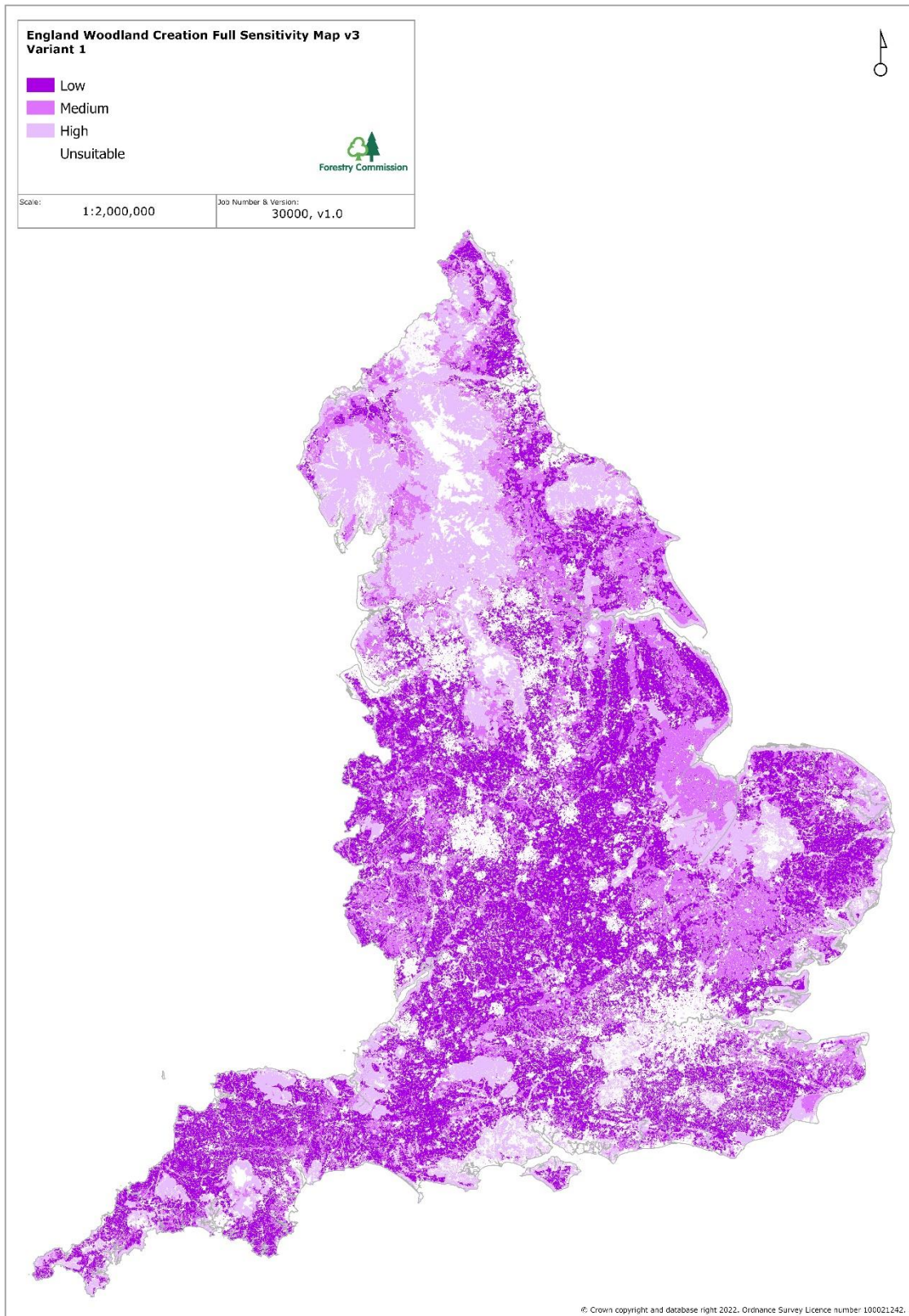
Data reproduced with the permission of RSPB. © Crown Copyright. Ordnance Survey licence number 100021787 (2022)

ANNEX E: SENSITIVITY MAPS FOR WOODLAND CREATION

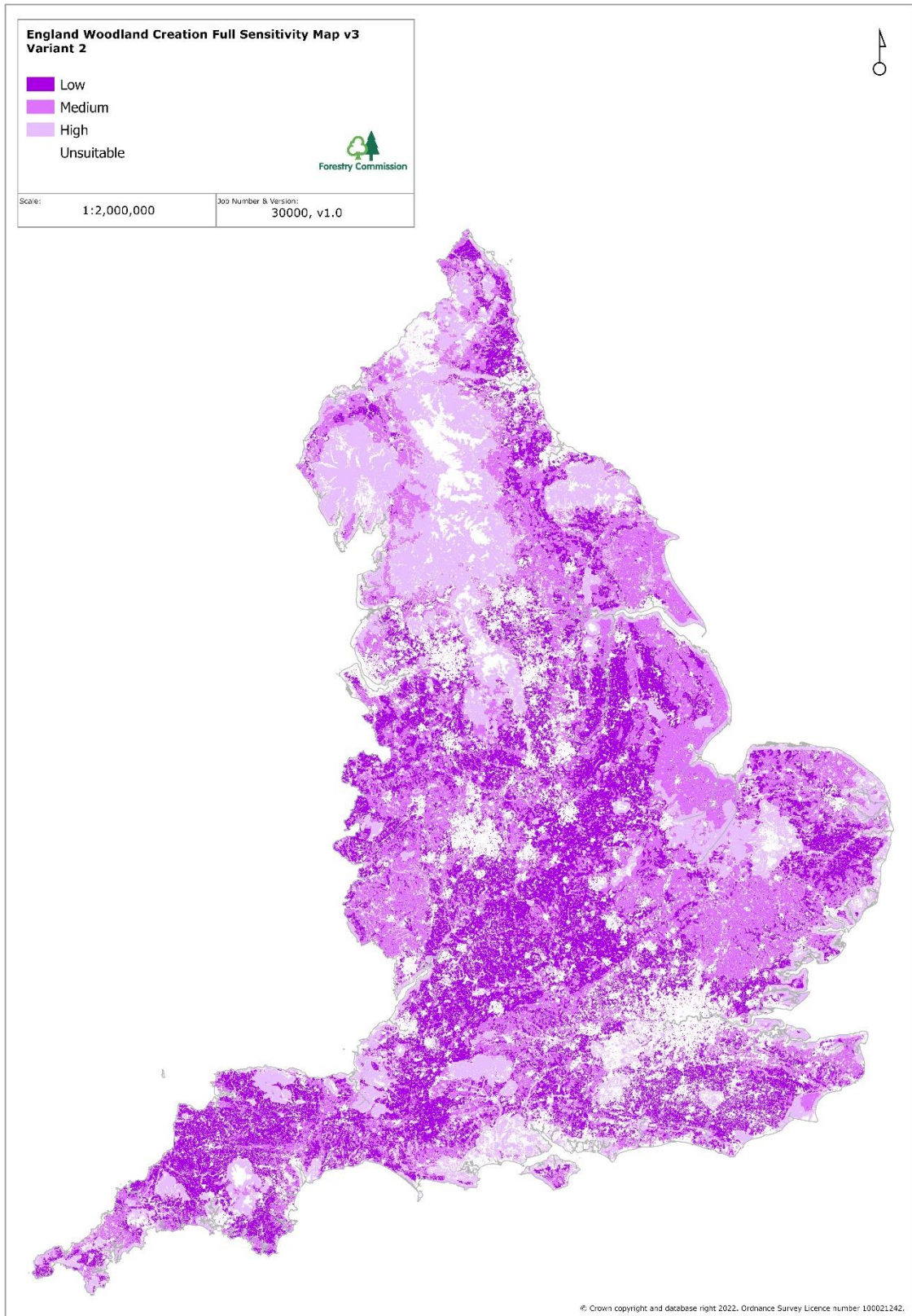
Map 1: England Woodland Creation Full Sensitivity Map version 3.0



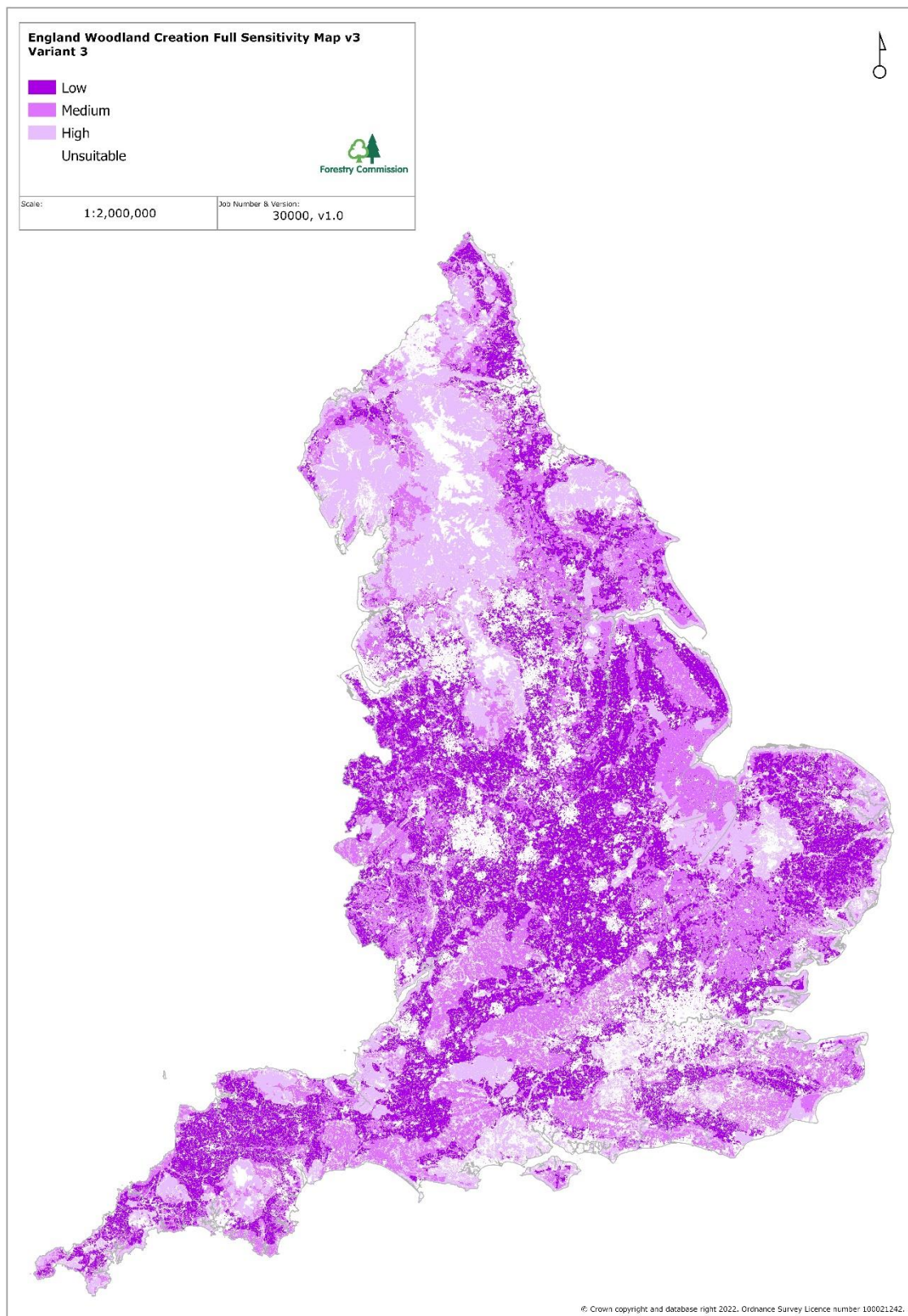
Map 2: England Woodland Creation Full Sensitivity Map version 3.0 variant 1



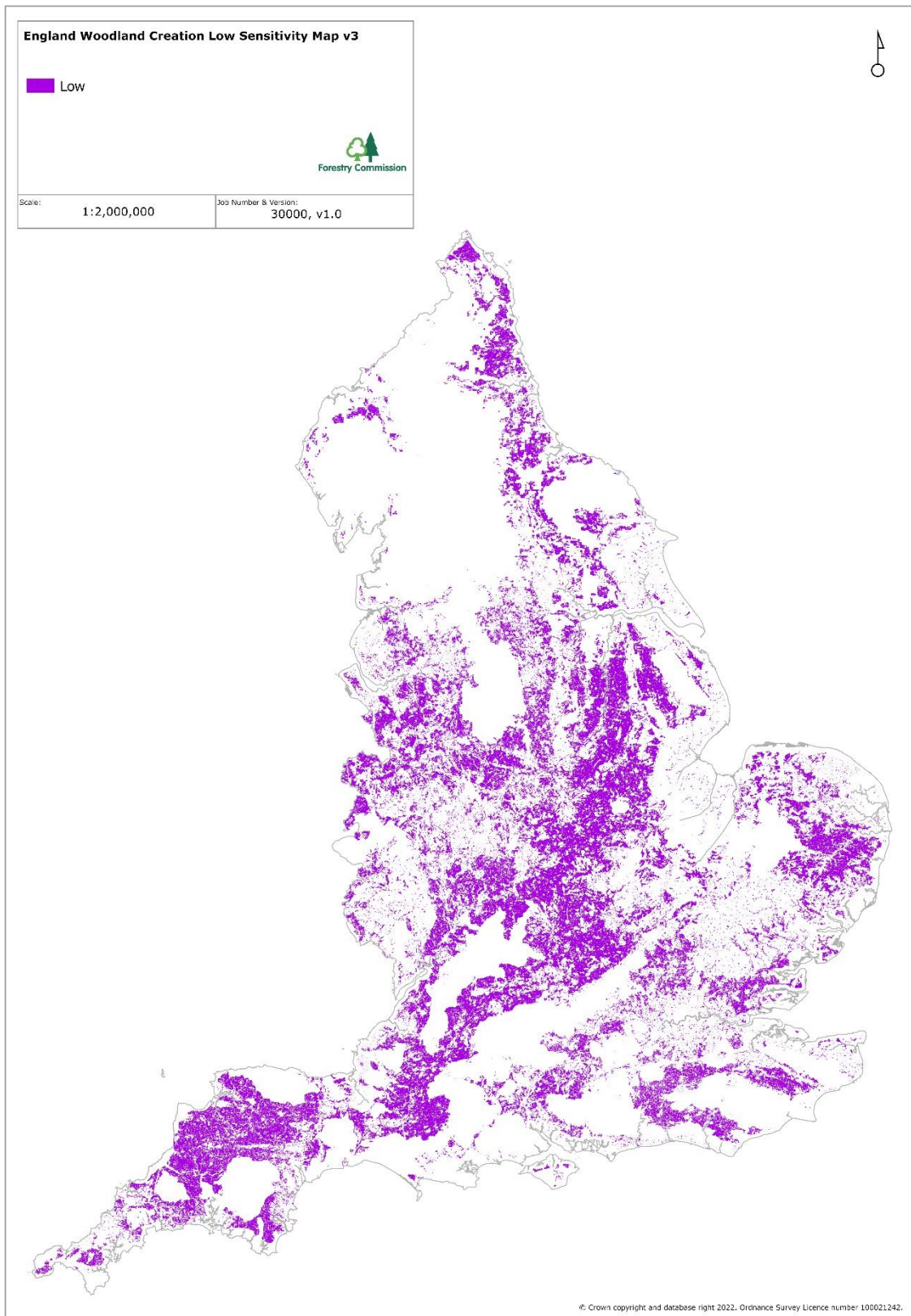
Map 3: England Woodland Creation Full Sensitivity Map version 3.0 variant 2



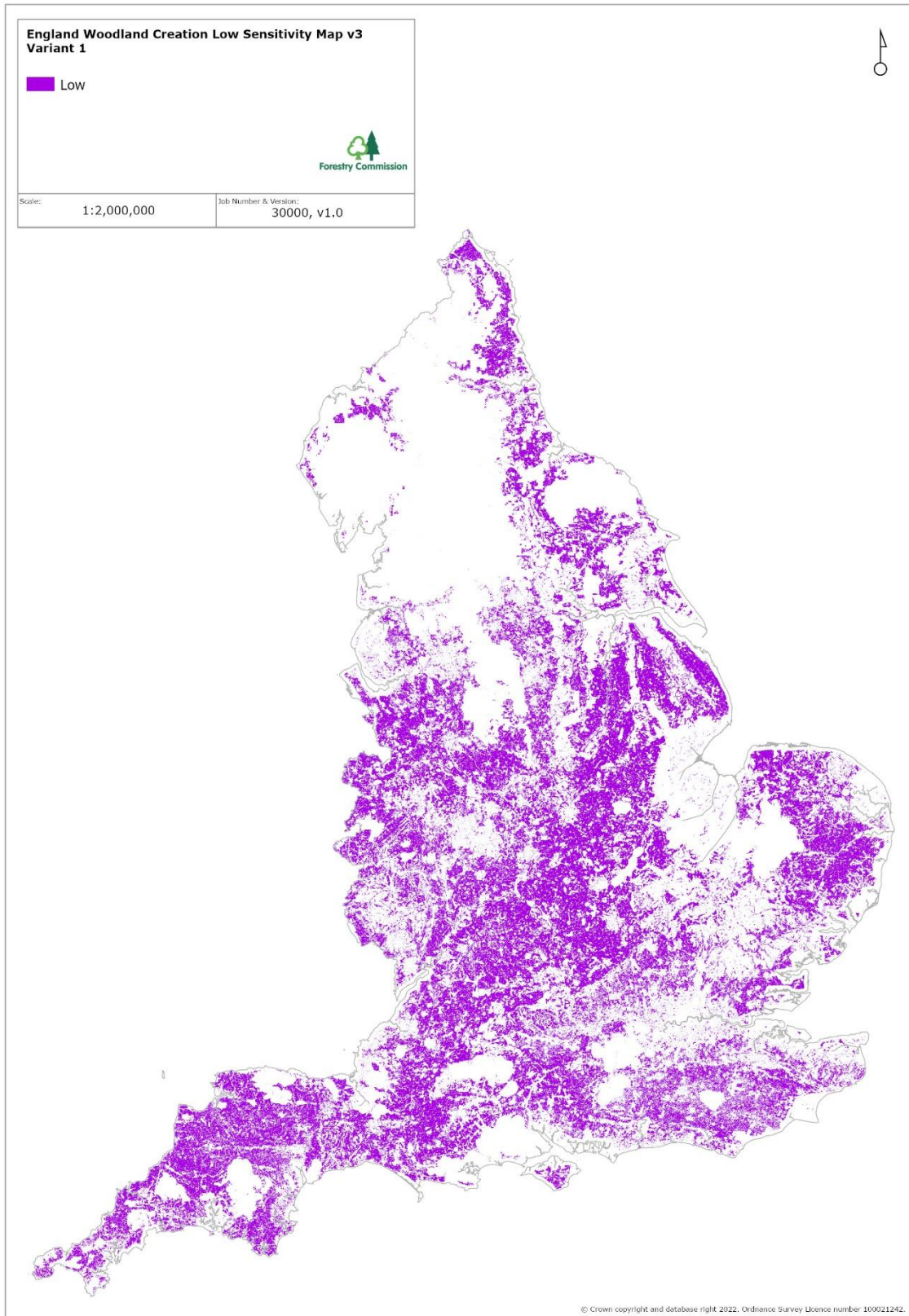
Map 4: England Woodland Creation Full Sensitivity Map version 3.0 variant 3



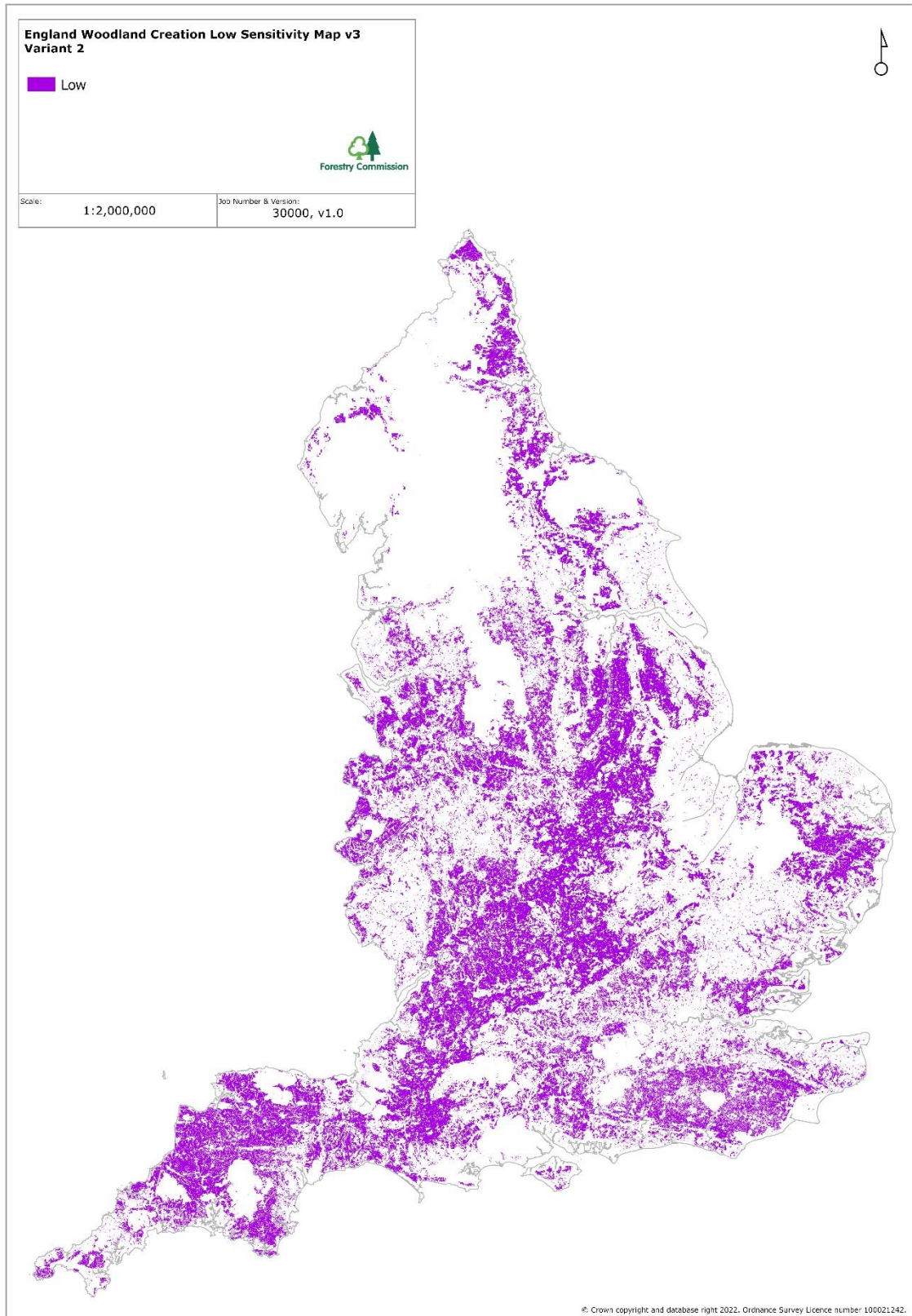
Map 5: England Woodland Creation Low Sensitivity Map version 3.0



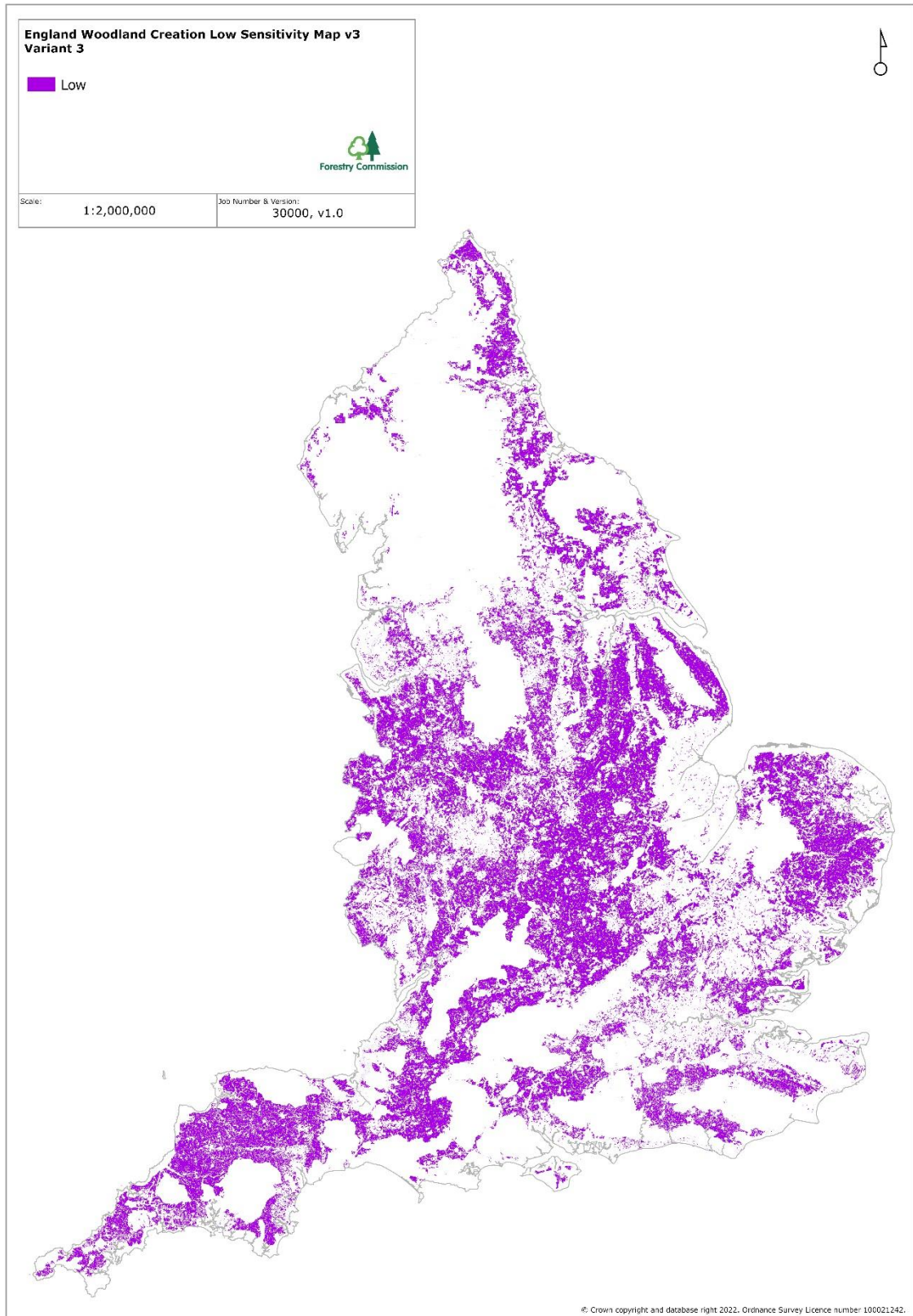
Map 6: England Woodland Creation Low Sensitivity Map version 3.0 variant 1



Map 7: England Woodland Creation Low Sensitivity Map version 3.0 variant 2



Map 8: England Woodland Creation Low Sensitivity Map version 3.0 variant 3



Further information

The spatial data can be downloaded from the [Forestry Commission Open Data website](#).

For further information on any of the Woodland Creation Sensitivity Map v3.0 spatial data layers please contact:

evidence@forestrycommission.gov.uk

Economics, Evidence and Analysis
Forestry Commission

August 2023