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Developing Indicators and Thresholds for Monitoring the Landscape Impacts of Environmental Stewardship at the National Character Area Scale

Report of Findings

Final Report

Prepared by LUC in association with Julie Martin Associates

November 2013

This project is supported by the Rural Development Programme for England, for which Defra is the Managing Authority, part financed by the European Agricultural Fund for Rural Development: Europe investing in rural areas

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September 2013

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Contents

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EXECUTIVE SUMMARY

Purpose

The purpose of this study has been to develop a bespoke database that allows the consistent and repeatable monitoring of the landscape effects of Environmental Stewardship and other agri-environment schemes, at the National Character Area (NCA) scale. This has been informed by developmental work undertaken under the Defra Research Project BD5303.

Method

The database and the results are organised under seven landscape themes:

- Woodlands and tree cover (including traditional orchards)
- Field patterns and boundary types
- Agricultural land use (concerned primarily with the conservation of permanent pasture)
- Traditional farm buildings
- Historic environment (including parkland)
- Semi-natural habitats
- Coast

In turn, within each theme, the assessment of landscape effects has been undertaken against a series of landscape objectives relevant to that theme that respond to the key characteristics of the landscape. Each objective is linked to the relevant ES options that are most likely to benefit the landscape. Assessment results are judged against a series of landscape thresholds (one for each objective) assessed as the percentage of ES uptake (of relevant options) against the stock of the landscape feature(s) that the ES options are affecting. The number and importance of the objectives that have a positive result provide the assessment for the individual themes while the sum of the results across all themes provides the overall landscape assessment for that NCA.

Outputs

The outputs of this study are:

- The database itself that can be re-run using different parameters to test different scenarios
- The outputs from the database for each NCA
- A summary of the outputs for each NCA.
- A report providing a detailed description of the method and database
- A Users' Guide of the database.
- A Report of Findings (which includes this Executive Summary)

Findings

Overall effects: The outputs from the database (which are based on ES uptake levels in February 2013) indicate that ES uptake is having:

- A **Strongly Positive** effect on the landscape of **21 NCAs (13%)**
- A **Positive** effect on the landscape of **102 NCAs (64%)**
- A **Neutral** effect on the landscape of **36 NCAs (23%)**

In all cases this is a result of the combined effects of ELS and HLS. ELS is particularly favouring the conservation of field trees, boundary features, permanent pasture, and aspects of archaeology, while HLS supports the conservation of woodland and orchards, wet and rough grasslands, archaeological features and the conservation of habitats. Together, under different combinations, these are very important in conserving landscape character.

NCAs benefiting from a **strongly positive** effect of ES on the landscape are concentrated in the north of England, primarily the upland areas but also including the lowlands of 1 Northumberland Coastal Plain, 7 West Cumbria Coastal Plain, and 9 Eden Valley. They are also found along the Welsh Borders including both uplands and lowlands (such as 106 Severn and Avon Vales); and also in isolated NCAs in the south east and south west. NCAs where ES is having a **positive** effect on the landscape are scattered across the

whole of England. Conversely those where ES is having a **neutral** effect on the landscape are concentrated along the north east coast, in central and north west England (south of Cumbria); and in lowland areas to the north and west of London.

Protected landscapes: NCAs where ES is assessed as having a **strongly positive** effect on the landscape show a strong coincidence with the protected landscapes, especially the upland National Parks. In addition, other NCAs falling within or partially within the protected landscapes generally have higher 'results' within the positive range but there are clear exceptions. In total six out of 10 (60%) of the **National Parks** are assessed as ES having a **strongly positive** effect on the landscape. These National Parks are: Exmoor, the Lake District, Northumberland, South Downs, Yorkshire Moors and Yorkshire Dales.

Eight Areas of Outstanding Natural Beauty (AONBs) out of 34 (24%) are assessed as ES having a **strongly positive** effect on the landscape. These are: Forest of Bowland, Nidderdale, North Pennines, Northumberland Coast, Shropshire Hills, Solway Basin, South Devon, and Tamar Valley. In addition, a further 11 have an assessment result of '4' which is at the top end of a positive assessment – these are: Arnside and Silverdale; Cornwall; Cranborne Chase (but not the West Wiltshire Downs); Dorset; Isle of Wight; Kent Downs; Lincolnshire Wolds; Mendips; North Devon;Solway Coast; and the Surrey Hills. Thus out of 34 AONBs, 53% indicate ES is having a significantly positive effect on the landscape.

For the National Parks and AONBs where ES is having a lesser effect this is primarily because, while having a very positive landscape effect under some themes, it is having little effect under other themes that are also important in defining the character of the landscape.

Agricultural Landscape Types (ALTs): These provide a useful way of summarising the assessment results by types of landscape, with all NCAs ascribed to one of the six ALTs. The results from the database demonstrate that ES is having by far the most **strongly positive** effect on the NCAs of the **Uplands ALT**. Here ES is assessed as having a strongly positive effect overall on the landscapes of 50% of the NCAs.

NCAs in **the Upland Fringe ALT** tell a story in two parts. This ALT has the second highest percentage of NCAs where ES is having a **strongly positive** effect on the landscape overall but in 27% of Upland Fringe NCAs ES is having a **neutral** effect on the landscape – primarily on the fringes of northern conurbations and/or in the heartland of past coal mining areas.

NCAs of the **Western Mixed ALT** show a similar pattern, although in this ALT ES is having a **positive** (as opposed to a strongly positive) effect on 60% of the NCAs and a **neutral** effect on 28% of the NCAs. This again includes a significant number of NCAs with a strong urban or mining influence and some intensively farmed landscapes, such as the Upper Thames Clay Vales.

The NCAs of the **South East Mixed (Wooded) ALT** have similarities with those of the Western Mixed, with ES assessed as having a **positive** effect on 60% of the NCAs and a **neutral** effect on the remaining 40%. All those NCAs assessed as neutral are under strong urban and urban fringe pressures, meaning that significant areas of land have now passed out of agricultural use. It is surprising though that ES is not assessed as having a strongly positive effect on any of these NCAs, despite the majority having strong medieval origins, characterised by a well-wooded small-scale landscape which might be expected to attract greater ES uptake.

The **Eastern Arable** and **Chalk and Limestone ALTs** are generally large-scale landscapes under intensive, predominantly arable, agriculture. It is therefore surprising, that compared to the other ALTs, other than the Uplands, they have fewer NCAs assessed as **neutral** (19% and 10% respectively). This may reflect the dominance of large estates and agri-businesses where ES might be pro-actively planned as a clear income stream. Also the stock of remaining features is proportionally smaller than in the other ALTs making thresholds easier to achieve.

1 Introduction

1.1 The aim of this study as set out in the brief has been to:

" provide a comprehensive set of indicators and threshold values of landscape impact [of Environmental Stewardship] at the National Character Area (NCA) scale. This is intended to help better monitor the landscape impact of Environmental Stewardship and to facilitate improved future agri-environment delivery that will secure good and enhanced landscape benefits through the targeting of appropriate land management options to particular places and in the quantity needed to have a significant landscape impact".

1.2 This study builds directly on the work that LUC and Julie Martin Associates undertook as part of the BD5303 contract. BD5303 was a three–year study undertaken on behalf of Defra and Natural England that 'Developed a Method for Reporting & Monitoring the Direct and Cumulative Impacts of Environmental Stewardship on the Maintenance and Enhancement of Landscape Character and Quality'.

1.3 As the approach to the identification of Indicators and Thresholds had been developed in BD5303, as part of this study, the team has considered how the approach could be refined further through the development of a separate bespoke database. This database has been developed in order to support a consistent approach for identifying and capturing values across all NCAs.

1.4 This study has been conducted in two phases:

- **Phase 1:** February – end March 2013 involved designing and developing the bespoke database and, using this database, assessed the landscape effects of ES against the identified indicators and thresholds in 50 NCAs that had been selected by Natural England
- **Phase 2:** April – September 2013 involved:
  - Refining the database further (primarily the use of base data but also alteration of one or two thresholds) based on the experience of Phase 1
  - Assessing the remaining 109 NCAs using the revised database. This included re-assessing the 18 NCAs that had originally been assessed in BD5303 but without the benefit of the database.
  - Checking the results of the assessment across all 159 NCAs to ensure consistency of approach and cross comparability, updating the first 50 where thresholds had changed, and ensuring that all updates in the approach were carried back into the assessments of the first 50 NCAs.

1.5 The first 50 NCAs prioritised those that encompass protected landscapes (AONBs, National Parks and Heritage Coasts), not covered in the initial 18 NCAs of BD5303, as well as those where Nature Improvement Area (NIA) projects have commenced.

1.6 Overall, the approach and database have been developed to ensure that the process is transparent, repeatable and future-proofed so that Natural England can implement and adapt this information source if required in the future.

1.7 The method followed is set out in the separate report 'Description of the Method and Database'.

1.8 The database and the results are organised under seven landscape themes:

- Woodlands and tree cover (including traditional orchards)

- Field patterns and boundary types
- Agricultural land use (primarily area-wide options for permanent pastures and over-wintering stubbles)
- Traditional farm buildings
- Historic environment (including parkland)
- Semi-natural habitats
- Coast

1.9 In turn, within each theme, the assessment of landscape effects has been undertaken against a series of landscape objectives relevant to that theme. Each objective is linked to the relevant ES options that are most likely to benefit the landscape. Assessment results are judged against a series of landscape thresholds (one for each objective) assessed as the percentage of ES uptake (of relevant options) against the stock of the landscape feature(s) that the ES options are affecting.

This Report

1.10 This report summarises the overall findings of this study, partly through the use of annotated maps and tables.

Part A: Overview

1.11 This looks at:

- the overall assessment results across all NCAs
- the overall assessment results for the NCAs within the protected landscapes (both National Parks and AONBs)
- the overall assessment results by Agricultural Landscape Type (ALT)
- the overall results for each of the seven landscape themes by ALT.

(All NCAs are assigned to one Agricultural Landscape Type. These six types are:

- Chalk & Limestone Mixed
- Eastern Arable
- South East Mixed (Wooded)
- Western Mixed
- Upland Fringe
- Uplands)

Part B: More detailed look at individual themes

1.12 **For those who want more detail, the results of the assessment are provided by landscape theme. In each case the information is provided through a series of maps with a text box inset into the map which summarises:**

(a) key findings/patterns in uptake observed
(b) any caveats on the results e.g. if we know that there are issues with uptake or base data or any other potential limitation that needs to be taken into account.

1.13 The maps and their associated commentaries for each theme are:

- Overall map of ES results for that theme
- Maps for each key objective per theme (these do not cover all objectives but those that were more frequently selected i.e. those reflecting the more common key landscape characteristics of the NCAs).

2 PART A: OVERVIEW

Overall assessment results across all NCAs

2.1 The overall assessment results across all ALTs are shown in **Figure 2.1.**

2.2 This demonstrates that ES uptake is having:

- A **Strongly Positive** effect on the landscape of **22 NCAs**
- A **Positive** effect on the landscape of **101 NCAs**
- A **Neutral** effect on the landscape of **36 NCAs**

2.3 Those NCAs benefiting from a **strongly positive** effect of ES on the landscape are concentrated in the north of England, primarily the upland areas but also including the lowlands of 1 Northumberland Coastal Plain, 6 Solway Coast, 7 West Cumbria Coastal Plain, and 9 Eden Valley. They are also found along the Welsh Borders including both uplands and lowlands (such as 106 Severn and Avon Vales); and also in isolated NCAs in the south east and south west.

2.4 NCAs where ES is having a **positive** effect on the landscape are scattered across the whole of England. Conversely those where ES is having a **neutral** effect on the landscape are concentrated on the north east coast, in central and north west England (south of Cumbria); and in lowland areas to the north and west of London.

Overall assessment results for the protected landscapes

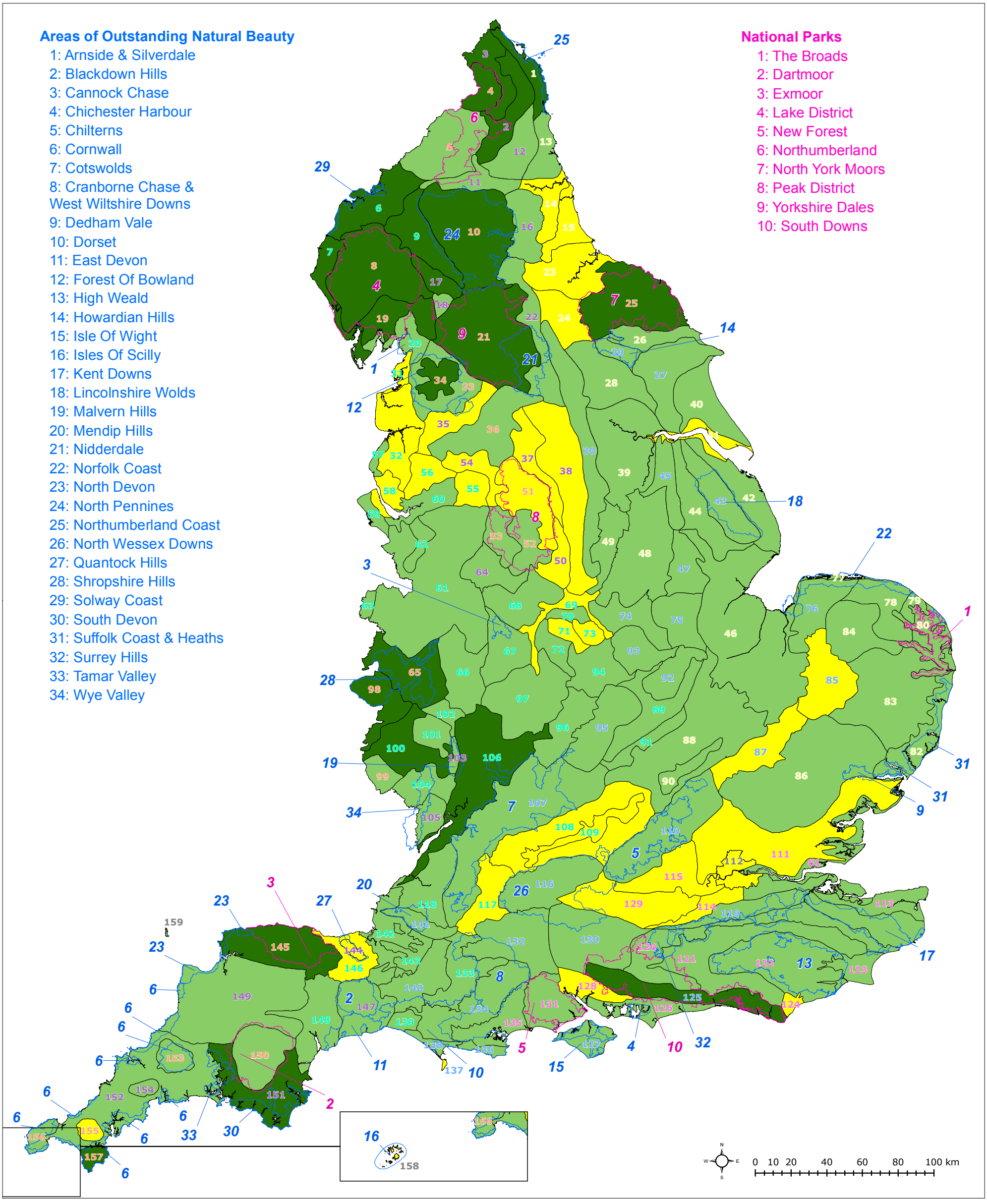
2.5 **Figure 2.1** also shows the boundaries of the protected landscapes relative to the NCA boundaries. NCAs where ES is having a **strongly positive** effect on the landscape show a strong coincidence with the protected landscapes, especially the upland National Parks. In addition, other NCAs falling within or partially within the protected landscapes generally have higher 'results' within the Positive range but there are clear exceptions. This is illustrated in **Table 2.1** below. The colour coding used in this Table reflects the 'assessment result' for the NCA or NCAs that cover over 50% of the protected landscape area. The figure in brackets is the assessment result for each NCA.

Areas of Outstanding Natural Beauty

1: Arnside & Silverdale
2: Blackdown Hills
3: Cannock Chase
4: Chichester Harbour
5: Chilterns
6: Cornwall
7: Cotswolds
8: Cranborne Chase & West Wiltshire Downs
9: Dedham Vale
10: Dorset
11: East Devon
12: Forest Of Bowland
13: High Weald
14: Howardian Hills
15: Isle Of Wight
16: Isles Of Scilly
17: Kent Downs
18: Lincolnshire Wolds
19: Malvern Hills
20: Mendip Hills
21: Nidderdale
22: Norfolk Coast
23: North Devon
24: North Pennines
25: Northumberland Coast
26: North Wessex Downs
27: Quantock Hills
28: Shropshire Hills
29: Solway Coast
30: South Devon
31: Suffolk Coast & Heaths
32: Surrey Hills
33: Tamar Valley
34: Wye Valley

National Parks

1: The Broads
2: Dartmoor
3: Exmoor
4: Lake District
5: New Forest
6: Northumberland
7: North York Moors
8: Peak District
9: Yorkshire Dales
10: South Downs



LUC LDN 5693-01_013_NCA_overall_effect_labels 03/12/2013

National Parks

Areas of Outstanding Natural Beauty

Overall effect

Strongly positive
Positive
Neutral

Colours of the NCA ID labels:

ALT 1: Chalk and Limestone Mixed
ALT 2: Eastern Arable
ALT 3: SE Mixed (Wooded)
ALT 4: Western mixed
ALT 5: Upland Fringe
ALT 6: Upland
ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 2.1

Overall landscape effects of ES at NCA level

Map Scale @ A3: 1:2,100,000

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Source: Natural England and LUC

Table 2.1: Assessment results for the Protected Landscapes

Protected landscape	Assessment result for relevant NCAs
National Parks	
Broads	80 The Broads (2.5)
Dartmoor	150 Dartmoor (3.5)
Exmoor	145 Exmoor (5.5)
Lake District	8 Cumbria High Fells (5);19 South Cumbria Low Fells (4.5)
New Forest	131 New Forest (3.5)
Northumberland	2 Northumberland Sandstone Hills (5); 4 Cheviots (4.5); 5 Border Moors and Forests (4)
Peak District	51 Dark Peak (1.5); 52 White Peak (4); 53 South West Peak (3)
South Downs	120 Wealden Greensand (3); 121 Low Weald (3); 125 South Downs (4.5); 130 Hampshire Downs (3.5)
Yorkshire Dales	21 Yorkshire Dales (6)
Yorkshire Moors	25 North Yorkshire Moors (4.5)
AONBs	
Arnside and Silverdale	20 Morecambe Bay Limestones
	(4)
Blackdown Hills	147 Blackdowns (3);
Cannock Chase	67 Cannock Chase and Cank Wood (2)
Chichester Harbour	126 South Coast Plain (2)
Chilterns	110 Chilterns (2.5)
Cornwall	152 Cornish Killas (4); 153 Bodmin Moor (3); 156 West Penwith (2.5) & 157 The Lizard (4.5).
Cotswolds	107 Cotswolds (3.5)
Cranborne Chase & West Wilts. Downs	132 Salisbury Plain and West Wiltshire Downs (2); 133 Blackmoor Vale and the Vale of Wardour (3); 134 Dorset Downs and Cranborne Chase (4)
Dedham Vale	86 South Suffolk and North Essex Clayland (3)
Dorset	134 Dorset Downs and Cranborne Chase (4); 136 South Purbeck (3); 138 Weymouth Lowlands (2.5); 139 Marshwood and Powerstock Vales (2.5).
East Devon	147 Blackdowns (3); 148 Devon Redlands (3.5)
Forest of Bowland	33;Bowland Fringe (4) 34 Bowland Fells (5.5)

High Weald	122 High Weald (2.5)
Howardian Hills	29 Howardian Hills (2.5)
Isle of Wight	127 Isle of Wight (4)
Isles of Scilly	No score in table
Kent Downs	119 North Downs (4)
Lincolnshire Wolds	43 Lincolnshire Wolds (4)
Malvern Hills	103 Malvern Hills (2.5)
Mendips	141 Mendip Hills (4)
Nidderdale	21 Yorkshire Dales (6); 22 Pennine Dales Fringe (3.5)
Norfolk Coast	77 North Norfolk Coast (2.5); 78 Central North Norfolk (3.5)
North Devon	145 Exmoor (5.5); 149 The Culm (4)
North Pennines	10 North Pennines (6)
Northumberland Coast	1 North Northumberland Coastal Plain (5)
North Wessex Downs	116 Berkshire and Marlborough Downs (3); 130 Hampshire Downs (3.5), 129 Thames Basin Heaths (on certain aspects of the landscape1.5)
Quantock Hills	144 Quantock Hills (1.5)
Shropshire Hills	65 Shropshire Hills (6); 98 Clun and North West Herefordshire Hills (4.5)
Solway Coast	6 Solway Basin (5)
South Devon	151 South Devon (5)
Suffolk Coast and Heaths	82 Suffolk Coast and Heaths (3)
Surrey Hills	119 North Downs (4); 120 Wealden Greensand (3)
Tamar Valley	151 South Devon (5)
Wye Valley	104 South Herefordshire and Over Severn (2); 105 Forest of Dean and Lower Wye (2)

1 = Strongly positive landscape effect

0.5 = Positive landscape effect

0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive

Results for the National Parks

2.6 Those National Parks where ES is having a strongly positive effect on the landscape overall are those where ES uptake is having a strongly positive effect across a range of landscape themes, ensuring a widespread impact on the landscape. Those that do not have a strongly positive result overall show a very strong concentration on certain aspects of the

landscape while other aspects receive less attention resulting in a less universal effect, as follows:

- **The Broads** show very high uptake of ES options for the over-riding characteristics of the NCA, namely, for wet grasslands, ditches and dykes and the conservation management of large water bodies. But ES is having more limited impact on farm woodlands and trees, the management of the wider agricultural landscape, the conservation of traditional farm buildings and of the wider historic environment. It is also noticeable that there is relatively low uptake (relative to stock) for characteristic lowland meadows and wetland habitats (fen and reed beds).
- **Dartmoor**, while showing that ES uptake is having a strongly positive effect on semi-natural habitats (primarily open moorland) and agricultural land use (primarily the conservation management of permanent pasture), it is having a neutral effect on the conservation of traditional farm buildings and a positive rather than a strongly positive effect on woodlands and trees, boundary features and the historic environment)**.**
- **The New Forest** likewise shows that ES uptake is having a strongly positive effect on its highly characteristic lowland heathland and coastal habitats and also its historic environment but this is matched by a neutral effect on farmland woodlands and trees, boundaries and traditional farm buildings,
- The **Peak District** is particularly influenced by the low levels of uptake in the Dark Peak, with neutral results for woodlands and trees, traditional buildings and, most noticeably, for semi-natural habitats (particularly moorland and species-rich grasslands), this may reflect, as yet, limited conversion from ESA agreements.

Results for the Areas of Outstanding Natural Beauty (AONBs)

2.7 Eight of the AONBs are indicating that ES is having a strongly positive effect on their landscape overall, with strongly positive effects across a number of themes. These are: Forest of Bowland, Nidderdale, North Pennines, Northumberland Coast, Shropshire Hills, Solway Basin, South Devon, and Tamar Valley. In addition, a further 10 have an assessment result of '4' which is at the top end of a positive assessment – these are: Arnside and Silverdale; Cornwall; Cranborne Chase (but not the West Wiltshire Downs); Dorset; Isle of Wight; Kent Downs; Lincolnshire Wolds; Mendips; North Devon; and the Surrey Hills. Thus out of 34 AONBs, 53% indicate ES is having a significant positive effect on the landscape.

2.8 For those AONBs where the landscape effects of ES are less marked, the reasons may be as follows:

2.9 In five cases, the AONBs are small and form a small part of a much larger NCA(s). This is the case for Cannock Chase (which notably shows very high levels of uptake for the characteristic heathland of the AONB); Chichester Harbour; Dedham Vale; Norfolk Coast; and Wye Valley.

2.10 In six cases the AONBs show a significant ES focus on some themes matched by a neutral effect on others, as in: the **Cotswolds** (strongly positive for woodlands and trees, boundaries, and semi-natural habitats but neutral for traditional agricultural buildings and agricultural land use); the **Chilterns** (strongly positive for semi-natural habitats but neutral for woodland and trees and the historic environment); **East Devon** (where the Devon Redlands NCA is strongly positive for semi-natural habitat and boundary features but neutral for agricultural land use and traditional farm buildings); **High Weald** (strongly positive for semi-natural habitats but neutral for boundaries and traditional farm buildings); the **Howardian Hills** (strongly positive for boundaries but neutral for woodland and trees and semi-natural habitats; and **Suffolk Coast and Heaths** (strongly positive for semi-natural habitats, primarily the highly characteristic lowland heathland, and

boundaries but neutral for woodland and trees, traditional buildings and coastal habitats).

2.11 In three cases the relevant NCAs have a good spread of ES uptake but only one theme at most 'scores' strongly positive (usually semi-natural habitats). This is the case for the **Blackdown Hills; Malvern Hills;** and **North Wessex Downs**.

2.12 Finally the **Quantock Hills** are the only AONB where the relevant NCA (which closely matches the AONB boundary) has ES uptake assessed as having a **neutral** effect on the landscape overall, potentially because ES options do not fit well with the special characteristics of this landscape, most notably outgrown beech hedges.

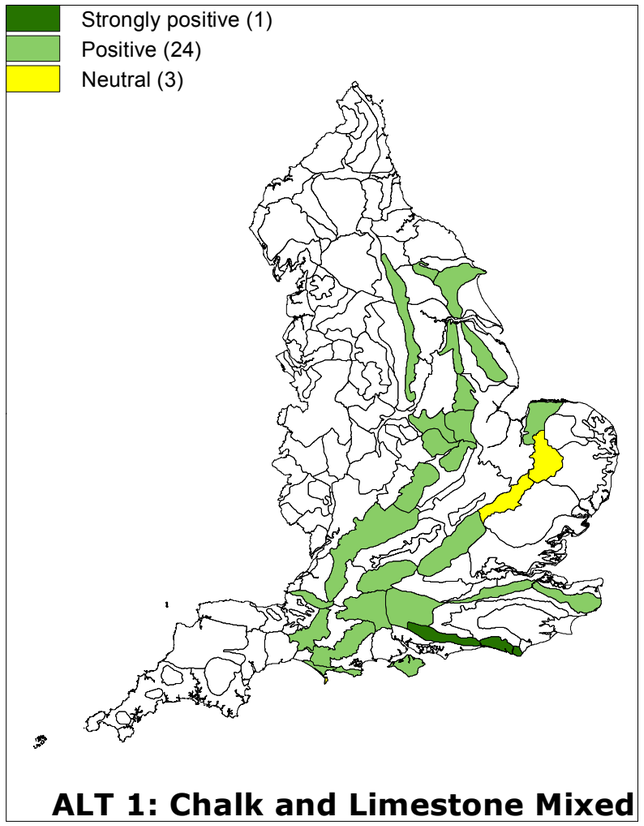
2.13 Taken together, these AONBs frequently share patterns of ES uptake equally found in other NCAs in the same ALT.

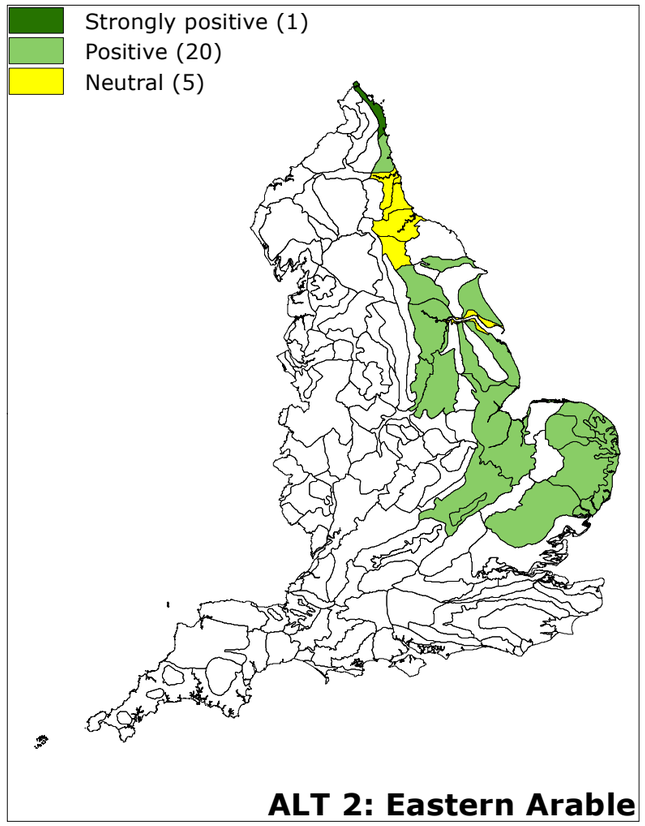
Overall assessment results for the NCAs in the six ALTs

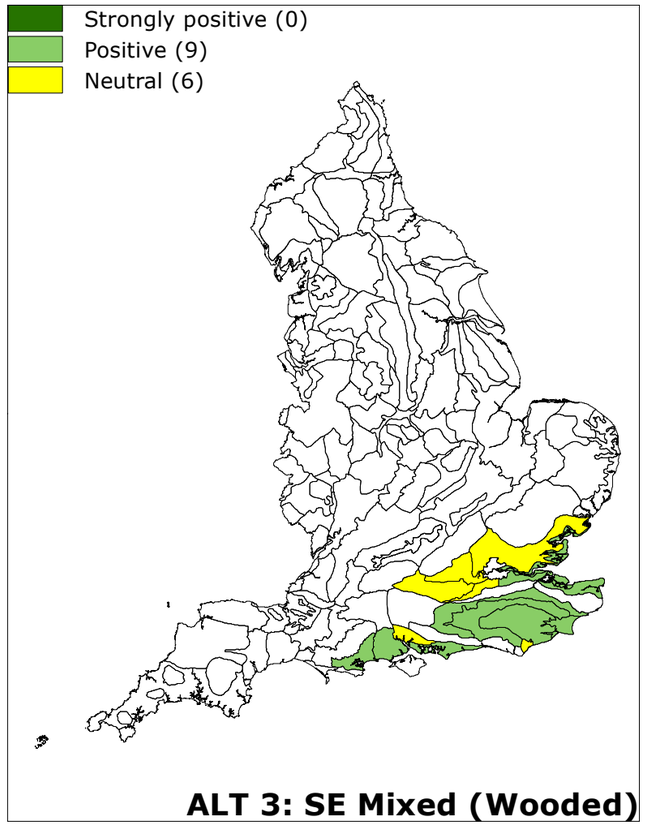
2.14 **Table 2.2** shows the overall landscape effects of ES by NCA within the six Agricultural Landscape Types (ALTs). **Figure 2.2** shows the location of these effects:

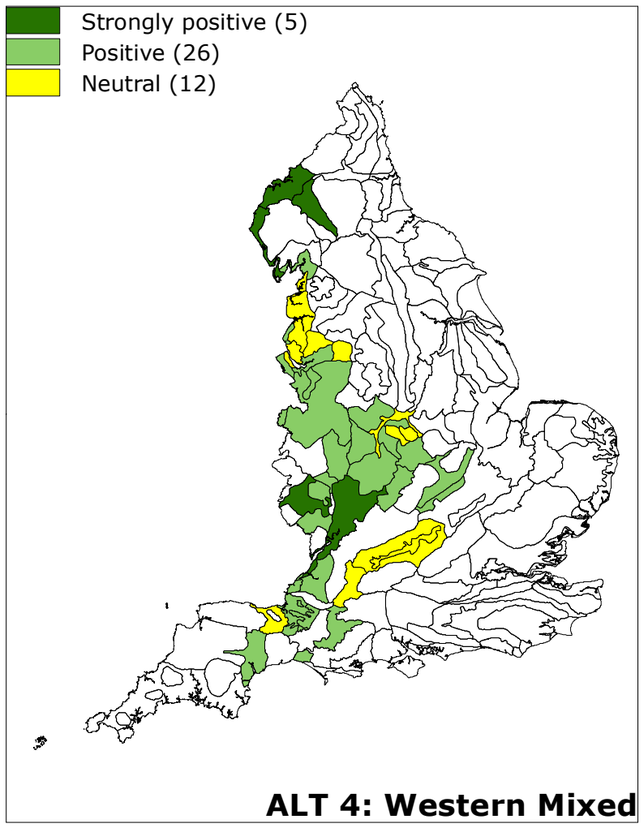
Table 2.2: Number of NCAs within each ALT where ES is having the same landscape effect

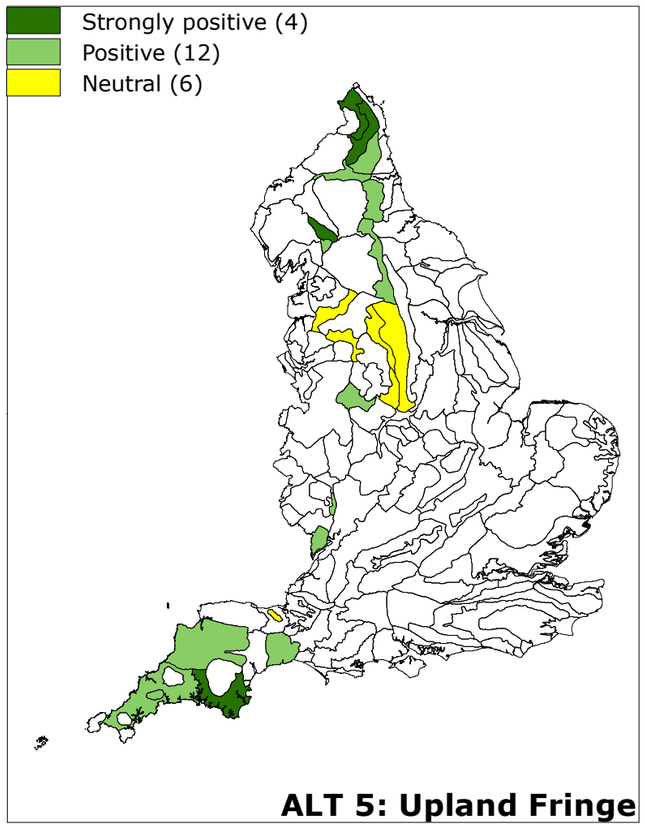
ALT	Assessment result	No of NCAs	% of NCAs
Chalk and Limestone Mixed	Strongly positive	1	4%
	Positive	24	86%
	Neutral	3	10%
	Total NCAs	**28**	100%
Eastern Arable	Strongly positive	1	4%
	Positive	20	77%
	Neutral	5	19%
	Total	**26**	100%
South East Mixed (Wooded)	Strongly positive	0	-
	Positive	9	60%
	Neutral	6	40%
	Total	**15**	100%
Western Mixed	Strongly positive	5	12%
	Positive	26	60%
	Neutral	12	28%
	Total	**43**	100%
Upland Fringe	Strongly positive	4	18%
	Positive	12	55%
	Neutral	6	27%
	Total	**22**	100%
Uplands	Strongly positive	11	50%
	Positive	9	41%
	Neutral	2	9%
	Total	**22**	100%

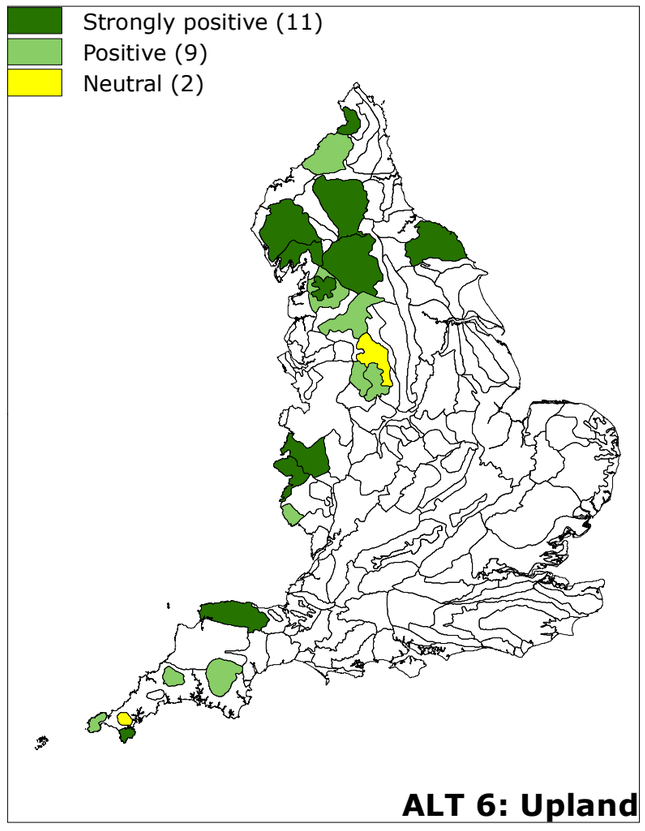










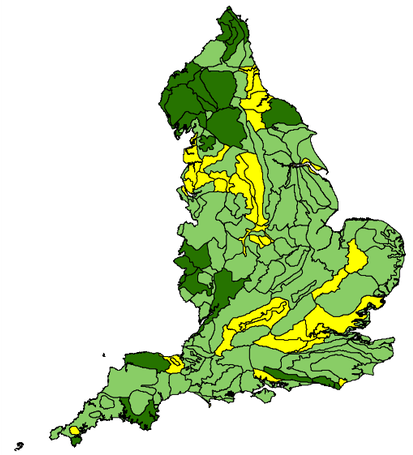


NCA Indicators and Thresholds

Figure 2.2

Overall landscape effect of ES by ALT

Overview of all ALTs



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LUC LDN 5693-01_064_ALT_Overall 03/12/2013

Source:

2.15 **Table 2 2** demonstrates that ES is having by far the most **strongly positive** effect on the NCAs of the **Uplands ALT**. Here ES is assessed as having a strongly positive effect overall on the landscapes of 50% of the NCAs.

2.16 NCAs in **the Upland Fringe ALT** tell a story in two parts. This ALT has the second highest percentage of NCAs where ES is having a **strongly positive** effect on the landscape overall, reflecting a pattern seen in the Uplands but in 27% of Upland Fringe NCAs ES is having a **neutral** effect on the landscape. This reflects that a considerable number of these NCAs lie on the fringes of the northern conurbations and/ or are the heartland of past coal mining and other extractive and heavy industries, such as in The Manchester Pennine Fringe, the Durham Coalfield and the Potteries.

2.17 NCAs of the **Western Mixed ALT** show a similar pattern, although in this ALT ES is having a **positive** (as opposed to a strongly positive) effect on 60% of the NCAs and a **neutral** effect on 28% of the NCAs. This again includes a significant number of NCAs with a strong urban or mining influence, as in the Manchester and Merseyside Conurbations, Morecambe Coast and Lune Estuary, Lancashire Coal Measures; Trent Valley Washlands, and the Leicestershire and South Derbyshire Coalfield, These NCAs with a **neutral** assessment result also include intensively farmed landscapes, such as the Upper Thames Clay Vales and the Avon Vales.

2.18 The NCAs of the **South East Mixed (Wooded) ALT** have similarities with those of the Western Mixed ALT, with ES assessed as having a **positive** effect on 60% of the NCAs and a **neutral** effect on the remaining 40%. All those NCAs assessed as neutral are under strong urban and urban fringe pressures, meaning that significant areas of land have now passed out of agricultural use, reducing the area of ES uptake, as in the Northern Thames Basin, Thames Basin Lowlands and Thames Valley. It is surprising though that ES is not assessed as having a strongly positive effect on any of these NCAs, despite the majority having strong medieval origins with limited impact from parliamentary enclosure, characterised by a well-wooded small-scale landscape.

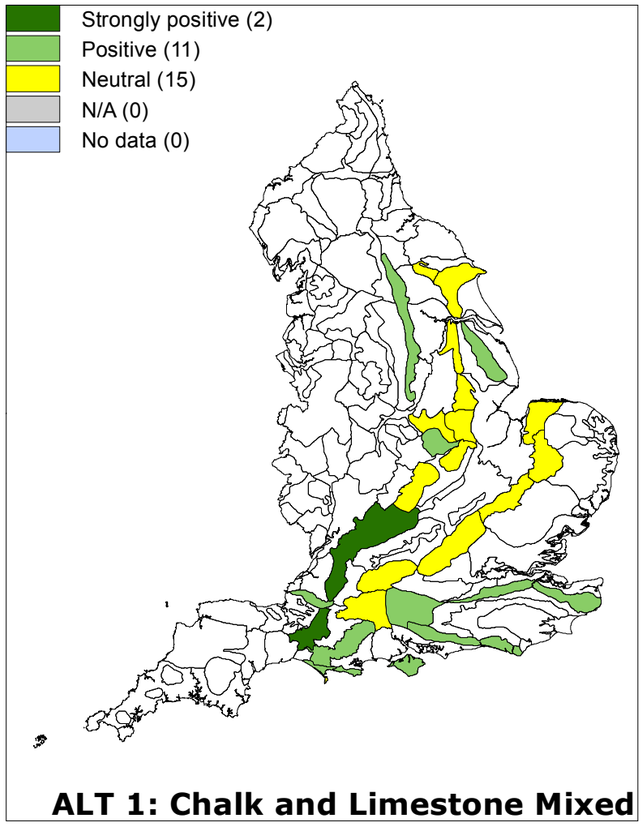
2.19 Both the **Eastern Arable** and **Chalk and Limestone ALTs** are generally large-scale landscapes under intensive, predominantly arable, agriculture. It is therefore surprising, that compared to the other ALTs, other than the Uplands, they have fewer NCAs assessed as **neutral** (19% and 10% respectively). This may reflect the dominance of large estates and agri-businesses where ES might be pro-actively planned as a clear income stream. Also the stock of remaining features is proportionally smaller than in the other ALTs making thresholds easier to achieve. Nevertheless, in these intensively managed farmlands conservation and enhancement of landscape structure and incident is to be welcomed.

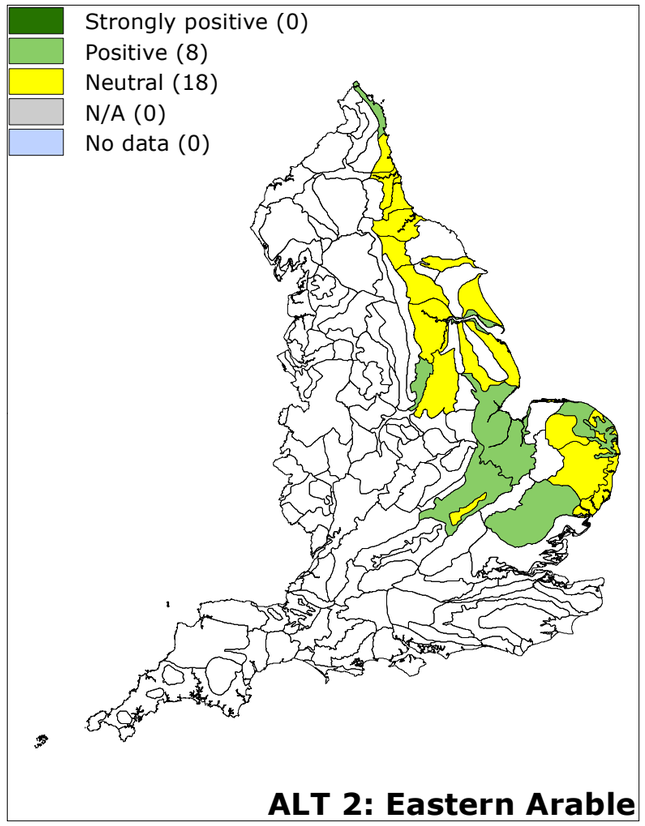
Overall results for each of the seven landscape themes by ALT

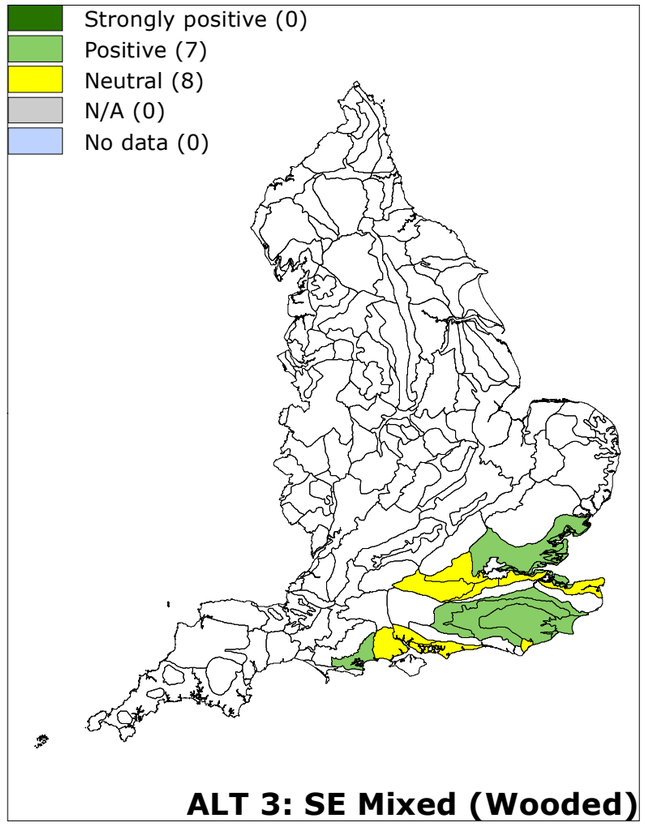
2.20 In this final section of the national overview, consideration is given to the performance of ES against the seven landscape themes within each of the ALTs.

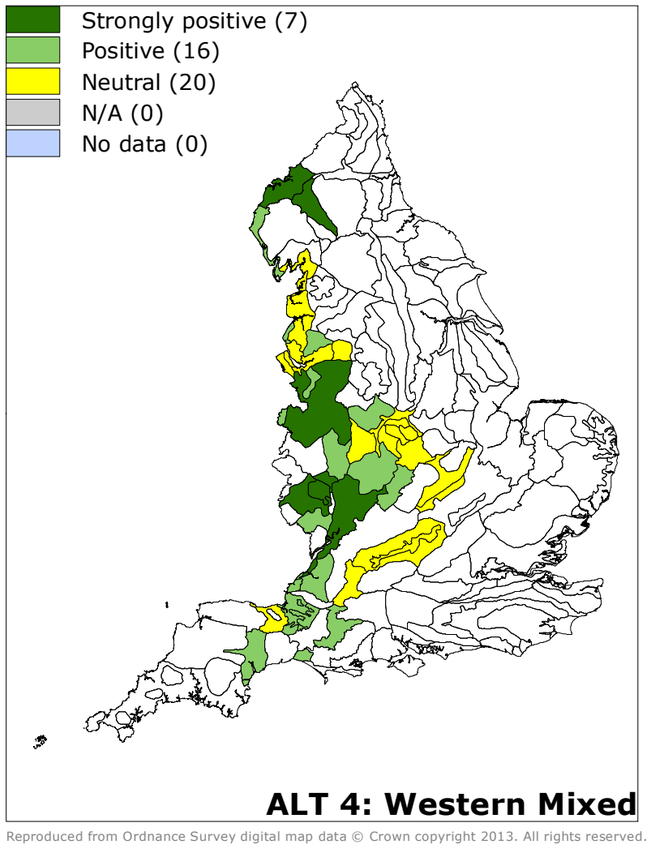
2.21 The distribution of the assessment results by landscape theme in each ALT are summarised in the following seven figures, with one figure for each theme and each figure showing the distribution of assessment results across each of the six ALTs. The Figures are;

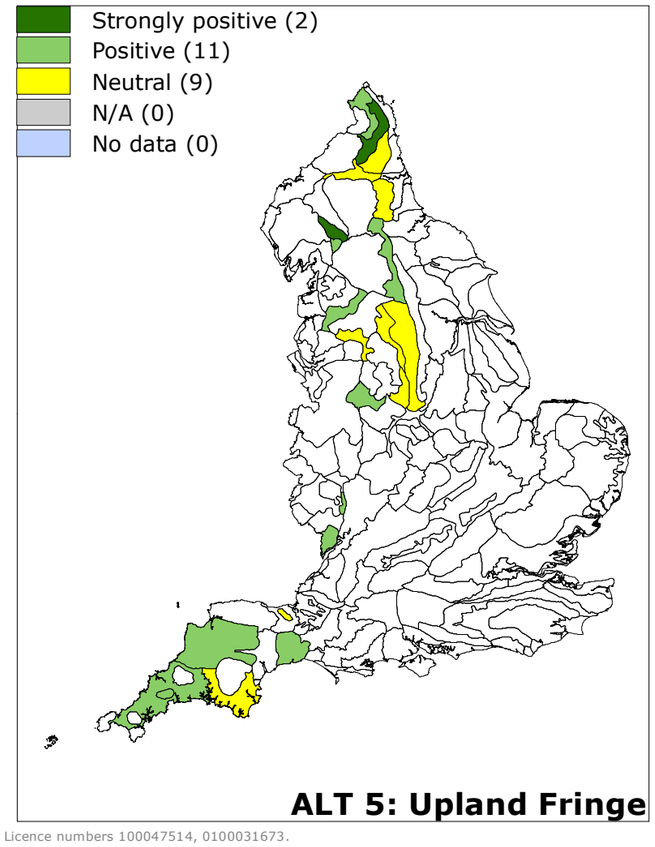
- **Figure 2.3**: Woodlands and trees by ALT
- **Figure 2.4:** Field patterns and boundary types by ALT
- **Figure 2.5:** Agricultural land use by ALT
- **Figure 2.6:** Traditional farm buildings by ALT
- **Figure 2.7:** Historic environment by ALT
- **Figure 2.8:** Semi-natural habitats by ALT
- **Figure 2.9:** Coast by ALT

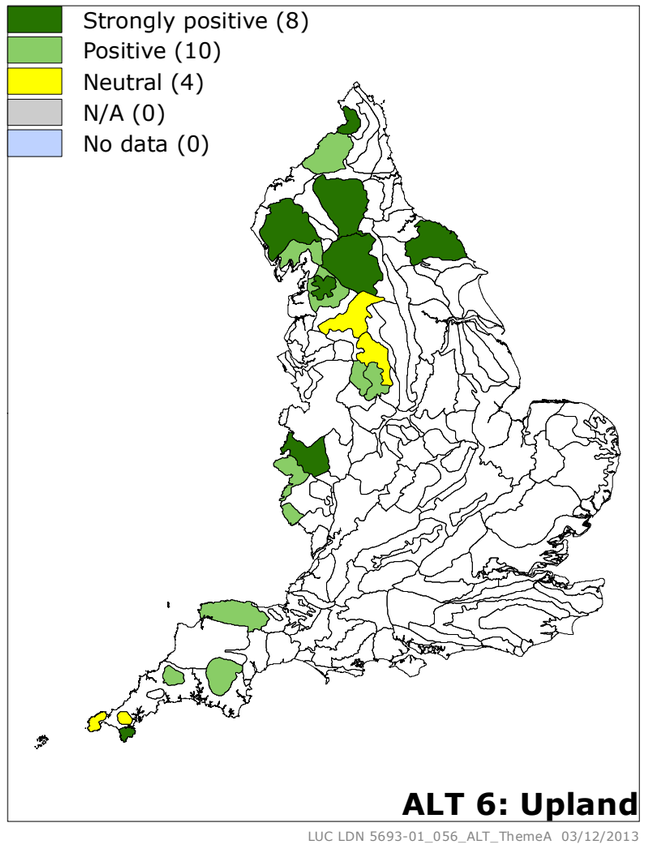










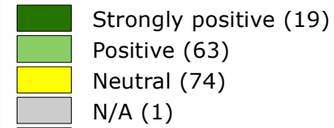


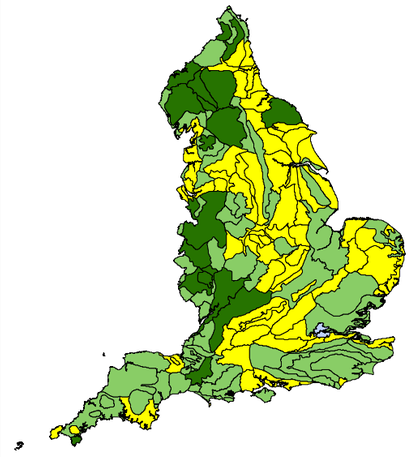
NCA Indicators and Thresholds

Figure 2.3

Overall effect of ES on woodland and trees by ALT

Overview of all ALTs





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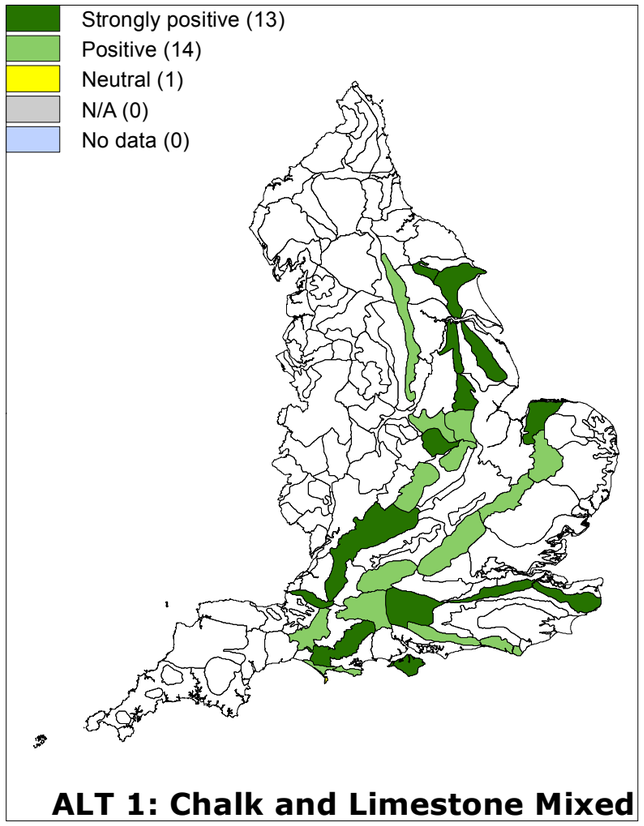
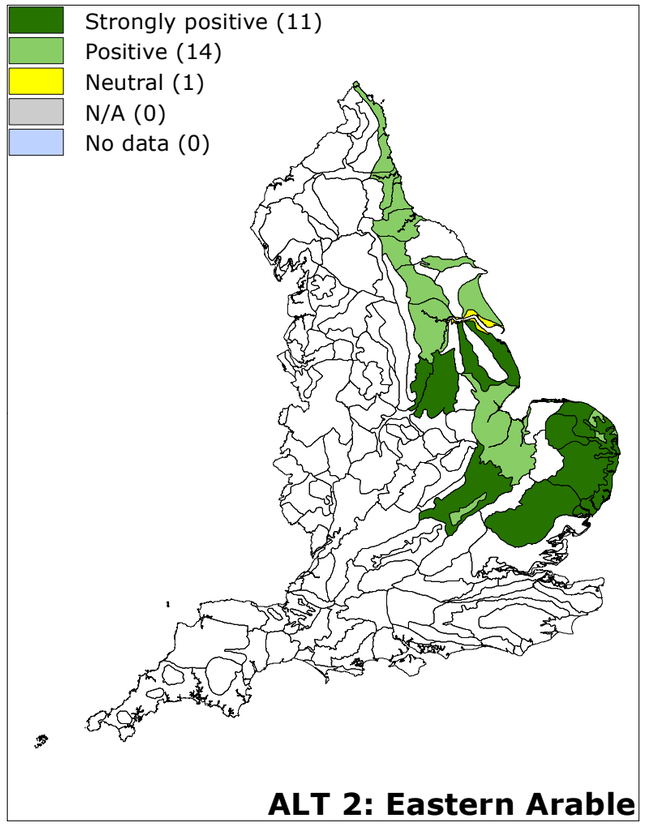
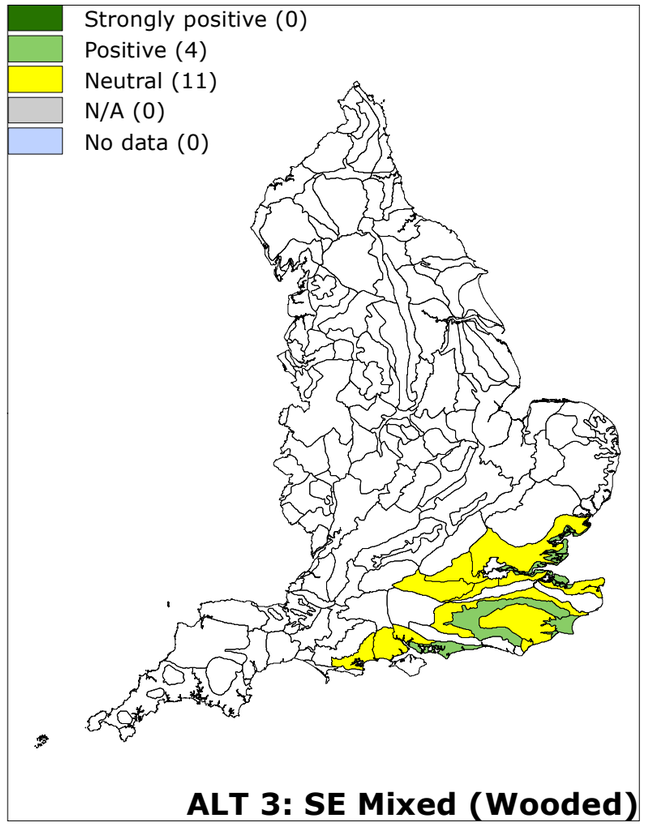
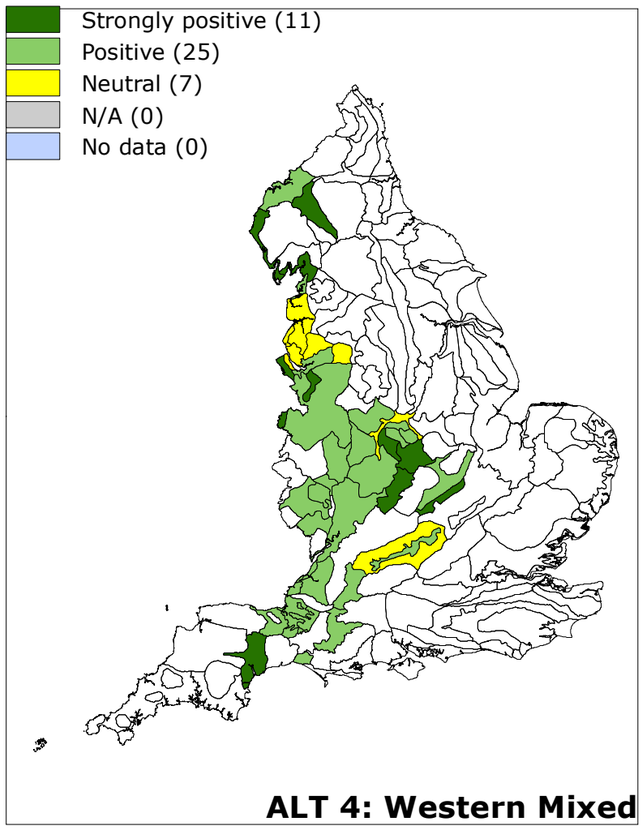
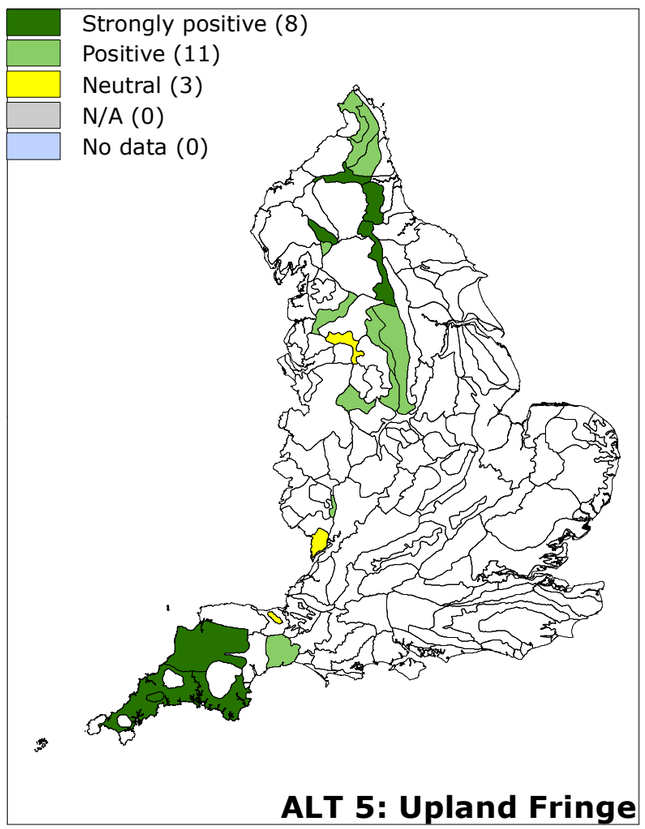
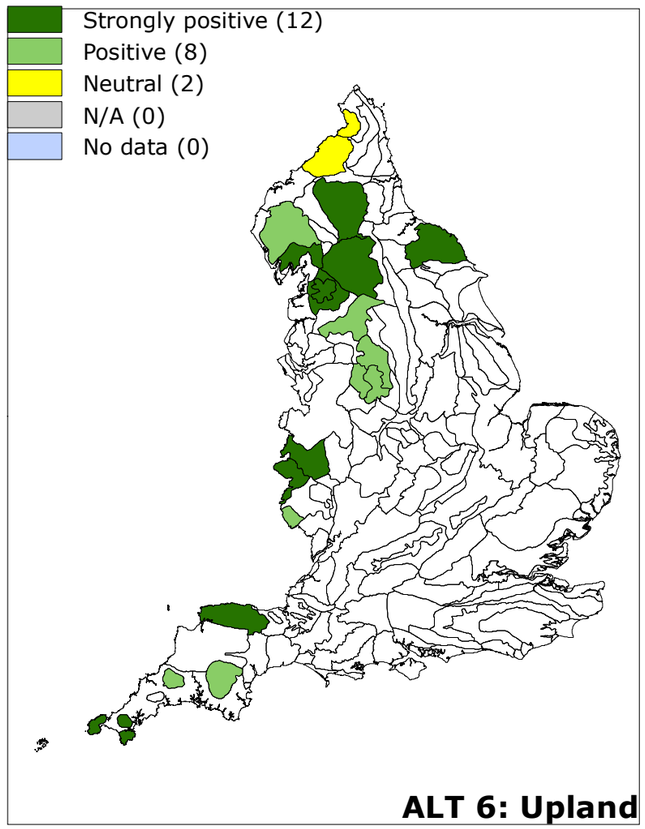










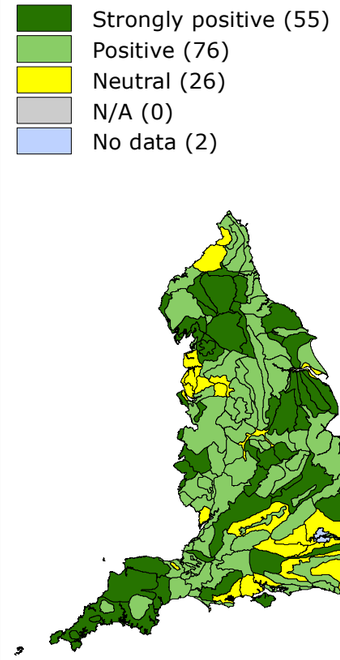


NCA Indicators and Thresholds

Figure 2.4

Overall effect of ES on field patterns and boundary types by ALT

Overview of all ALTs



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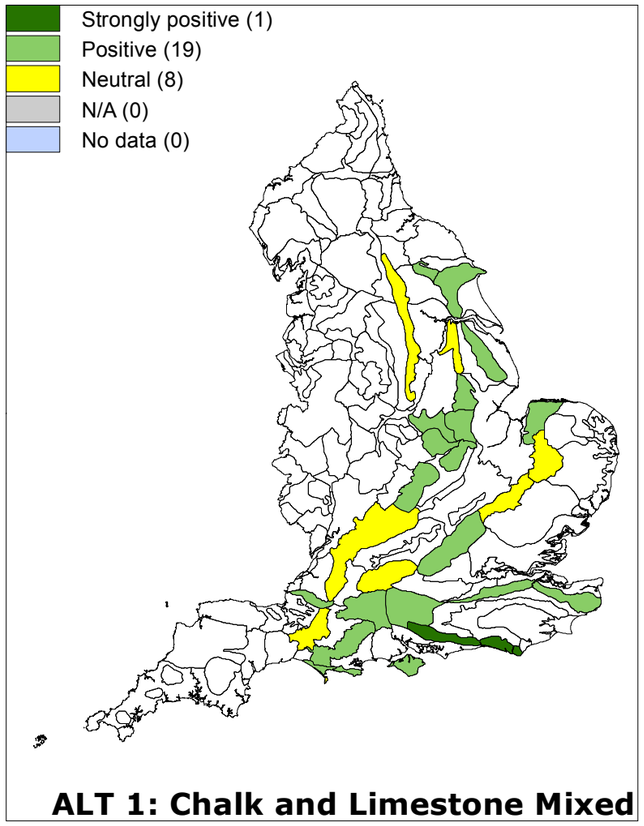
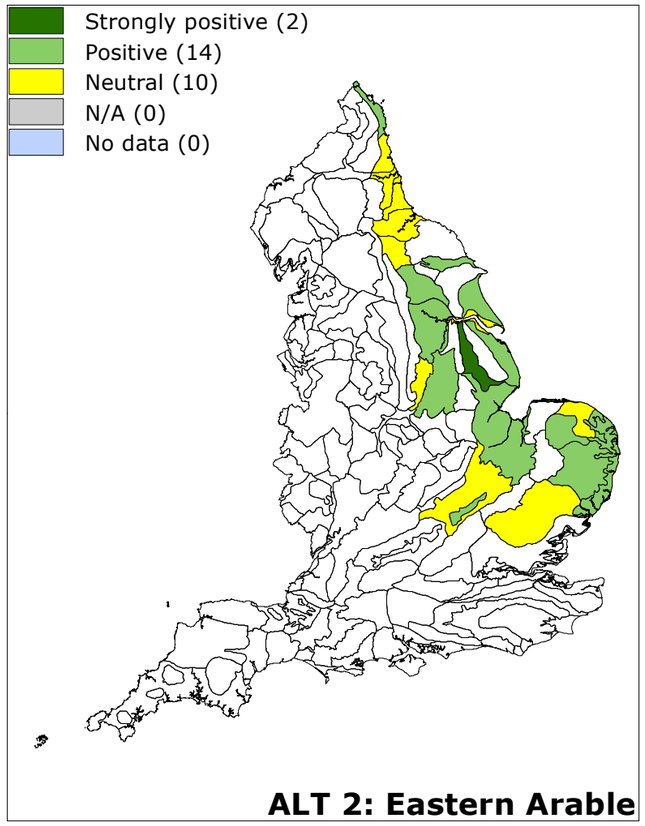
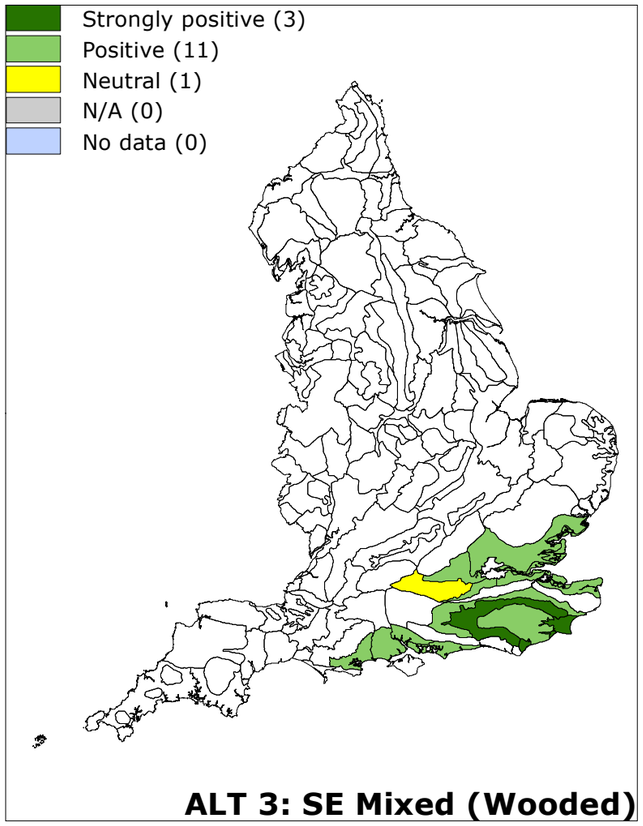


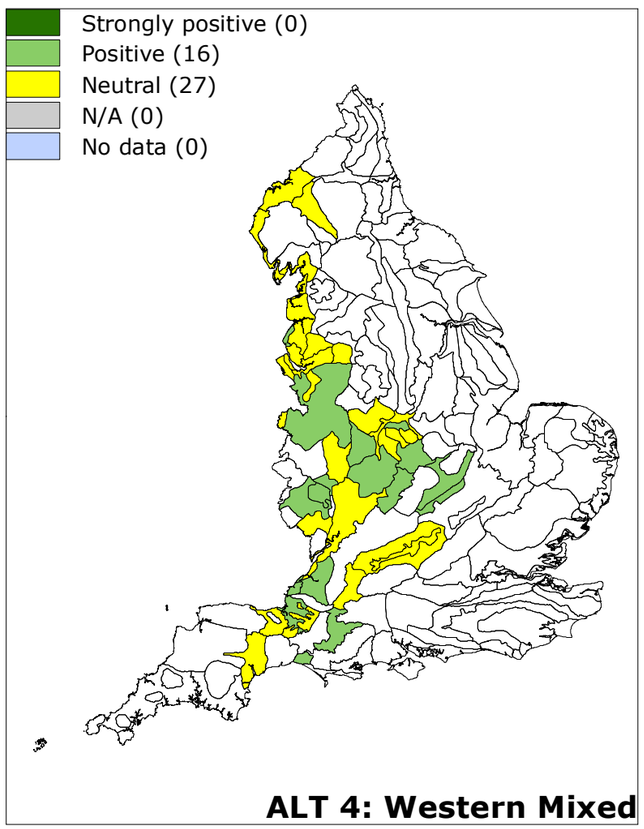
ALT 1: Chalk and Limestone Mixed



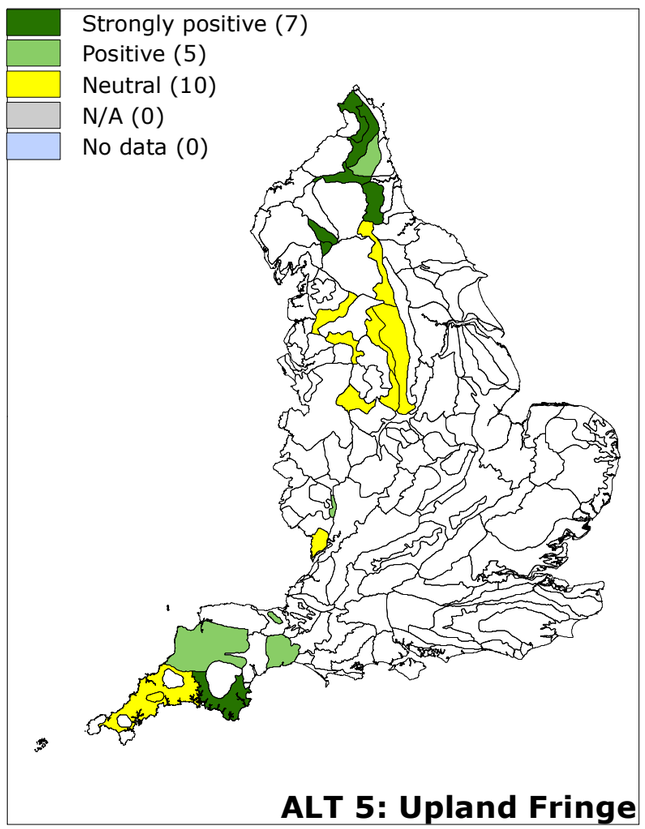
ALT 2: Eastern Arable



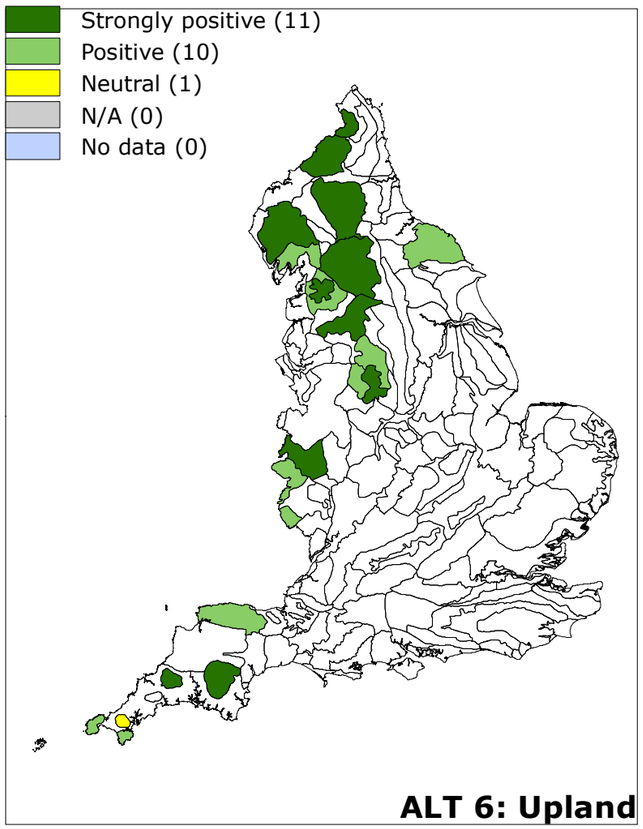
ALT 3: SE Mixed (Wooded)



ALT 4: Western Mixed



ALT 5: Upland Fringe



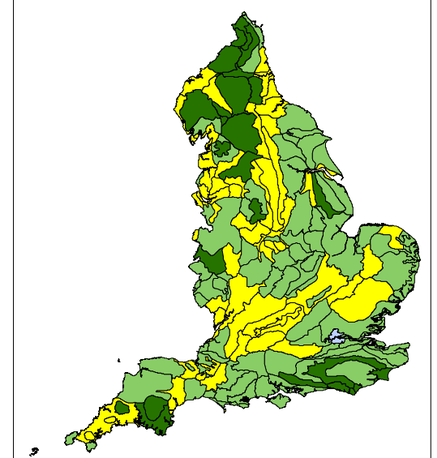
ALT 6: Upland

NCA Indicators and Thresholds

Figure 2.5

Overall effect of ES on agricultural land use by ALT

Overview of all ALTs



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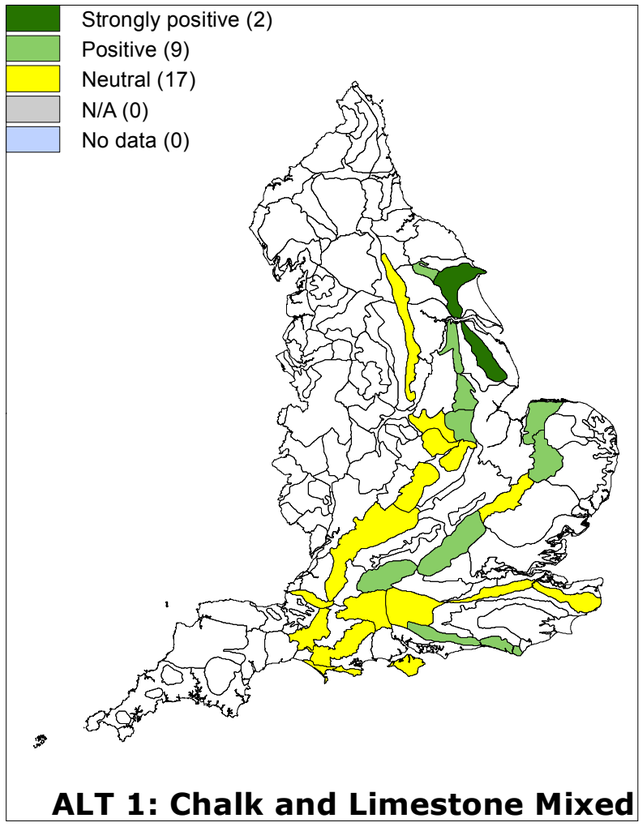
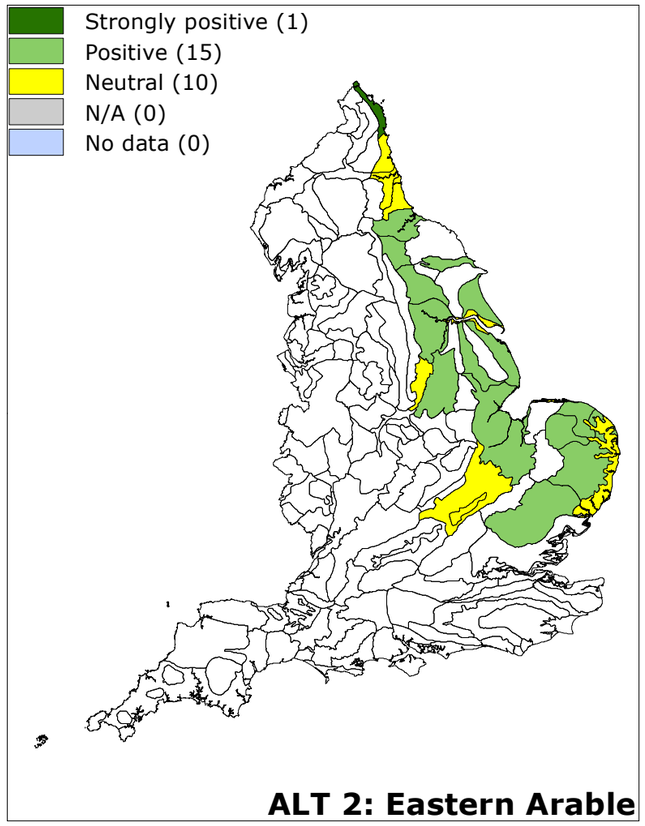
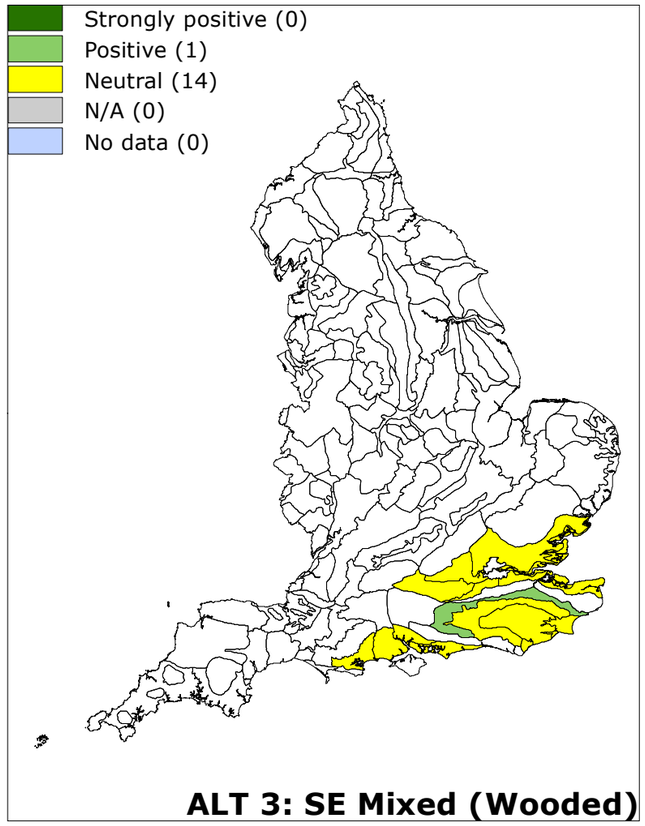
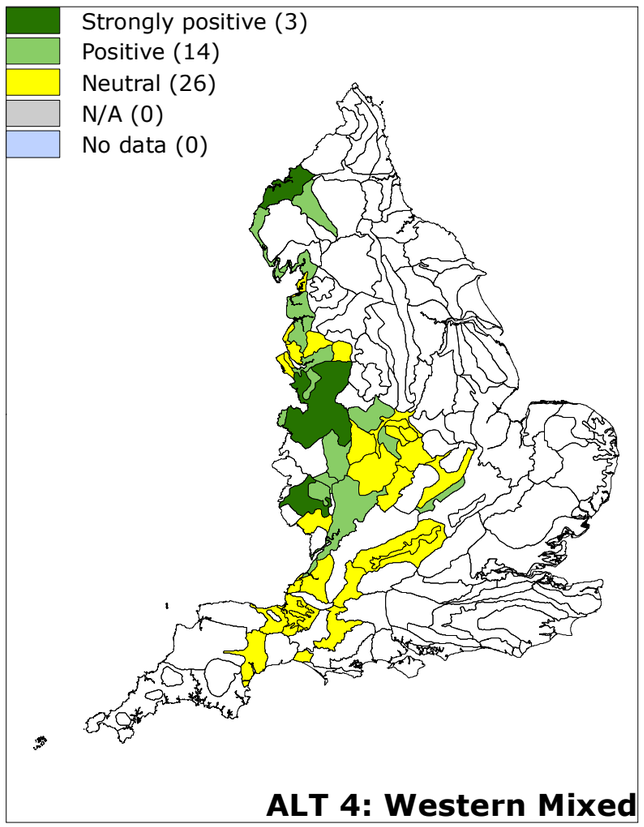
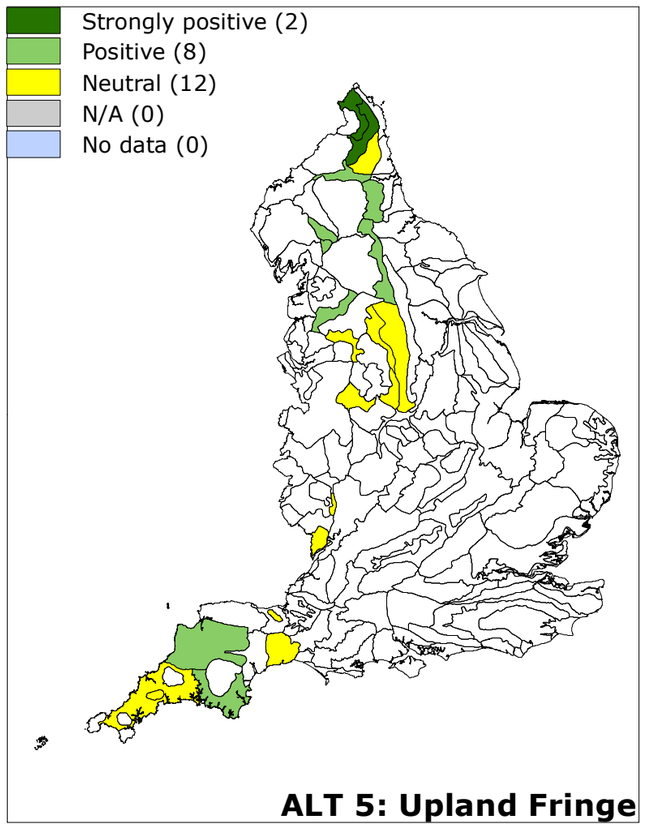
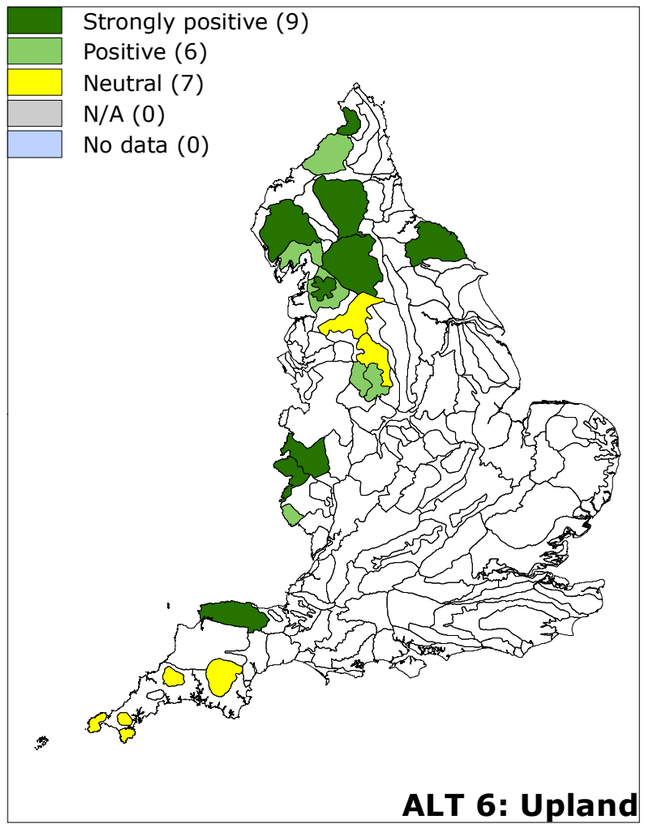












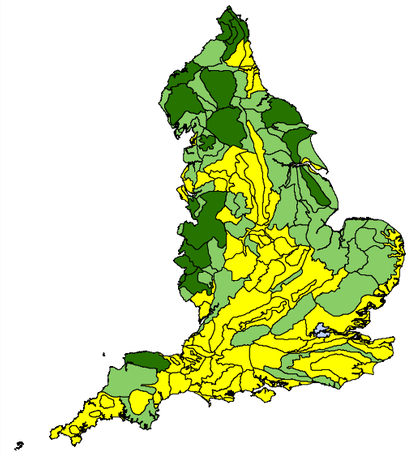
NCA Indicators and Thresholds

Figure 2.6

Overall effect of ES on traditional farm buildings by ALT

Overview of all ALTs

Strongly positive (18)
Positive (53)
Neutral (86)
N/A (0)
No data (2)



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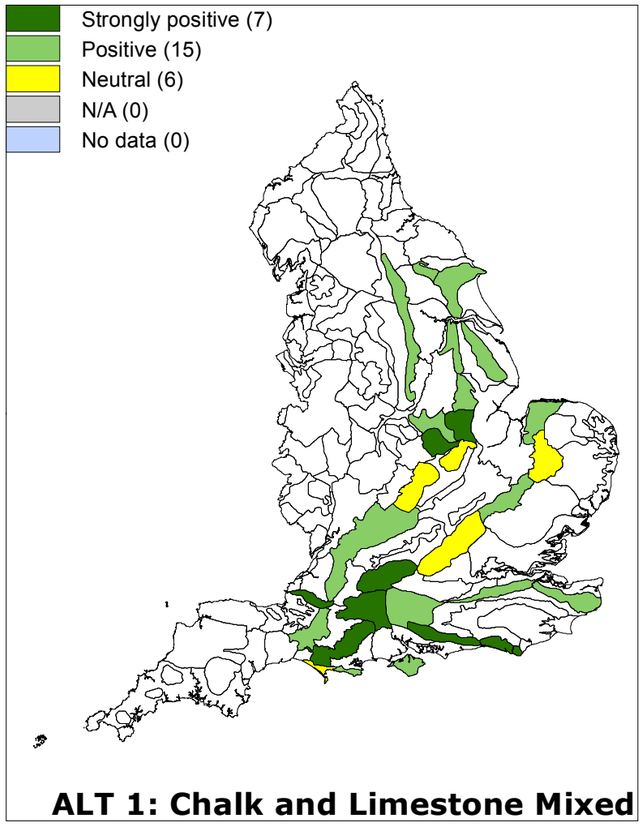
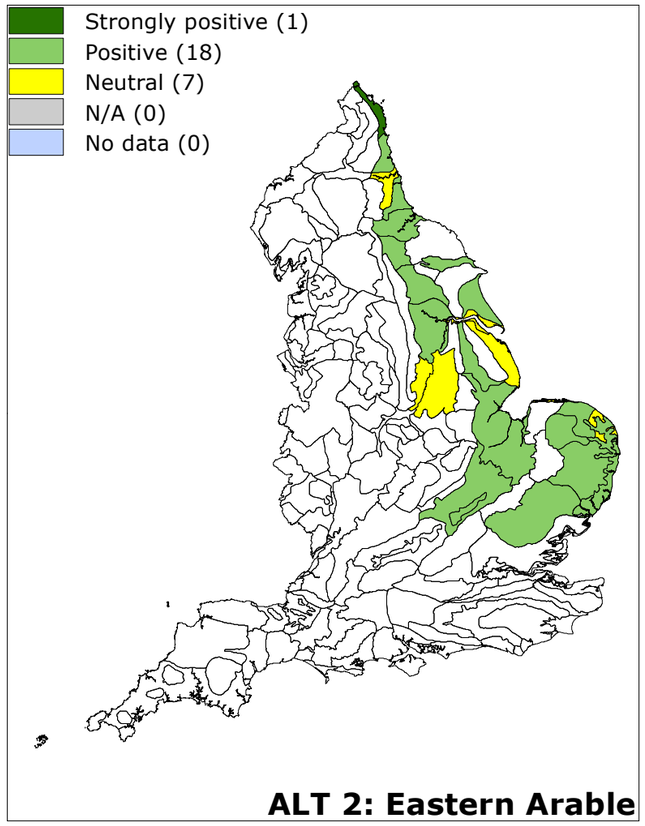
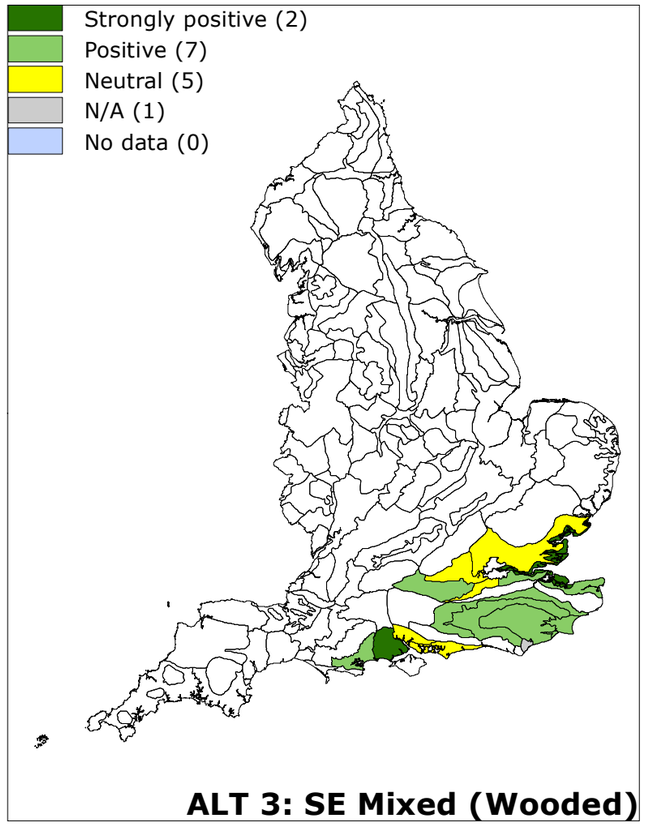


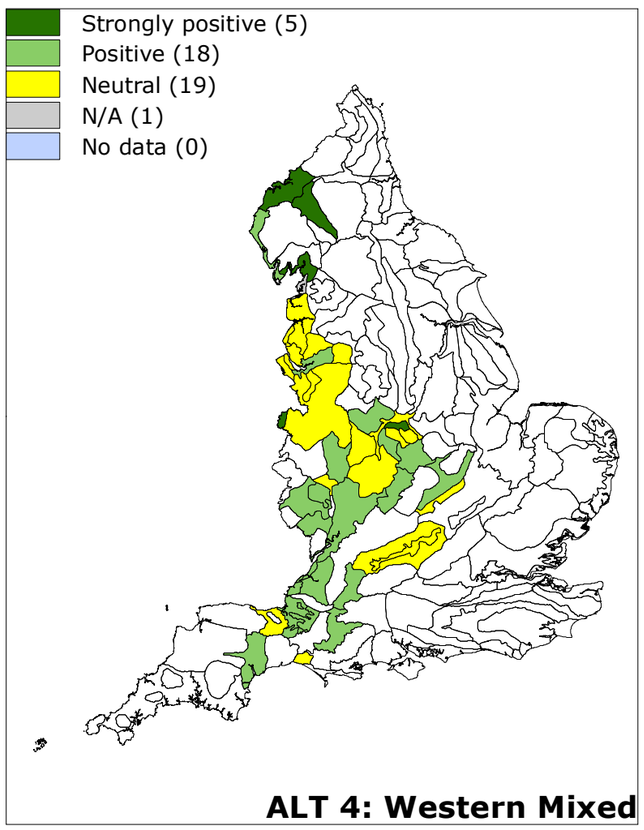
ALT 1: Chalk and Limestone Mixed



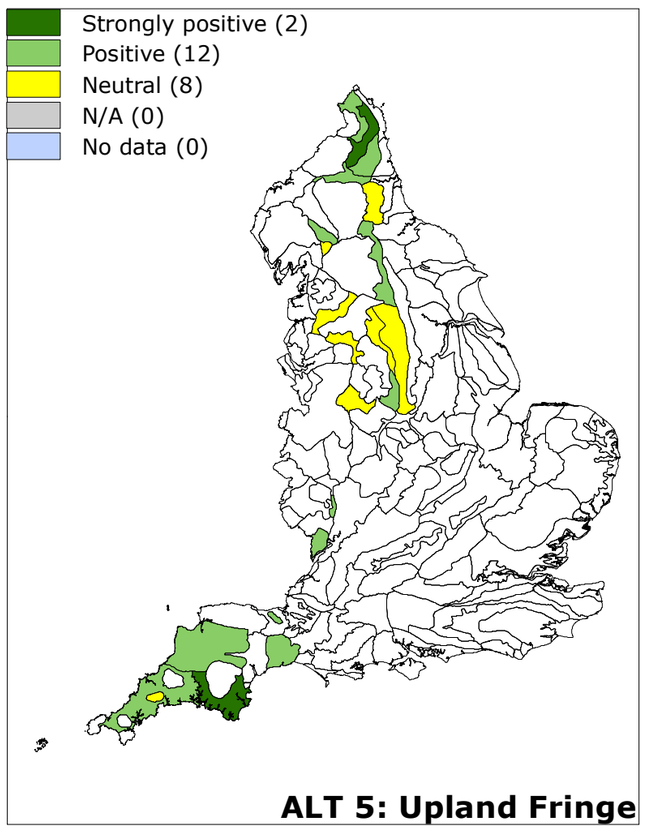
ALT 2: Eastern Arable



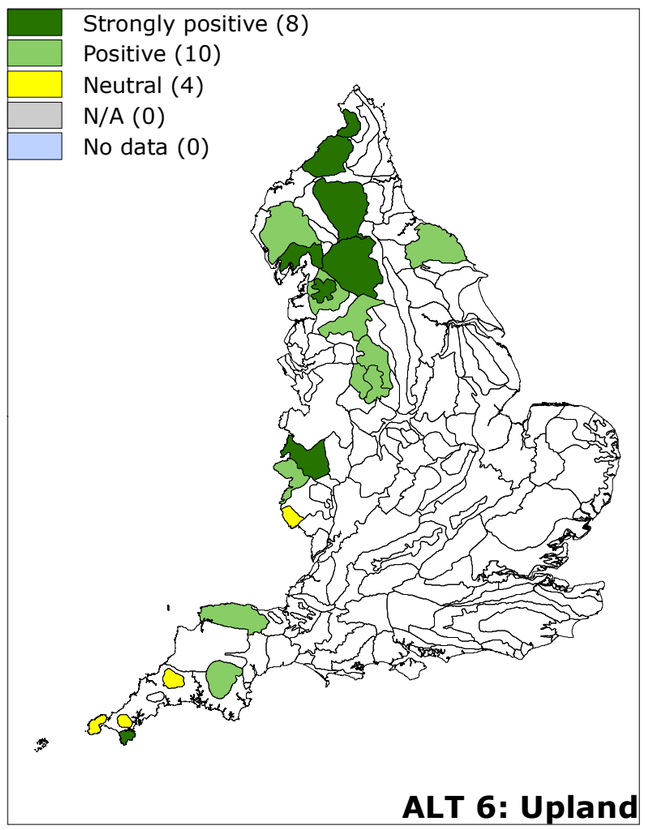
ALT 3: SE Mixed (Wooded)



ALT 4: Western Mixed



ALT 5: Upland Fringe



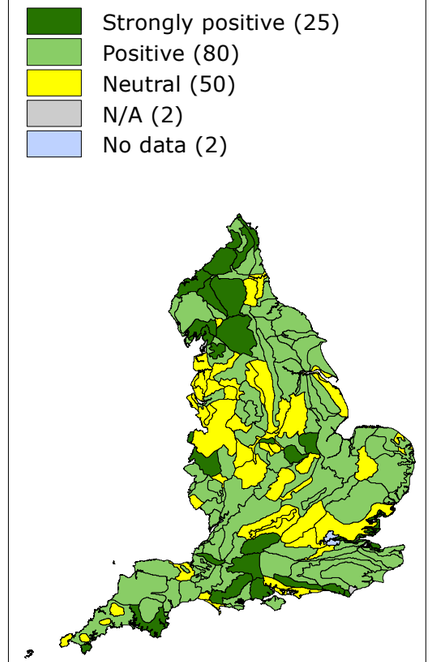
ALT 6: Upland

NCA Indicators and Thresholds

Figure 2.7

Overall effect of ES on historic environment by ALT

Overview of all ALTs



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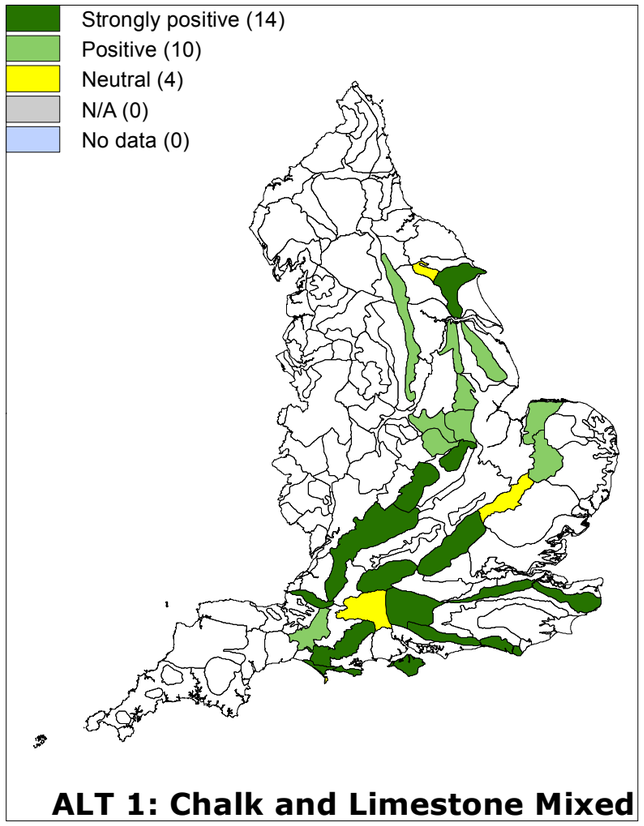
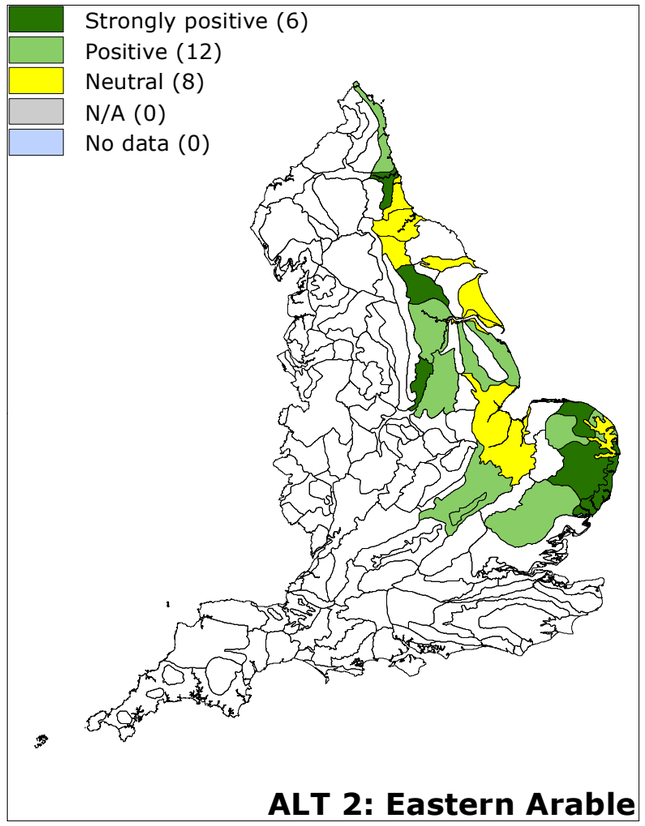
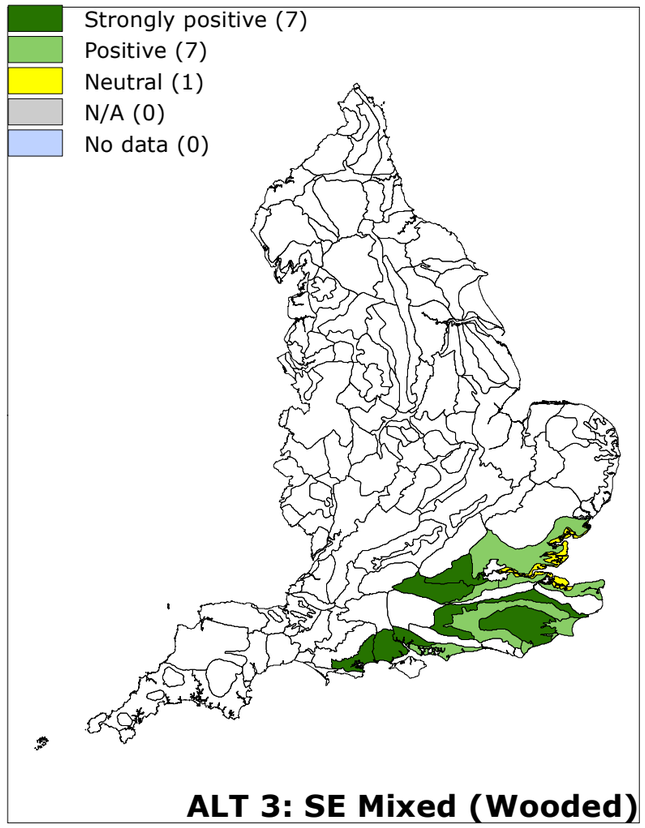
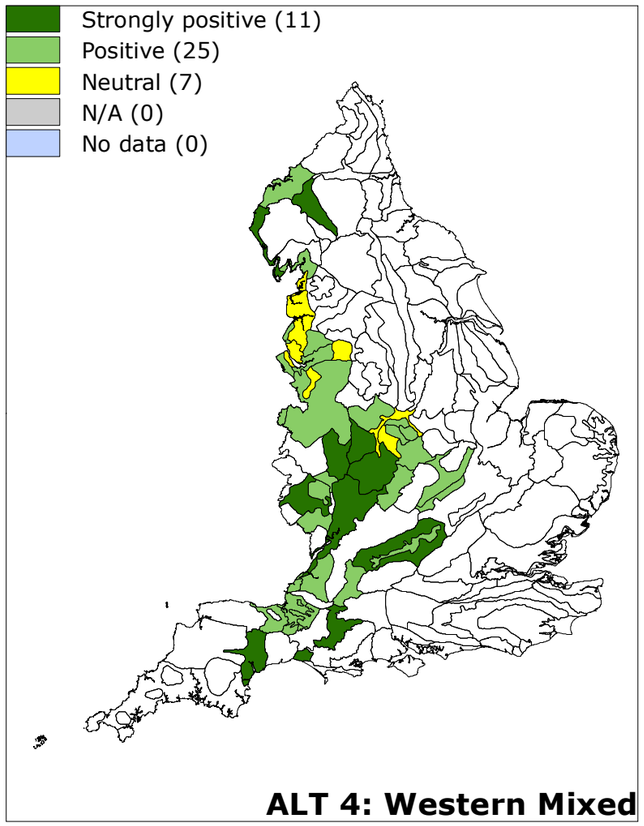
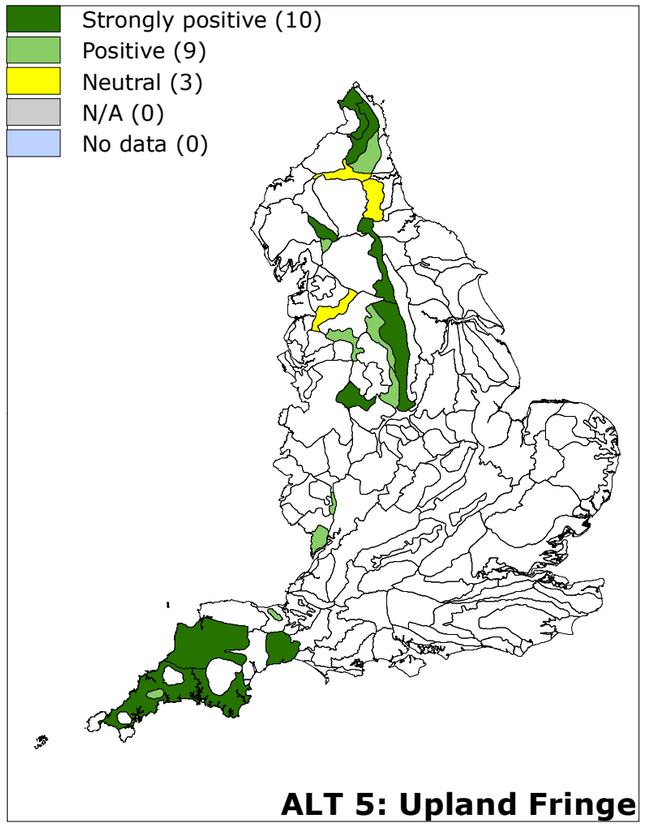
Source:

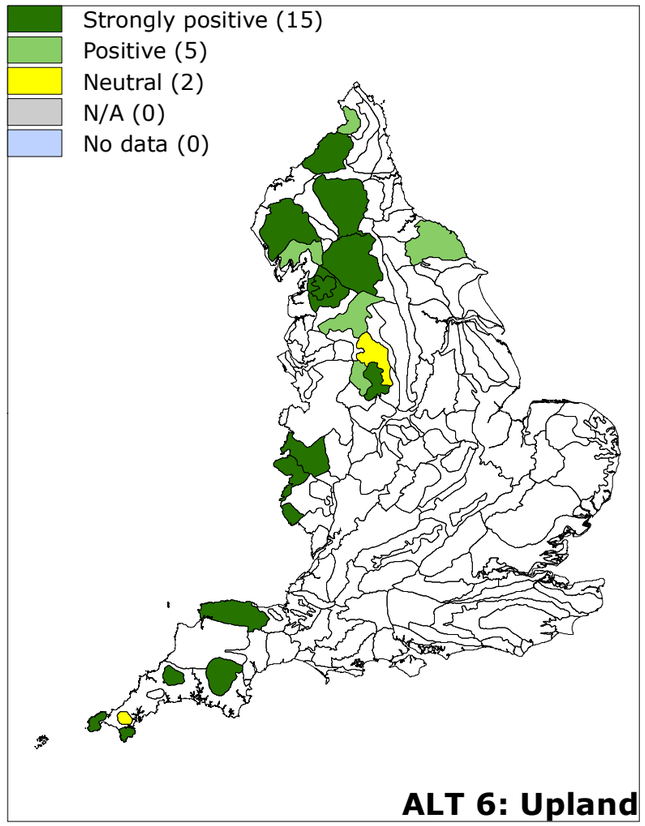










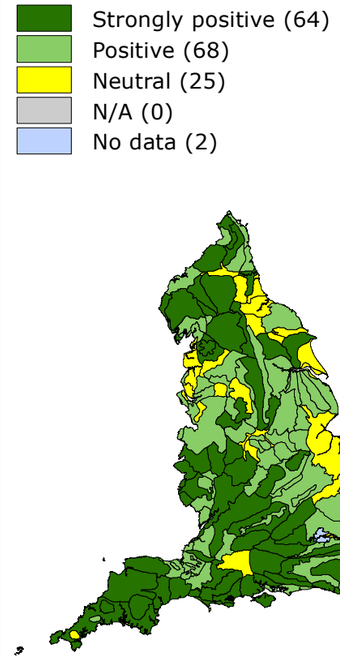


NCA Indicators and Thresholds

Figure 2.8

Overall effect of ES on semi-natural habitats by ALT

Overview of all ALTs



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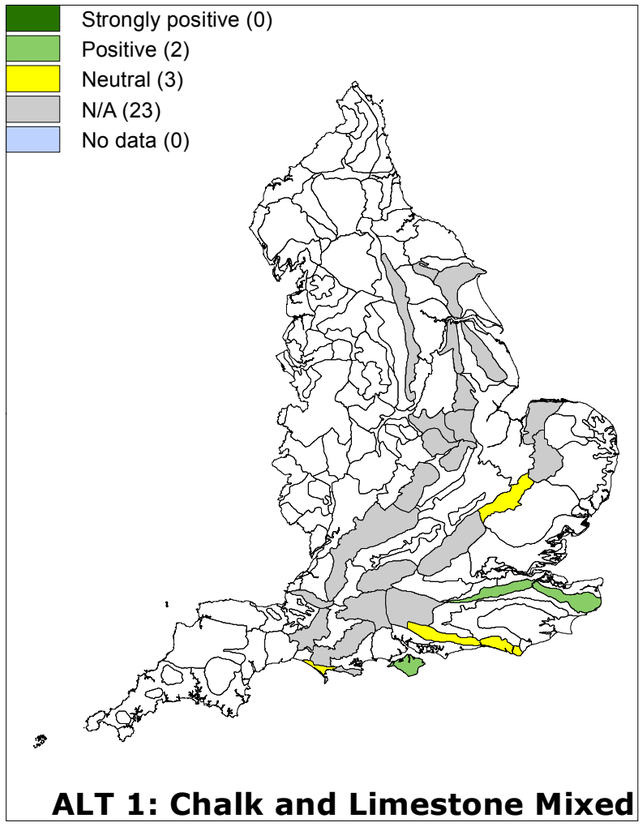
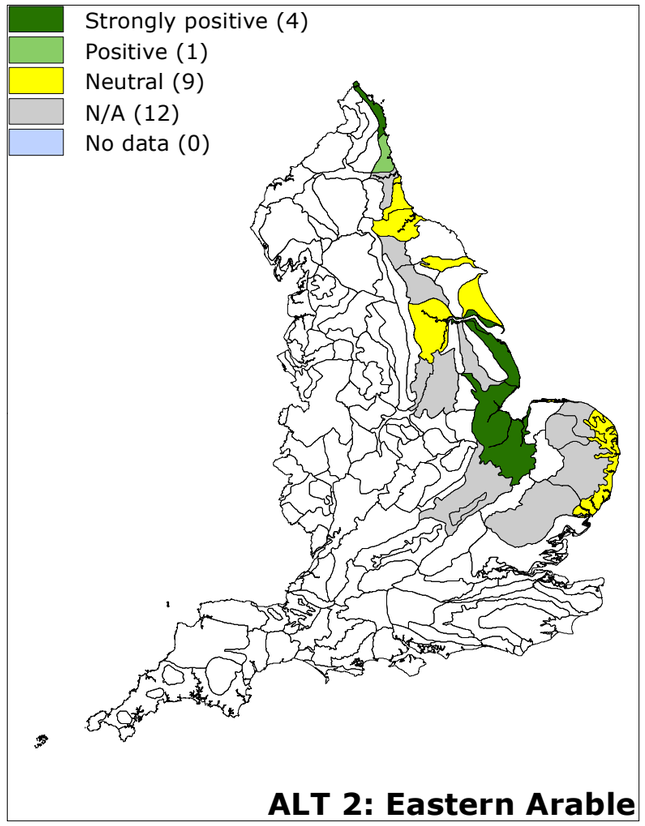
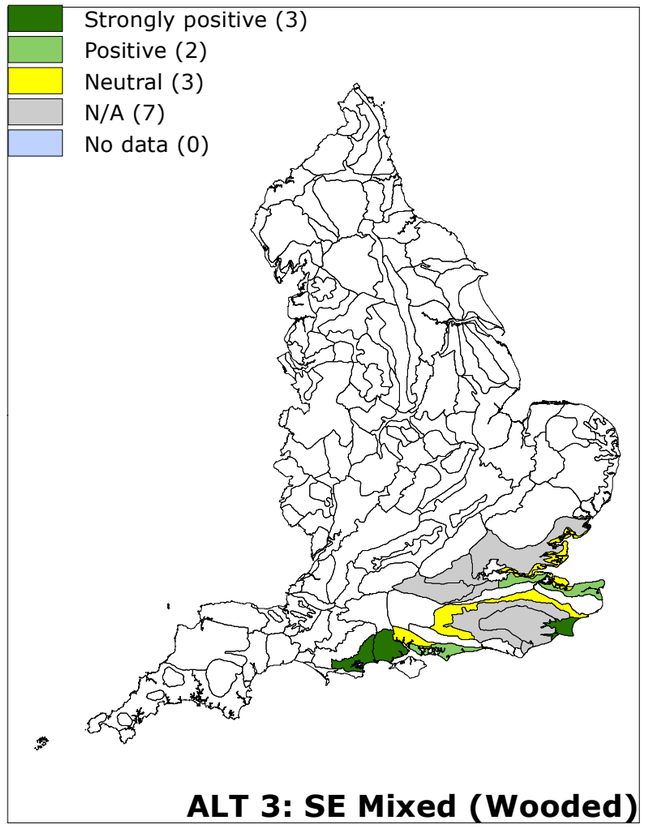


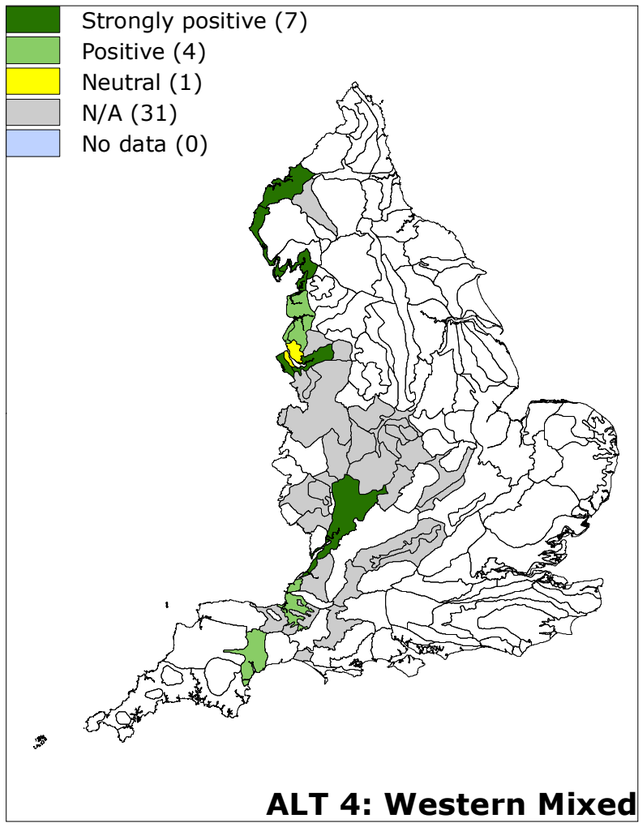
ALT 1: Chalk and Limestone Mixed



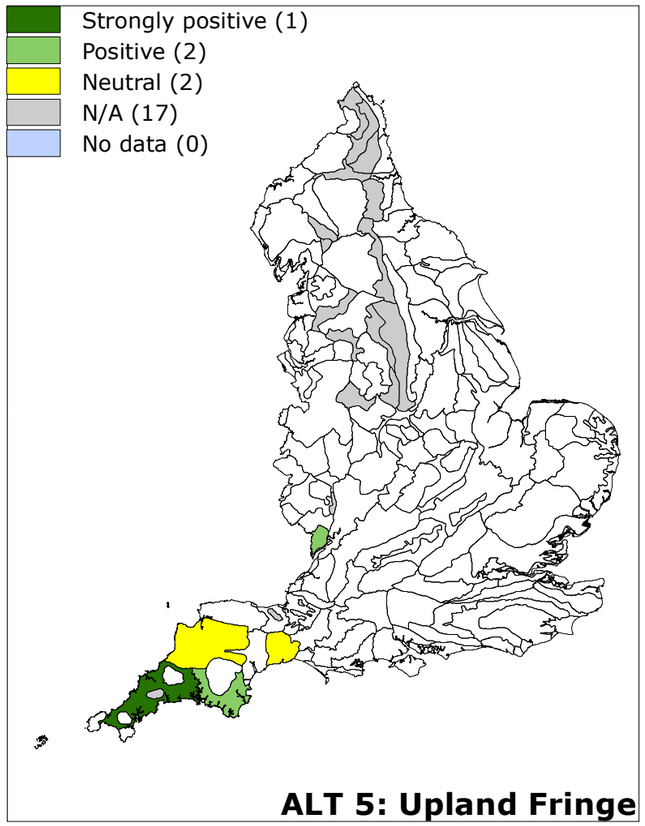
ALT 2: Eastern Arable



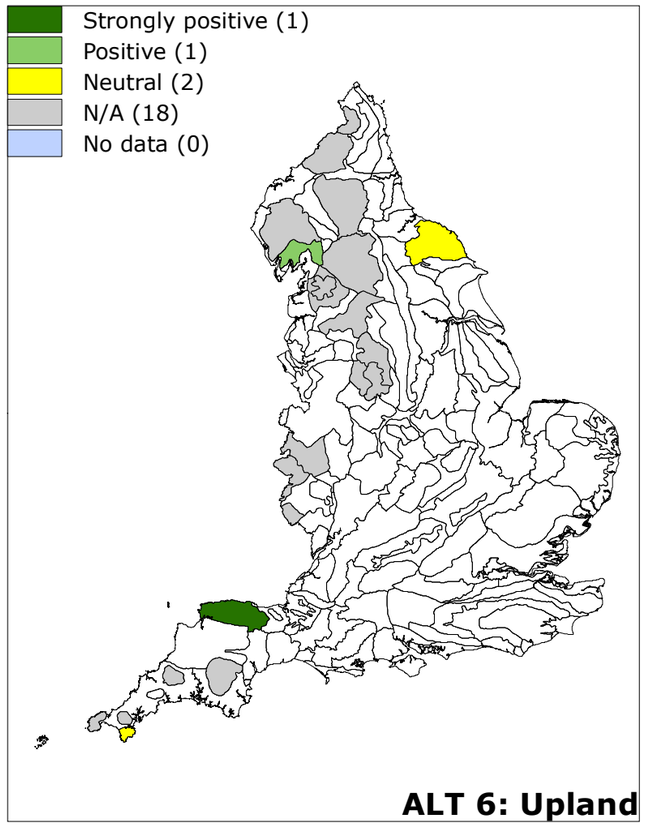
ALT 3: SE Mixed (Wooded)



ALT 4: Western Mixed



ALT 5: Upland Fringe



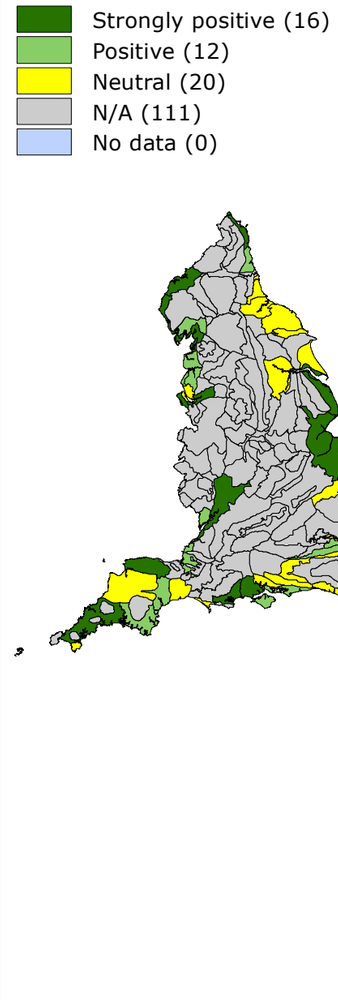
ALT 6: Upland

NCA Indicators and Thresholds

Figure 2.9

Overall effect of ES on the coast by ALT

Overview of all ALTs



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2.22 In addition, **Appendices 1 – 6** show the assessment results for each NCA per theme within each of the six ALTs. This allows the results of individual NCAs to be compared within the same ALT or indeed across ALTs. The Appendices are:

- **Appendix 1: Chalk and Limestone Mixed ALT**
- **Appendix 2: Eastern Arable ALT**
- **Appendix 3: South East Mixed (Wooded) ALT**
- **Appendix 4: Western Mixed ALT**
- **Appendix 5: Upland Fringe ALT**
- **Appendix 6 : Uplands ALT**

Chalk and Limestone ALT

2.23 The overall results for this ALT by theme are summarised in **Table 2.3.**

Table 2.3: Summary of assessment results by theme for the NCAs of the Chalk and Limestone ALT

Theme	Number of NCAs with this assessment result		
	Strongly positive	Positive	Neutral
Trees & woodland	2	11	15
Boundaries	13	14	1
Agricultural land use	1	19	8
Traditional farm buildings	2	9	17
Historic environment	7	15	6
Semi-natural habitats	13	11	4
Coast (23 N/A)	0	2	3

2.24 **Woodland and trees (Figure 2.3):** In this ALT, in over 50% of NCAs, ES is assessed as having a **neutral** effect overall on woodland and trees. This reflects the large-scale open landscape of many of these NCAs, such as Salisbury Plain and the West Wiltshire Downs and the East Anglian Chalk.

2.25 It also reflects that across the large estates, larger woodlands and plantations (falling outside the scope of ES) tend to dominate. More surprising is the neutral score for the effect of ES in NCAs that include small areas of ancient woodland, such as the Chilterns and Northamptonshire Uplands, suggesting the need for better targeting. The two NCAs where ES is having a **strongly positive** effect on woodlands and trees are the Cotswolds (with very high levels of uptake for field trees) and the Yeovil Scarplands.

2.26 **Field boundaries (Figure 2.4)**: Across these NCAs, ES uptake appears to be making a relatively strong contribution to the management of field boundaries and the strengthening of field pattern. This is achieved with every NCA in this ALT (other than the Isle of Portland where there is no ES uptake) exceeding the threshold for ES management of hedgerows and with the use of wide buffer strips also helping strengthen field pattern in a number of these large-scale landscapes. It is notable though that in the limestone landscapes the threshold for stone walls is not always met, suggesting the potential for more focused targeting e.g. in the Yorkshire and Lincolnshire Wolds

2.27 **Agricultural land use (Figure 2.5):** In this ALT, ES is assessed as having a **positive** effect on the agricultural land use of the majority of NCAs through the conservation of permanent pasture and more particularly the conservation of wet grasslands in river valleys (which can be locally significant). In none of these NCAs is the threshold for overwintering stubbles met.

2.28 **Traditional farm buildings (Figure 2.6):** In the majority of these NCAs, ES is having a **neutral** effect on the conservation of these buildings, often of characteristic flint (on the Chalk)

and of limestone. There are no clear patterns as to why some NCAs have a positive effect under this theme and others do not.

2.29 **Historic environment (Figure 2.7):** In the chalkland landscapes of South East England ES uptake is making a strong contribution to the conservation of the historic environment in many NCAs. This includes the conservation management of archaeological sites on arable and grassland and the conservation management of parkland. However, this is not reflected in the Cotswolds and Chilterns which are also noted for their historic heritage including extensive parkland. In both these NCAs the landscape thresholds have not been met for parklands or for archaeology on arable or grassland. The strongly positive assessments in the South East are also not so common in the Midlands and North, although in the majority of NCAs in this ALT, ES is assessed as having a positive effect on the historic environment

2.30 **Semi-natural habitats (Figure 2.8):** In this ALT ES is assessed as having a **strongly positive** effect on the semi-natural habitats of 46% of the NCAs, especially in southern England, primarily for the maintenance and restoration of species-rich grassland (covering the important calcareous grasslands of this landscape). In the Midlands and North effects tend to be **positive** rather than strongly positive, although there are clear exceptions, as in the Yorkshire Wolds and Rockingham Forest, Notable are those NCAs which have been assessed as **neutral** under this theme: the Howardian Hills, East Anglian Chalk and Salisbury Plain. In the case of Salisbury Plain and the West Wiltshire Downs there are still relatively high levels of uptake for this habitat - 2,675 ha but this is a small proportion of the extensive semi-natural grasslands of Salisbury Plain - the largest remaining extent of chalk grassland in Western Europe. It is also a smaller area of uptake than that noted in some of the other chalkland landscapes, such as the South Downs NCA with 6,319 ha under the relevant ES options. This reflects that much of the grassland on Salisbury Plain is under MoD ownership and therefore not eligible for ES.

2.31 **The Coast:** Only five of the NCAs have relevant lengths of low lying coastline. Of these, ES is assessed as having a **neutral** effect on the coastal habitats of three of them. The only NCAs where ES is having a **positive** effect on coastal habitats are the North Downs and the Isle of Wight.

2.32 **For more detail on the performance of individual NCAs in this ALT refer to Appendix 1.**

Eastern Arable ALT

2.33 The overall results for this ALT by theme are summarised in **Table 2.4.**

Table 2.4: Summary of assessment results by theme for the NCAs of the Eastern Arable ALT

Theme	Number of NCAs with this assessment result		
	Strongly positive	Positive	Neutral
Trees & woodland	0	8	18
Boundaries	11	14	1
Agricultural land use	2	14	10
Traditional farm buildings	1	15	10
Historic environment	1	18	7
Semi-natural habitats	6	1	8
Coast (12 N/A)	4	1	9

2.34 **Woodland and trees (Figure 2.3)**: It is notable that across most of the NCAs in this ALT, ES uptake relating to trees and woodlands is low. This is a missed opportunity, as these are important in providing structure to these open landscapes. Greater targeting of these options would be beneficial.

2.35 **Field boundaries (Figure 2.4)**: In 42% of these NCAs, ES uptake is having a **strongly positive** effect on field boundaries and a **positive** effect on a further 54% of the NCAs. This relates to the conservation maintenance of both hedgerows and ditches / dykes as well as the use of wide buffer strips to help strengthen field pattern, especially where hedgelines are weak. In these generally open large-scale landscapes, the strengthening of field boundaries is particularly important for the landscape. In some NCAs, such as the South Norfolk and High Suffolk Claylands and the South Suffolk and North Essex Claylands, it is the strong uptake of boundary options that is helping maintain the structure of these largely arable landscapes that still retain areas of ancient countryside with small irregular medieval enclosures.

2.36 **Agricultural land use (Figure 2.5):** It is notable that most of these NCAs do not meet the landscape threshold for low input grasslands (and therefore the conservation of permanent grasslands in these arable landscapes). The only NCAs where ES uptake is making a **strongly positive** contribution to agricultural land uses are in the North Norfolk Coast and the Central Lincolnshire Vales. In the former the thresholds are exceeded for low input, wet and rough/ semi-improved permanent pastures while in the latter there is a high level of uptake (relative to stock) for characteristic wet grasslands, in both cases helping retain landscape diversity. In the Broads there is very high levels of uptake for characteristic wet grasslands but no equivalent uptake for other forms of permanent pasture. Greater targeting of ES permanent pasture options would be beneficial in those NCAs assessed as **neutral**. In none of these NCAs is the threshold for over-wintering stubbles met, suggesting the benefit of targeting in specific areas.

2.37 **Traditional farm buildings (Figure 2.6):** It is evident that thresholds are more regularly met in this ALT for this theme than in the Chalk and Limestone ALT. The one NCA where ES is assessed as having a **strongly positive** landscape effect under this theme is the North Northumberland Coastal Plain.

2.38 **Historic environment (Figure 2.7):** In 69% of NCAs ES is having a **positive** effect on the historic environment but only in one NCA, again the North Northumberland Coastal Plain, is it having a **strongly positive** effect. In this ALT there is a great opportunity to combine the restoration and creation of permanent grasslands with the conservation of archaeology – an opportunity that does not appear to have been regularly taken up to date.

2.39 **Semi-natural habitats (Figure 2.8):** Compared to the NCAs of the Chalk and Limestone ALT, this ALT is showing a much more subdued response to the conservation of semi-natural habitats under ES (with over 50% of NCAs assessed as **neutral** for this landscape theme). There are therefore significant opportunities for greater targeting, especially where this can be combined with meeting other objectives in NCAs that currently have low uptake, as in the Broads, the Fens and Holderness and the Tees Lowlands and the Vale of Pickering. The Broads is particularly noticeable: here there has been significant uptake of options for wet grasslands (covered. under Agricultural Land Use) but uptake has not been sufficient to meet the thresholds, especially for characteristic wetland habitats.

2.40 **The Coast (Figure 2.9):** 14 NCAs in this ALT have low lying coastal habitats yet ES is only having a **strongly positive** effect in four (primarily for salt marsh): the North Northumberland Coastal Plain, Humber Estuary, Lincolnshire Coast and Marshes, and the Fens. Greater targeting of coastal

habitats would be beneficial, especially if it can be linked with the positive management of coastal processes.

2.41 **For more detail on the performance of individual NCAs in this ALT refer to Appendix 2.**

South East Mixed (Wooded) ALT

2.42 The overall results for this ALT by theme are summarised in **Table 2.5.**

Table 2.5: Summary of assessment results by theme for the NCAs of the South East Mixed (Wooded) ALT

Theme	Number of NCAs with this assessment result		
	Strongly positive	Positive	Neutral
Trees & woodland	0	7	8
Boundaries	0	4	11
Agricultural land use	3	11	1
Traditional farm buildings	0	1	14
Historic environment (1 N/A)	2	7	5
Semi-natural habitats	7	7	1
Coast (7N/A)	3	2	3

2.43 **Woodland and trees (Figure 2.3):** In an area with some of the highest woodland cover in England (rising to 20% in some NCAs) and with a large number of small farm woodlands reflecting the medieval origins of much of this landscape, uptake of ES woodland and tree options is weak. Many NCAs fail to meet the identified thresholds for woodland and trees. This might be expected in the open, largely treeless landscapes of the North Kent Plain and Pevensey Levels falling within this ALT but is unexpected in other NCAs where ES is assessed as having a neutral effect, such as Thames Basin Heaths, Thames Basin Lowlands, South Hampshire Lowlands and the New Forest - all these are landscapes framed by woodland and trees. It is possible that much of this woodland has now passed out of agricultural ownership, reflecting the sub-division of land holdings in these peri-urban areas. It is surprising nonetheless that uptake for trees is also low. As one typical example - in the Thames Basin Lowlands only 54 trees are being protected under ES across the whole NCA. Significantly greater targeting would be beneficial.

2.44 **Boundary features (Figure 2.4):** Even more unexpected is the low uptake for ES boundary options in this ALT. Here coastal NCAs are characterised by fields bounded by ditches and dykes while the medieval landscapes of the majority of the inland NCAs are characterised by small irregular fields bounded by dense hedgerows and wooded shaws. Yet there are no NCAs in this ALT where ES is assessed as having a **strongly positive** effect under this theme and in only 50% of NCAs is ES having a **positive** effect. NCAs where it is particularly surprising to see ES having a **neutral** effect under this theme include the New Forest, Dorset Heaths. Wealden Greensand and South Hampshire Lowlands to name just a few.

2.45 **Agricultural land use (Figure 2.5):** In the case of agricultural land use (primarily the conservation of permanent pastures) ES is generally having a positive effect. It is having a **strongly positive** effect in three NCAs: the Low Weald, Pevensey Levels and Romney Marsh where there are high levels of uptake for different combinations of permanent pasture options, including the conservation of characteristic wet grasslands in all three cases. It is evident that in only two

NCAs in this ALT does ES uptake meet the threshold for low input permanent pasture.

2.46 **Traditional farm buildings (Figure 2.6):** In this ALT ES is having little effect on the conservation of traditional farm buildings. This may reflect strong pressure for the conversion of these buildings to residential use.

2.47 **Historic environment (Figure 2.7):** Conversely, in 60% of NCAs ES is having a **positive** effect on the conservation of the Historic Environment, although uptake for parkland options, a key feature of these landscapes, often does not meet the identified threshold. The high levels of uptake of parkland options in the New Forest may reflect efforts to conserve and restore areas of semi-natural wood pasture. It is important to note though, that in 33% of NCAs in this ALT this theme is assessed as **neutral,** suggesting the need for greater targeting.

2.48 **Semi-natural habitats (Figure 2.8):** In just under half of these NCAs, ES is assessed as having a **strongly positive** effect on the conservation of semi-natural habitats – specifically the conservation of lowland heathland which has benefited from strong targeting under HLS, such as in the New Forest and Dorset Heaths. In those NCAs without significant heathland ES is generally having a **positive** effect on semi-natural habitats.

2.49 **Coast (Figure 2.9):** ES is having a **strongly positive** effect on the salt marsh habitats of the New Forest, Romney Marsh and the Dorset Heaths but a neutral effect on those of the Greater Thames Estuary, where salt marsh was once an over-riding characteristic of this NCA, suggesting the need for better targeting.

2.50 **For more detail on the performance of individual NCAs in this ALT refer to Appendix 3.**

Western Mixed ALT

2.51 The overall results for this ALT by theme are summarised in **Table 2.6.**

Table 2.6: Summary of assessment results by theme for the NCAs of the Western Mixed ALT

Theme	Number of NCAs with this assessment result		
	Strongly positive	**Positive**	**Neutral**
Trees & woodland	7	16	20
Boundaries	11	25	7
Agricultural land use	0	16	27
Traditional farm buildings	4	12	27
Historic environment (1 N/A)	5	18	19
Semi-natural habitats	11	25	7
Coast (31 N/A)	7	4	1

2.52 **Woodland and trees (Figure 2.3):** Although woodland and trees are characteristic of this ALT, in nearly half of these NCAs ES is having a **neutral** effect under this theme. Those landscapes where ES is assessed as having a **strongly positive** effect tend to be plain and valley landscapes. Standing out under this theme is the Shropshire, Cheshire and Staffordshire Plain NCA where over 13,000 field trees are being protected under ES. Conversely, many vale landscapes where Elms were once an important component of the landscape, are identified as ES having a **neutral** effect under

this theme, including the Avon Vales, Trent Valley Washlands, Northamptonshire Vales, Leicestershire Vales, Upper Thames Clay Vales, and Vale of Taunton – these would benefit from greater targeting of tree protection (and reinstatement) options.

2.53 **Boundary features (Figure 2.4):** The importance of hedgerows in the landscape, joined by ditches in vale landscapes, is underlined by ES having a **strongly positive** effect on 26% of these NCAs, and a positive effect on a further 58% of NCAs. NCAs where ES is assessed as having a **neutral** effect are concentrated along the north east coastal belt.

2.54 **Agricultural land use (Figure 2.5):** It is noticeable that in these predominantly pastoral landscapes, ES is not playing a significant role in conserving permanent pastures. Under this landscape theme, in 63% of NCAs ES is having a **neutral** effect, and a **positive** effect in the remaining 37%. In only 15% of these NCAs is the threshold for lows input grasslands achieved. Greater targeting of options for wet and semi-improved / rough grasslands would be beneficial in these pastoral landscapes.

2.55 **Traditional farm buildings (Figure 2.6):** In this ALT, ES is assessed as having a **neutral** effect on conserving traditional farm buildings in 63% of NCAs. However, it is having a **positive** effect in 28% of NCAs. These NCAs, and those identified as **strongly positive** (9%) under this theme, are concentrated along the Welsh Borders and the north west coastal plain.

2.56 **Historic environment (Figure 2.7):** Overall, ES is having a less significant effect on this theme than in other ALTs. Where there is uptake it is primarily for the management of archaeology on grassland. Parklands, although common in this ALT, do not often achieve the identified threshold, even in landscapes such as Arden. This may be because they are being covered by special projects including conservation management plans. If not, better targeting is required.

2.57 **Semi-natural habitats (Figure 2.8):** Compared to most other ALTs, uptake relating to semi-natural habitats in these NCAs is lower, with only 30% of NCAs assessed as ES uptake having a **strongly positive** effect under this theme, and 40% of NCAs identified as having a **positive** outcome. Like the eastern arable landscapes there appears, on the whole, to have been less positive targeting of ES to particular habitat types. It is noticeable that many areas of lowland raised bog in the north west remain outside HLS, as in the Shropshire, Cheshire and Staffordshire Plain. Equally, with the clear exception of Cannock Chase, smaller areas of heathland, forming part of wider habitat mosaics, do not appear to have received particular attention in this ALT suggesting a lack of targeting of HLS. Overall the habitat types for which there is the highest uptake are species-rich grasslands, reflecting the pastoral traditions of this ALT, but in a considerable number of NCAs thresholds for these habitats are not met and, they are very frequently not met for wetland habitats, across this ALT, again suggesting the need for better targeting.

2.58 **Coast (Figure 2.9):** .Across 70% of the NCAs in this ALT coastal ES options are not relevant. In those NCAs where they are, ES uptake is generally having a **strongly positive** effect, especially for salt marsh and to a lesser extent for sand dunes. In the case of sand dunes ES is having a positive effect along the Cumbria coast but less so further south e.g. north of Liverpool.

2.59 **For more detail on the performance of individual NCAs in this ALT refer to Appendix 4.**

Upland Fringe ALT

2.60 The overall results for this ALT by theme are summarised in **Table 2.7.**

Table 2.7: Summary of assessment results by theme for the NCAs of the Upland Fringe ALT

Theme	Number of NCAs with this assessment result		
	Strongly positive	**Positive**	**Neutral**
Trees & woodland	2	11	9
Boundaries	8	11	3
Agricultural land use	7	5	10
Traditional farm buildings	2	8	12
Historic environment	2	12	8
Semi-natural habitats	10	9	3
Coast (17 N/A)	1	2	2

2.61 **Woodland and trees (Figure 2.3):** In this ALT the management and protection of woodlands, according to ES uptake levels, plays a proportionally more important role than the protection and management of individual trees. The thresholds for individual trees are only reached in six of the NCAs in this ALT. Nevertheless, both woodlands and trees are important features in these Upland Fringe locations and further targeting of small farm woodlands and field and hedgerow trees would be beneficial. Particularly noticeable are the low levels of uptake (and **neutral** assessments for woodland and trees) in NCAs such as the Derbyshire Peak Fringe and Lower Derwent, the Quantock Hills with their outgrown beech hedges, and South Devon with its numerous often small ancient woodlands.

2.62 **Boundary features (Figure 2.4):** The Upland Fringe NCAs tend to have a mix of boundary types (most commonly hedges and walls). Those NCAs where ES is **strongly positive** for boundary features are found in north central England and in the South West. In these cases the NCAs have high uptake for hedgerow options (well in excess of the threshold) and also for other important boundary types, either drystone walls in the north or stone-faced hedgebanks in the south west, combined in some NCA with the management of ditches. Those NCAs where ES is identified as having a **positive** effect are those where one boundary type exceeds the threshold but other boundary types do not. Those NCAs with a **neutral** assessment will be where no significant boundary type exceeds the threshold – it is noticeable that these three NCAs include both the Quantocks and the Forest of Dean where their distinctive field pattern is an important part of their landscape character.

2.63 **Agricultural land use (Figure 2.5):** In 45% of NCAs in this ALT, ES is assessed as having a **neutral** effect under this theme, concentrated on the Pennine Fringes and in Cornwall. Conversely those assessed as **positive** or **strongly positive** are concentrated in Devon and the north east. Unlike earlier ALTs, 50% of NCAs in this ALT achieve the threshold for low input grasslands. Those identified as strongly positive will be meeting this threshold along with those for wet and/or rough/semi-improved grasslands.

2.64 **Traditional farming buildings (Figure 2.6):** Those NCAs that are identified as **positive** or **strongly positive** under this theme are concentrated in north east England and Devon,

with nine NCAs meeting or significantly exceeding the threshold for the maintenance of farm buildings. The two NCAs that also meet the threshold for the restoration of traditional farm buildings and are assessed as **strongly positive** are the Northumberland Sandstone Hills and the Cheviot Fringe.

2.65 **Historic environment (Figure 2.7):** Those NCAs where ES has been assessed as having a **positive** effect on the historic environment are concentrated on the fringes of the northern uplands and in Devon. This primarily relates to the meeting of thresholds for the conservation of archaeology on grassland, with 13 NCAs in this ALT meeting this threshold. On the other hand few NCAs in this ALT meet the thresholds for parkland other than the Howgill Fells, Malvern Hills, Forest of Dean (although this uptake may relate to the conservation of wood pasture), the Blackdowns and South Devon. This suggests that there may be need for greater targeting.

2.66 **Semi-natural habitats (Figure 2.8):** As in other ALTs, there is a significant number of NCAs (45%) assessed as **strongly positive** under this theme, with a further 41% assessed as **positive**. The range of habitats covered is variable and includes species-rich grasslands, hay meadows, wetland habitats, lowland heathland and moorland – it tends to be those with moorland that are identified as benefiting from a strongly positive effect, although this will usually be accompanied by high uptake for other habitats as well. Those NCAs with a **neutral** result under this theme are the Tyne Gap and Hadrian's Wall, Durham Coalfield and the Lancashire Valleys.

2.67 **Coast (Figure 2.9):** It is only the NCAs in the South West within this ALT that have significant coast. Amongst these only one NCA is identified as having a **strongly positive** effect - which benefits form ES uptake for both saltmarsh and especially sand dunes.

2.68 **For more detail on the performance of individual NCAs in this ALT refer to Appendix 5.**

Upland ALT

2.69 The overall results for this ALT by theme are summarised in **Table 2.8.**

Table 2.8: Summary of assessment results by theme for the NCAs of the Upland ALT

Theme	Number of NCAs with this assessment result		
	Strongly positive	**Positive**	**Neutral**
Trees & woodland	8	10	4
Boundaries	12	8	2
Agricultural land use	11	10	1
Traditional farm buildings	9	6	7
Historic environment	8	10	4
Semi-natural habitats	15	5	2
Coast (18 N/A)	1	1	2

2.70 **Woodland and trees (Figure 2.3):** There is a much stronger response to this theme than in any of the other ALTs, with ES

option uptake having a **positive** or **strongly positive** effect under this theme in 82% of the NCAs. The only NCAs where this theme is identified as **neutral** is the Southern Pennines and Dark Peak (where overall uptake is very low) and in the largely treeless Carnmenellis and West Penwith in the South West. Unlike the other ALTs, there is a proportionally high level of uptake for the management of woodlands, with many NCAs meeting or exceeding the threshold. This is often joined by significant uptake for field trees. As one example, in the Yorkshire Dales the indicator result for woodland management is 25% compared to a threshold of 5% and the uptake of field trees is 5,461 compared to a threshold of 1,500.

2.71 **Boundary features (Figure 2.4):** As in most of the other ALTs (other than the South East Mixed (Wooded) ALT) there are high levels of uptake under this theme, with 54% of NCAs showing ES as having a strongly positive effect. As in the Upland Fringe ALT, those NCAs identified as strongly positive show high levels of uptake for both hedgerows and stone walls, the two characteristic boundary types.

2.72 **Agricultural land use (Figure 2.5):** This theme has a much stronger response than found in the NCAs of the Upland Fringe. It is notable that this ALT, of all the ALTs, has by far the largest number of NCAs meeting or exceeding the threshold for low input grasslands – with 72% of NCAs in this ALT meeting or exceeding this threshold. To be identified as having a **strongly positive** landscape effect under this theme, the NCAs will meet or exceed the threshold for wet and /or rough grassland (depending on what is characteristic), as well as low input grasslands.

2.73 **Traditional farm buildings (Figure 2.6)**: It is in the Uplands that this landscape theme comes into its own, with 68% of NCAs identified as ES having a **positive** or **strongly positive** landscape effect. It is identified as having a strongly positive effect in those NCAs where stone field barns are highly characteristics, as in the Yorkshire Dales and Moors and the North Pennines as well as along the Scottish Borders and in the Lake District – to achieve this assessment NCAs will usually meet or significantly exceed the thresholds for both the maintenance and restoration of traditional farm buildings. The NCAs that are assessed as **neutral** under this theme are the Dark Peak and Southern Pennines and the Uplands of Cornwall and Dartmoor where field barns are less characteristic and there is strong pressure for conversion to holiday accommodation where the barns lie within the farm complex.

2.74 **Historic environment (Figure 2.7):** ES is having a significantly more positive effect on the historic environment than in the Upland Fringe ALT, having a **positive** or **strongly positive** effect in 82% of NCAs (compared to 63% in the Upland Fringe). In the Uplands 16 NCAs meet or exceed the threshold for the conservation of archaeology on grass. In those NCAs where ES is assessed as having a strongly positive effect under this theme, uptake will also normally exceed the threshold for the conservation of archaeology on moorland and (where characteristic) for parkland. Those NCAs where ES is having a strongly positive effect are concentrated along the Scottish Borders, Cumbria and the northern Pennines, the Welsh Borders and on the Lizard. It is noticeable that uptake is generally not high in the NCAs of Cornwall or on Exmoor or Dartmoor – areas of international importance for their archaeological resource.

2.75 **Semi-natural habitats (Figure 2.8):** ES is having a **strongly positive** effect on 68% of NCAs in this ALT, reflecting the very strong targeting of ES on upland moorland areas, although uptake for the re-wetting of blanket bog has been limited. The only NCAs to be assessed as **neutral** under this theme in this ALT are: the Dark Peak (which has low levels of uptake overall) and Carnmenellis.

2.76 **Coast (Figure 2.9)**: There are only three NCAs in this ALT where ES options are relevant and these are South Cumbria Low Fells (assessed as positive); North Yorkshire Moors and Cleveland Hills (assessed as neutral) and Exmoor (assessed as strongly positive).

2.77 **For more detail on the performance of individual NCAs in this ALT refer to Appendix 6.**

3 PART B: THE LANDSCAPE EFFECTS OF ES UNDER THE INDIVIDUAL THEMES

3.1 Here the results of the assessment are provided by landscape theme. In each case the information is provided through a series of maps with a text box inset into the map which summarises:

- key findings/patterns in uptake observed
- Any caveats on the results e.g. if we know that there are issues with uptake or base data or any other potential limitation that needs to be taken into account.

3.2 The maps are ordered by each theme and within each theme include:

1. An overall map of ES results for that theme
2. Maps for each key objective per theme (these do not cover all objectives but those that were more frequently selected i.e. those reflecting the more common ley landscape characteristics of the NCAs).

Themes

Theme A: Woodlands and tree cover (including traditional orchards)
Theme B: Field patterns and boundary types
Theme C: Agricultural land use
Theme D: Traditional farm buildings
Theme E: Historic environment (including parkland)
Theme F: Semi-natural habitats
Theme G: Coast

Objectives

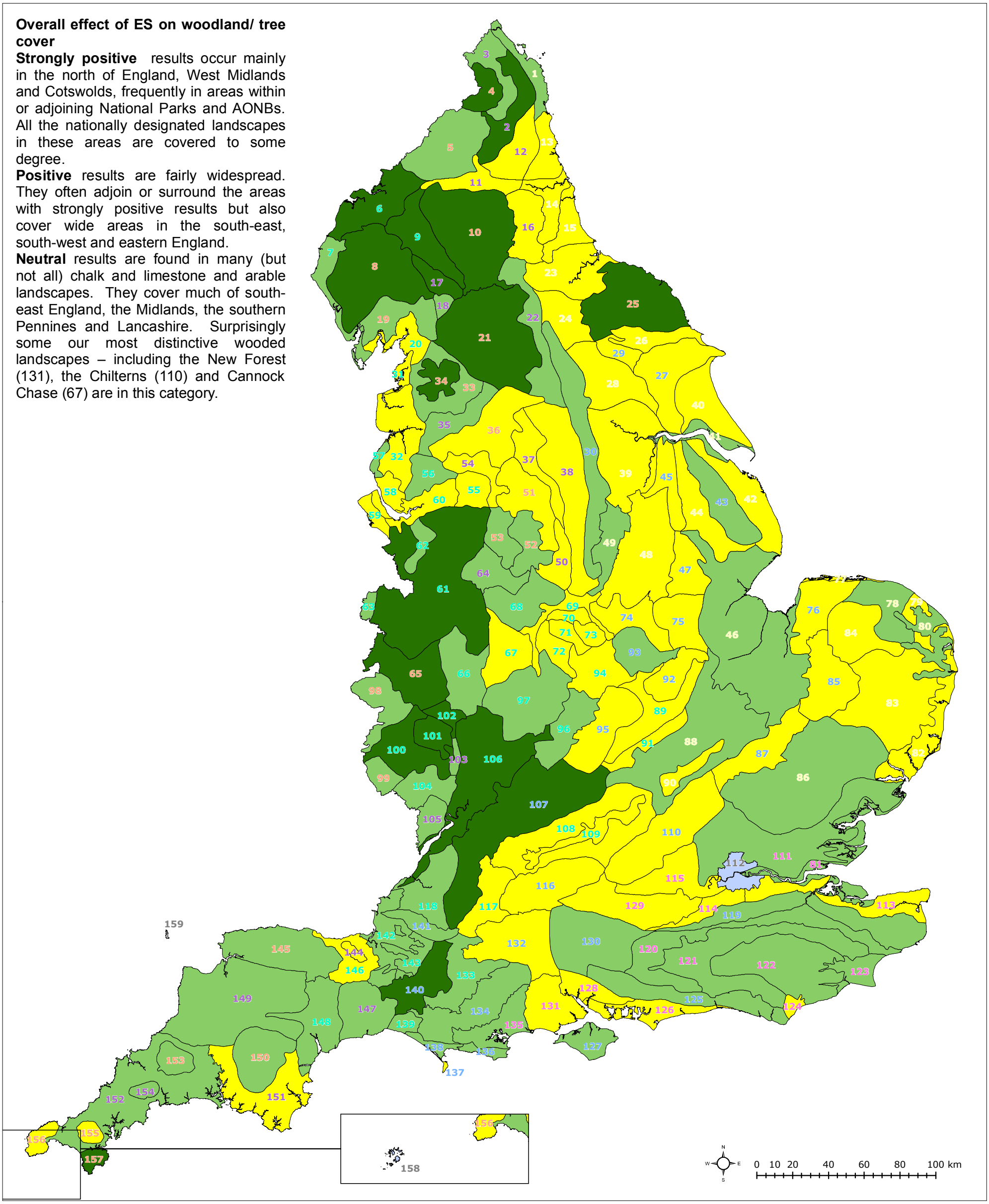
Objectives under each theme carry the theme prefix e.g. Objective A1 Woodland management, B1 Management of hedgerows.

Overall effect of ES on woodland/ tree cover

Strongly positive results occur mainly in the north of England, West Midlands and Cotswolds, frequently in areas within or adjoining National Parks and AONBs. All the nationally designated landscapes in these areas are covered to some degree.

Positive results are fairly widespread. They often adjoin or surround the areas with strongly positive results but also cover wide areas in the south-east, south-west and eastern England.

Neutral results are found in many (but not all) chalk and limestone and arable landscapes. They cover much of south-east England, the Midlands, the southern Pennines and Lancashire. Surprisingly some our most distinctive wooded landscapes – including the New Forest (131), the Chilterns (110) and Cannock Chase (67) are in this category.



LUC LDN 5693-01_015_ThemeA_03/12/2013

Overall effect of ES on woodland/ tree cover

- Strongly positive
- Positive
- Neutral
- N/A
- No data

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.1

Overall effect of ES on woodland/ tree cover

Map Scale @ A3: 1:2,100,000

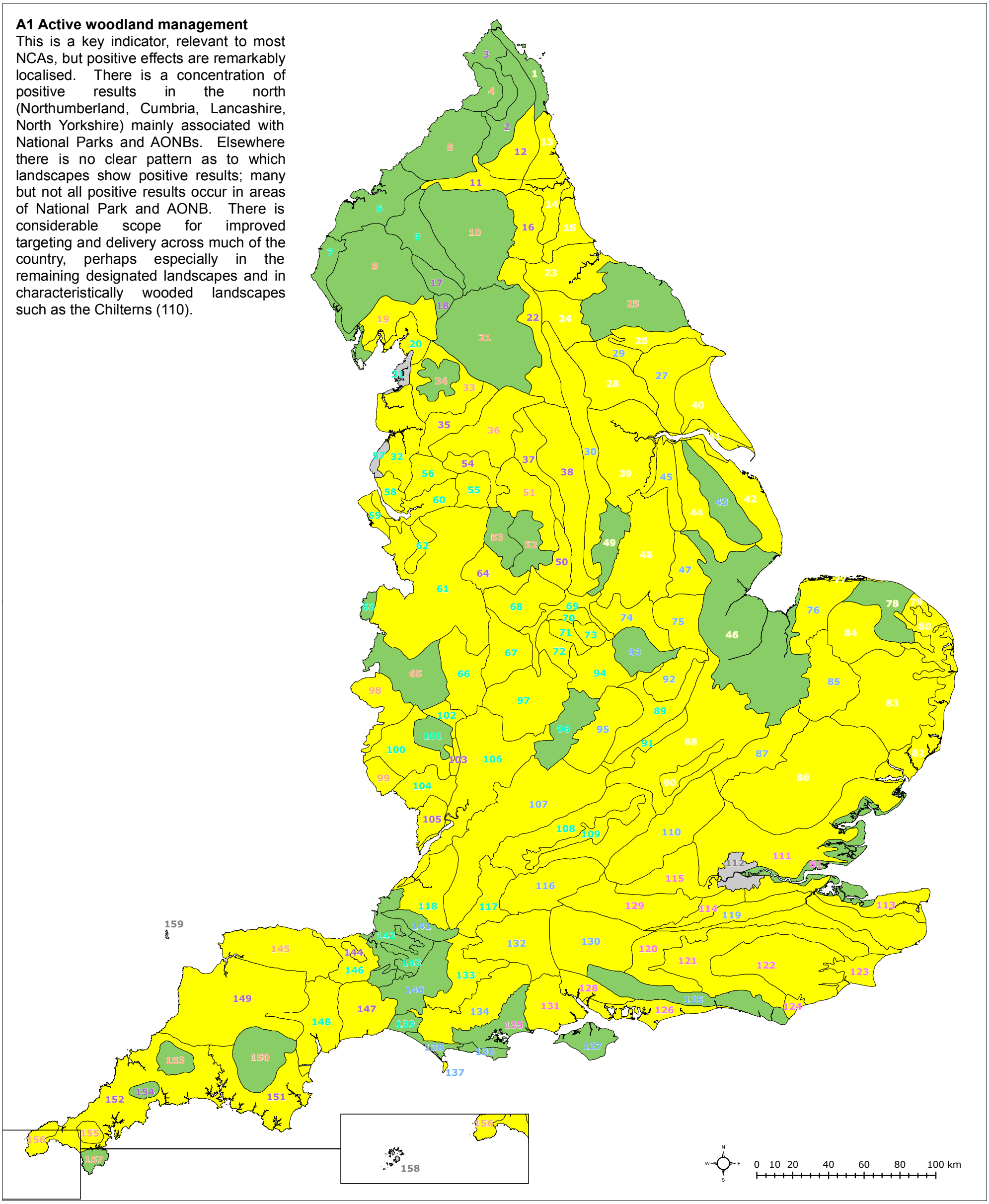
LUC

NATURAL ENGLAND

Source: Natural England and LUC

A1 Active woodland management

This is a key indicator, relevant to most NCAs, but positive effects are remarkably localised. There is a concentration of positive results in the north (Northumberland, Cumbria, Lancashire, North Yorkshire) mainly associated with National Parks and AONBs. Elsewhere there is no clear pattern as to which landscapes show positive results; many but not all positive results occur in areas of National Park and AONB. There is considerable scope for improved targeting and delivery across much of the country, perhaps especially in the remaining designated landscapes and in characteristically wooded landscapes such as the Chilterns (110).



LUC LDN 5693-01_022_ObjA1_03/12/2013

Objective A1: Effect of ES on active woodland management

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.2

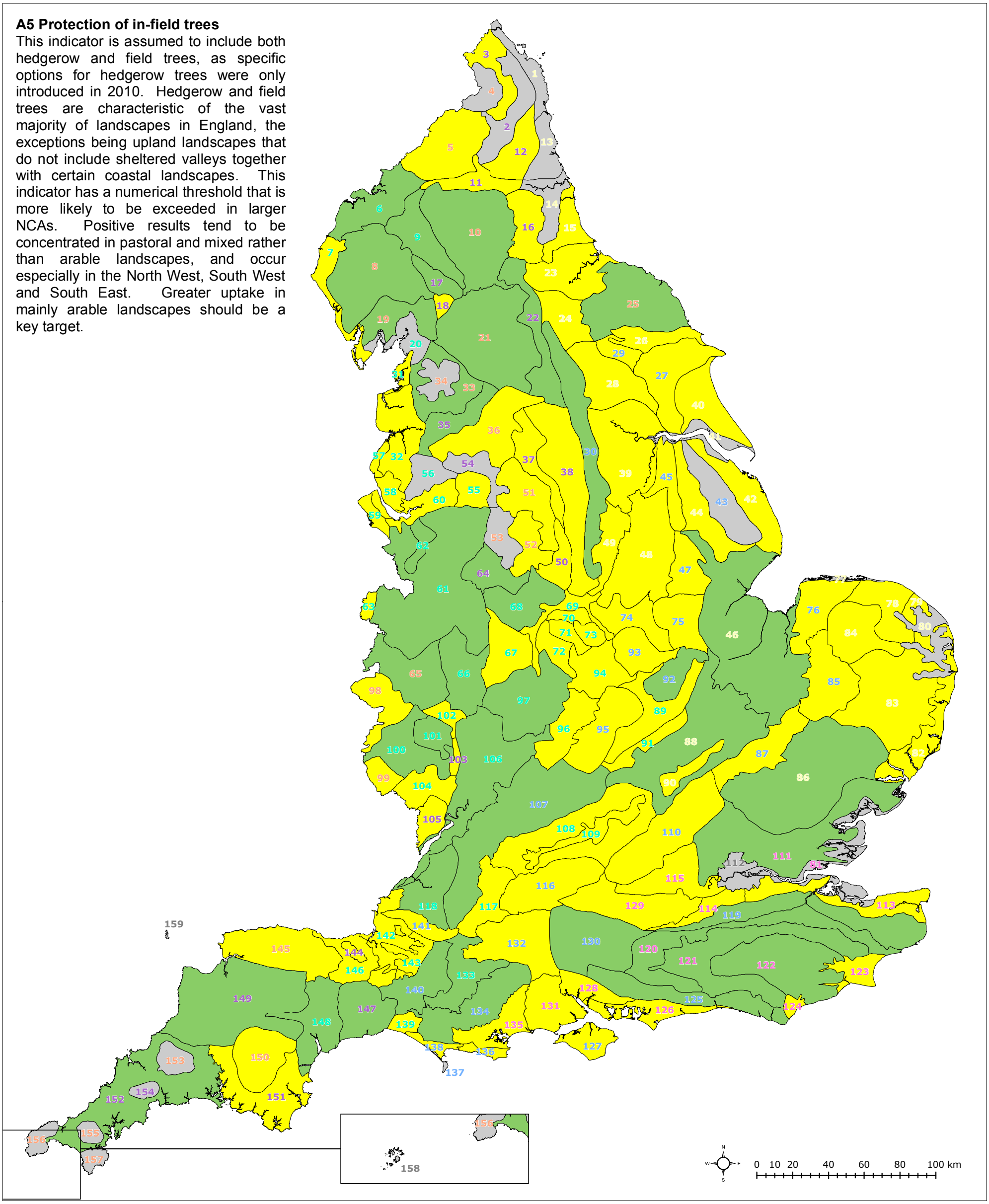
Objective A1: Effect of ES on active woodland management

Map Scale @ A3: 1:2,100,000

Source: Natural England and LUC

A5 Protection of in-field trees

This indicator is assumed to include both hedgerow and field trees, as specific options for hedgerow trees were only introduced in 2010. Hedgerow and field trees are characteristic of the vast majority of landscapes in England, the exceptions being upland landscapes that do not include sheltered valleys together with certain coastal landscapes. This indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. Positive results tend to be concentrated in pastoral and mixed rather than arable landscapes, and occur especially in the North West, South West and South East. Greater uptake in mainly arable landscapes should be a key target.



LUC LDN 5693-01_023_ObjA5_03/12/2013

Objective A5: Effect of ES on the protection of in-field trees

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.3

Objective A5: Effect of ES on the protection of in-field trees

Map Scale @ A3: 1:2,100,000

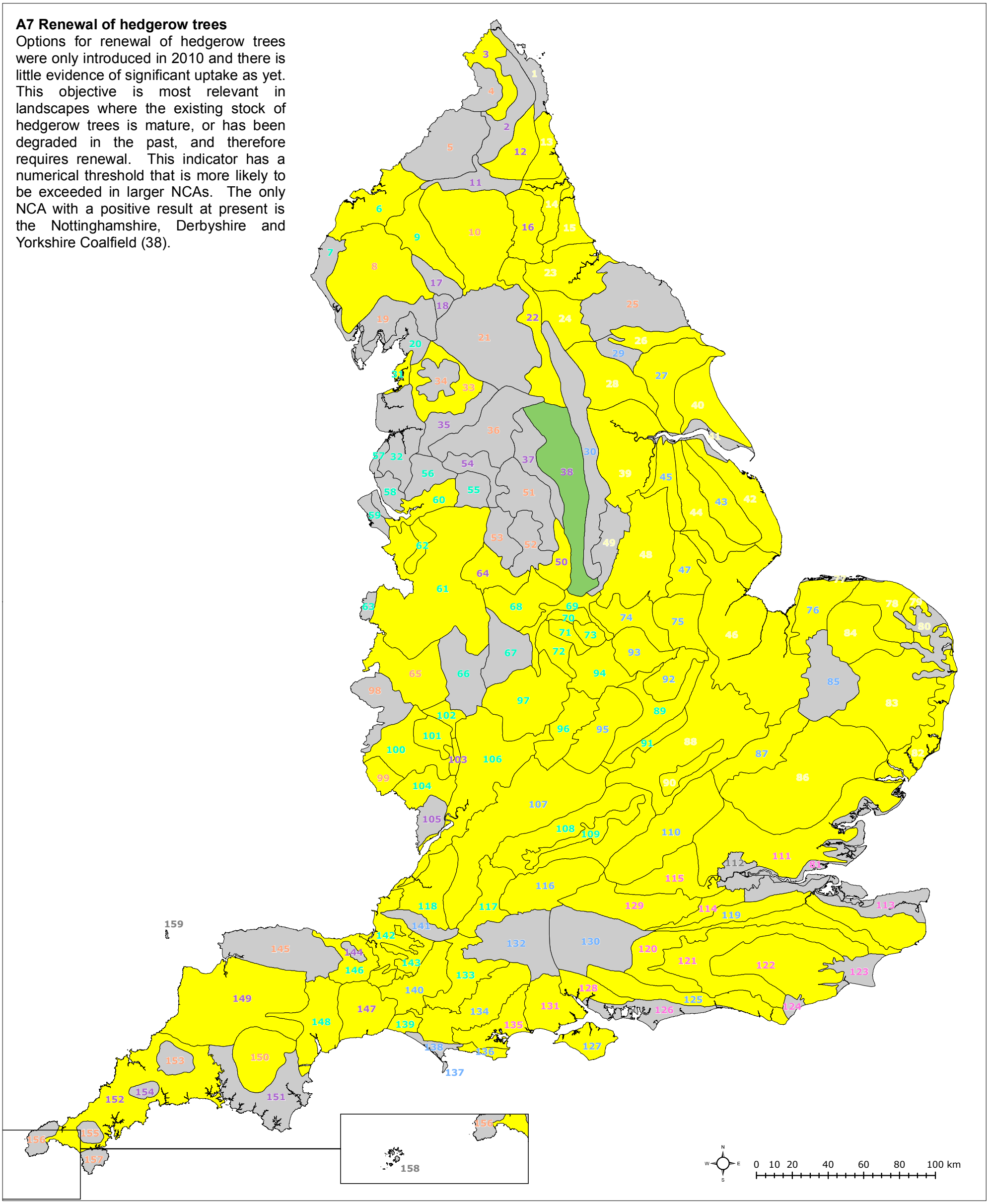
LUC

NATURAL ENGLAND

Source: Natural England and LUC

A7 Renewal of hedgerow trees

Options for renewal of hedgerow trees were only introduced in 2010 and there is little evidence of significant uptake as yet. This objective is most relevant in landscapes where the existing stock of hedgerow trees is mature, or has been degraded in the past, and therefore requires renewal. This indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. The only NCA with a positive result at present is the Nottinghamshire, Derbyshire and Yorkshire Coalfield (38).



LUC LDN 5693-01_024_ObjA7_03/12/2013

Objective A7: Effect of ES on the renewal of hedgerow trees

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.4

Objective A7: Effect of ES on the renewal of hedgerow trees

Map Scale @ A3: 1:2,100,000

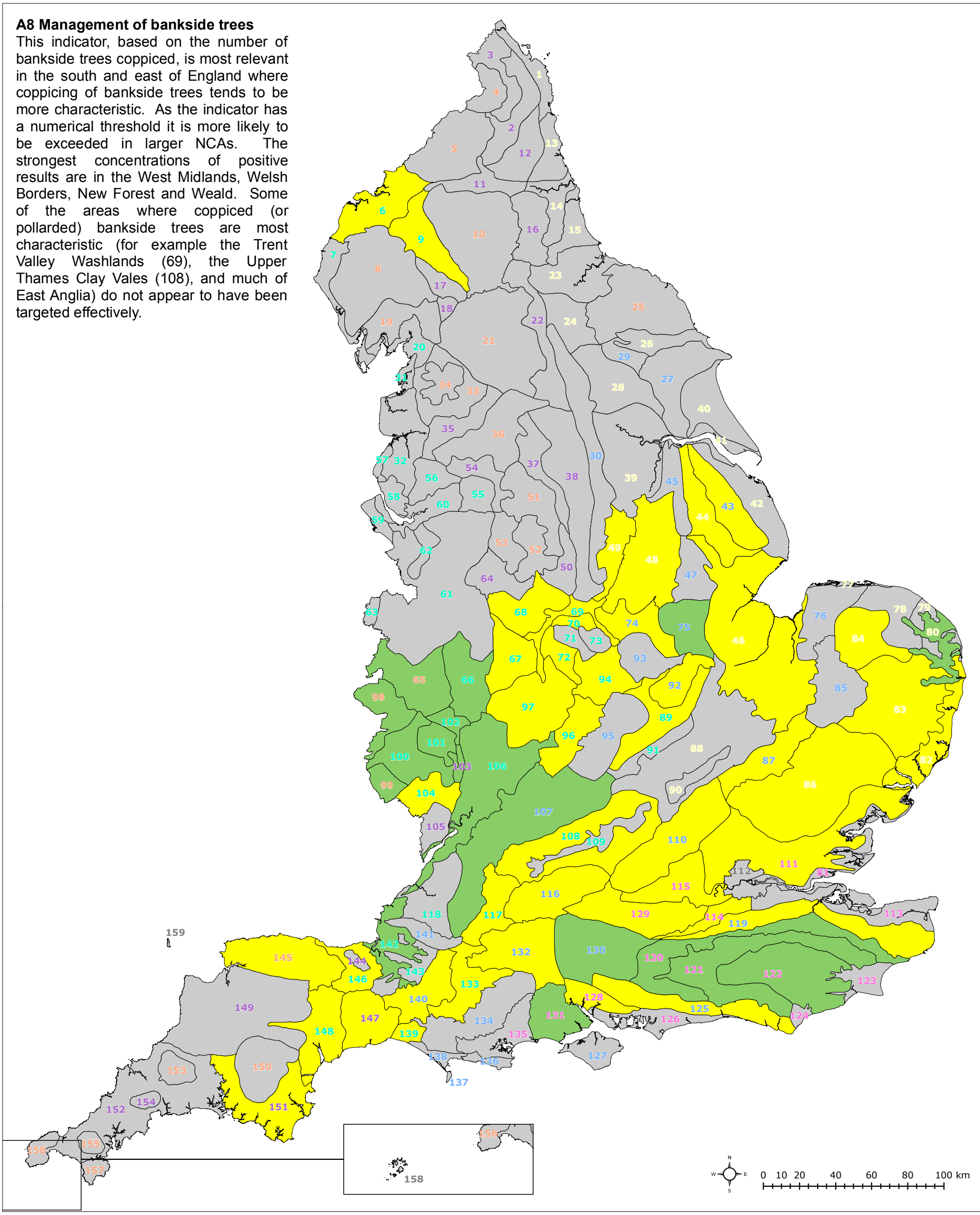
LUC

NATURAL ENGLAND

Source: Natural England and LUC

A8 Management of bankside trees

This indicator, based on the number of bankside trees coppiced, is most relevant in the south and east of England where coppicing of bankside trees tends to be more characteristic. As the indicator has a numerical threshold it is more likely to be exceeded in larger NCAs. The strongest concentrations of positive results are in the West Midlands, Welsh Borders, New Forest and Weald. Some of the areas where coppiced (or pollarded) bankside trees are most characteristic (for example the Trent Valley Washlands (69), the Upper Thames Clay Vales (108), and much of East Anglia) do not appear to have been targeted effectively.



LUC LDN 5693-01_053_ObjA8_03/12/2013

Objective A8: Effect of ES on the management of bankside trees

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.5

Objective A8: Effect of ES on the management of bankside trees

Map Scale @ A3: 1:2,100,000

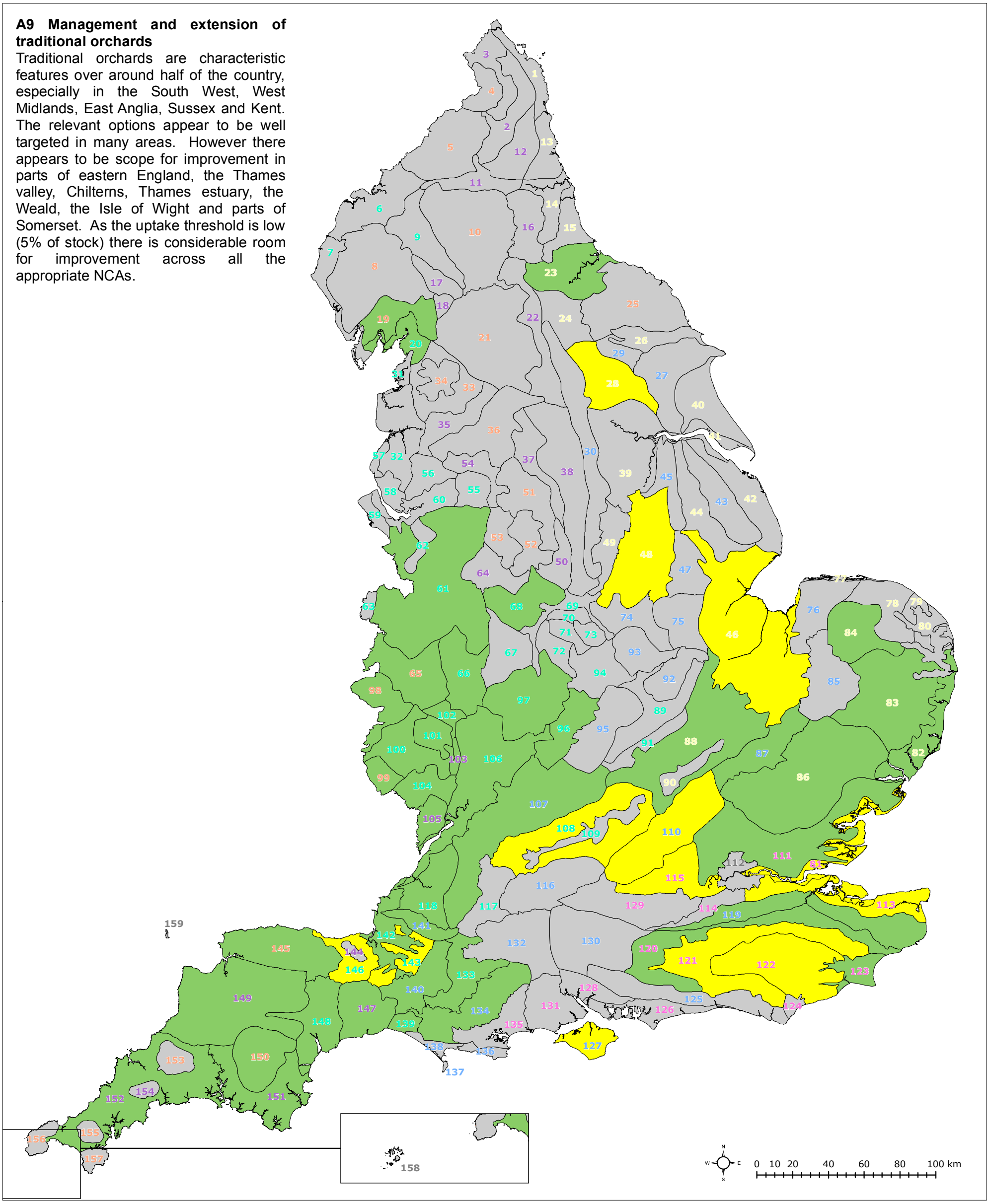
LUC

NATURAL ENGLAND

Source: Natural England and LUC

A9 Management and extension of traditional orchards

Traditional orchards are characteristic features over around half of the country, especially in the South West, West Midlands, East Anglia, Sussex and Kent. The relevant options appear to be well targeted in many areas. However there appears to be scope for improvement in parts of eastern England, the Thames valley, Chilterns, Thames estuary, the Weald, the Isle of Wight and parts of Somerset. As the uptake threshold is low (5% of stock) there is considerable room for improvement across all the appropriate NCAs.



LUC LDN 5693-01_025_ObjA9 03/12/2013

Objective A9: Effect of ES on the management and extension of traditional orchards

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.6

Objective A9: Effect of ES on the management and extension of traditional orchards

Map Scale @ A3: 1:2,100,000

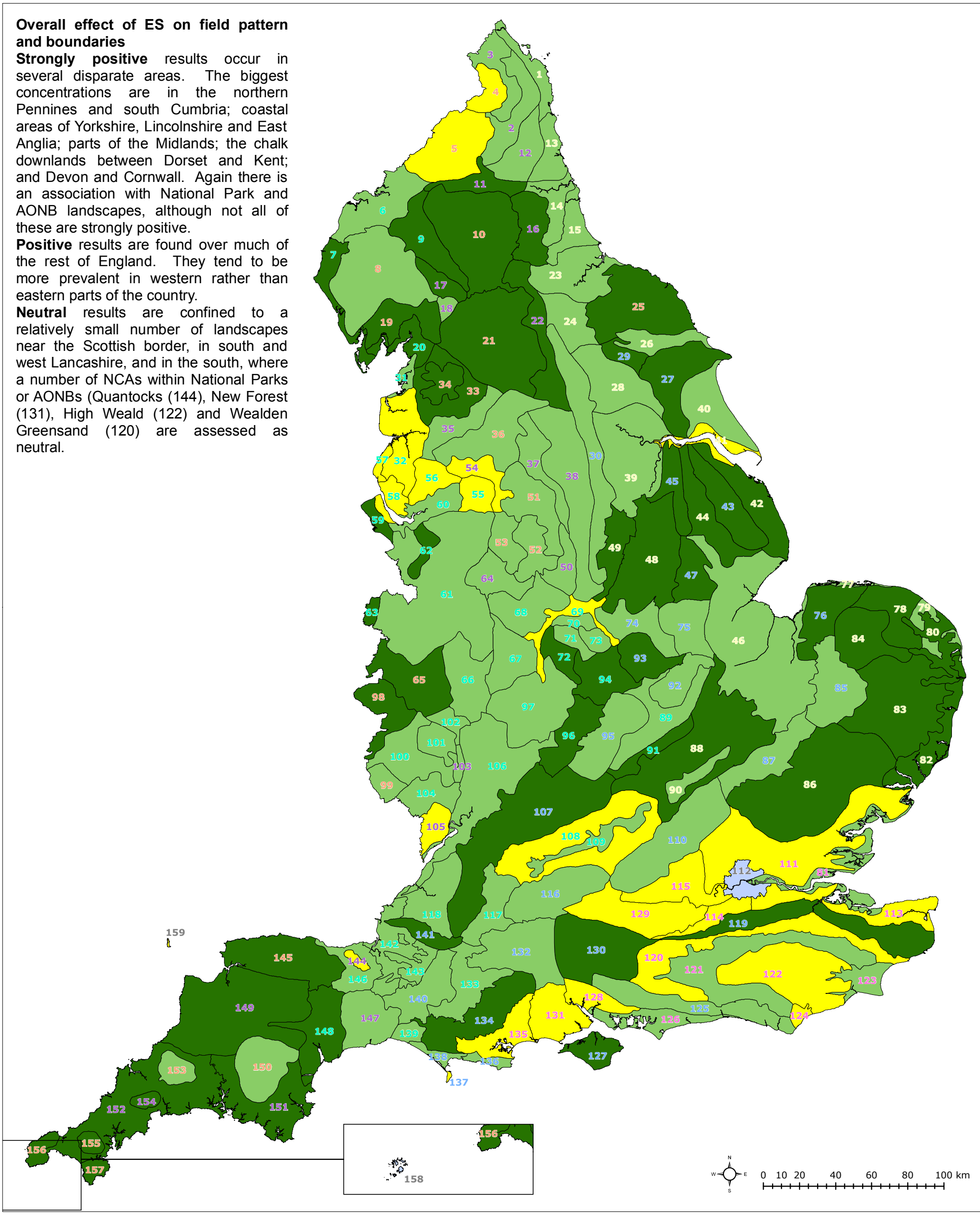
Source: Natural England and LUC

Overall effect of ES on field pattern and boundaries

Strongly positive results occur in several disparate areas. The biggest concentrations are in the northern Pennines and south Cumbria; coastal areas of Yorkshire, Lincolnshire and East Anglia; parts of the Midlands; the chalk downlands between Dorset and Kent; and Devon and Cornwall. Again there is an association with National Park and AONB landscapes, although not all of these are strongly positive.

Positive results are found over much of the rest of England. They tend to be more prevalent in western rather than eastern parts of the country.

Neutral results are confined to a relatively small number of landscapes near the Scottish border, in south and west Lancashire, and in the south, where a number of NCAs within National Parks or AONBs (Quantocks (144), New Forest (131), High Weald (122) and Wealden Greensand (120) are assessed as neutral.



LUC LDN 5693-01_016_ThemeB 03/12/2013

Overall effect of ES on field pattern and boundaries

- Strongly positive
- Positive
- Neutral
- No data

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.7

Overall effect of ES on field pattern and boundaries

Map Scale @ A3: 1:2,100,000

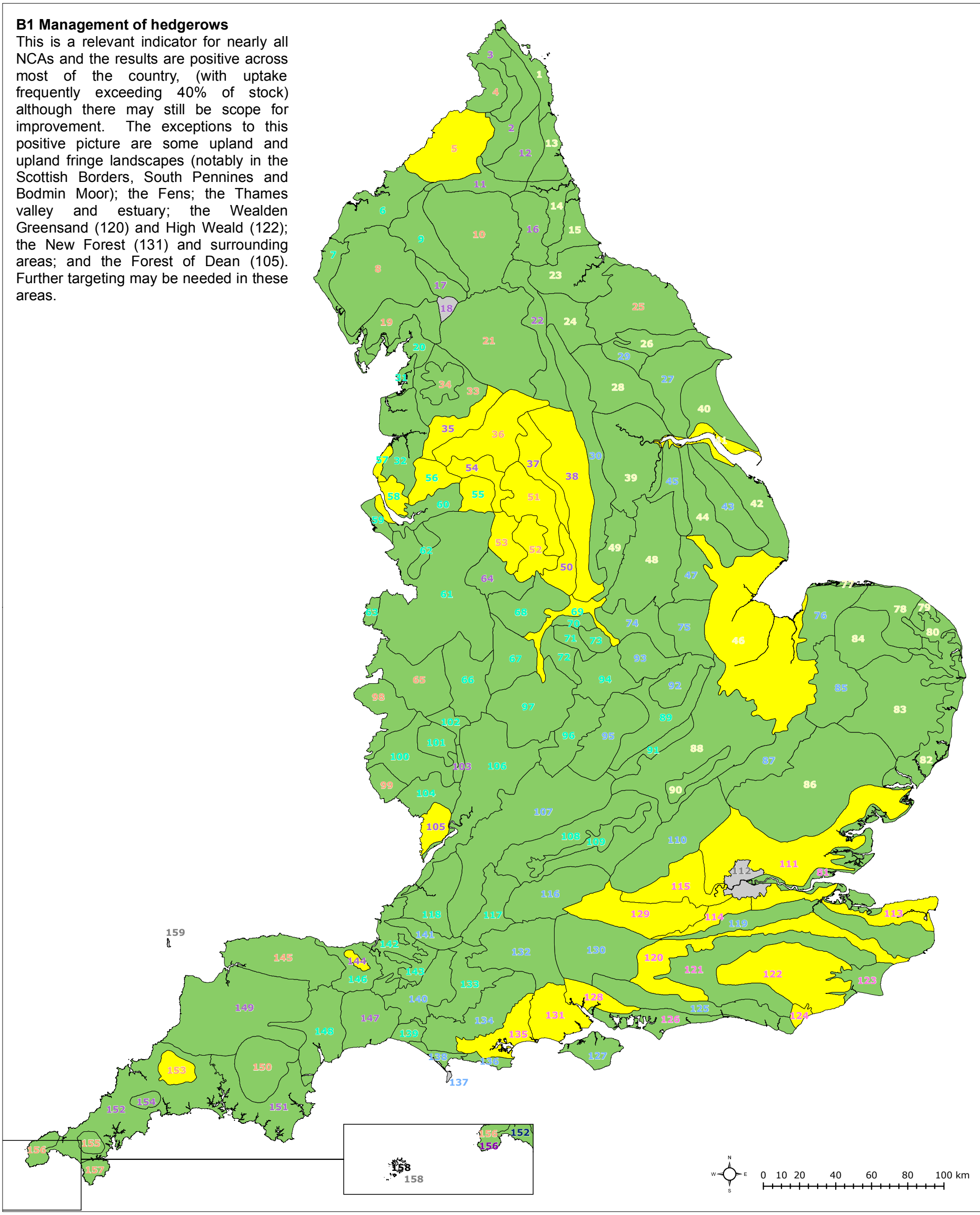
LUC

NATURAL ENGLAND

Source: Natural England and LUC

B1 Management of hedgerows

This is a relevant indicator for nearly all NCAs and the results are positive across most of the country, (with uptake frequently exceeding 40% of stock) although there may still be scope for improvement. The exceptions to this positive picture are some upland and upland fringe landscapes (notably in the Scottish Borders, South Pennines and Bodmin Moor); the Fens; the Thames valley and estuary; the Wealden Greensand (120) and High Weald (122); the New Forest (131) and surrounding areas; and the Forest of Dean (105). Further targeting may be needed in these areas.



LUC LDN 5693-01_026_ObjB1_03/12/2013

Objective B1: Effect of ES on the management of hedgerows

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.8

Objective B1: Effect of ES on the management of hedgerows

Map Scale @ A3: 1:2,100,000

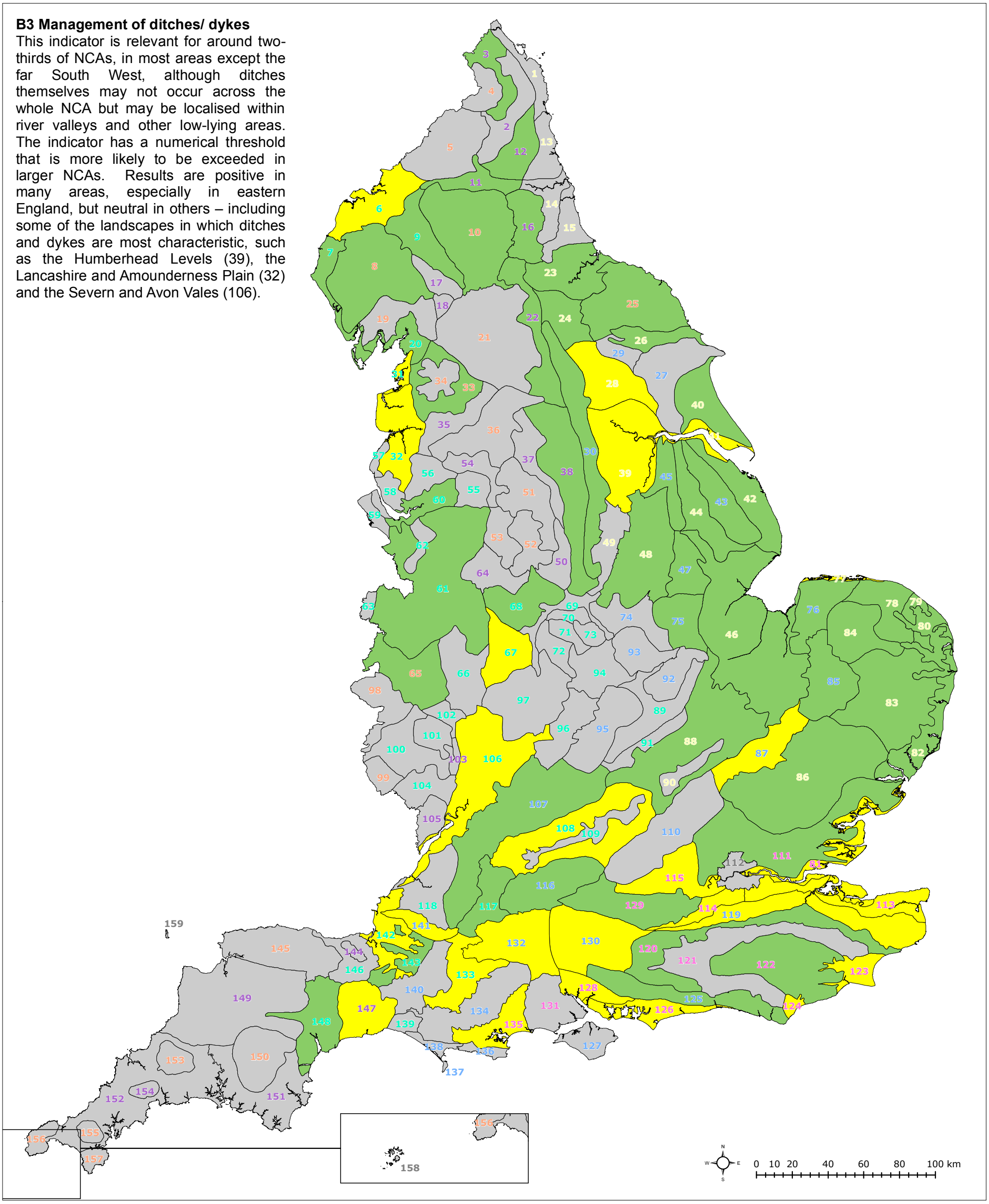
LUC

NATURAL ENGLAND

Source: Natural England and LUC

B3 Management of ditches/ dykes

This indicator is relevant for around two-thirds of NCAs, in most areas except the far South West, although ditches themselves may not occur across the whole NCA but may be localised within river valleys and other low-lying areas. The indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. Results are positive in many areas, especially in eastern England, but neutral in others – including some of the landscapes in which ditches and dykes are most characteristic, such as the Humberhead Levels (39), the Lancashire and Amounderness Plain (32) and the Severn and Avon Vales (106).



LUC LDN 5693-01_027_ObjB3_03/12/2013

Objective B3: Effect of ES on the management of ditches/dykes

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.9

Objective B3: Effect of ES on the management of ditches/dykes

Map Scale @ A3: 1:2,100,000

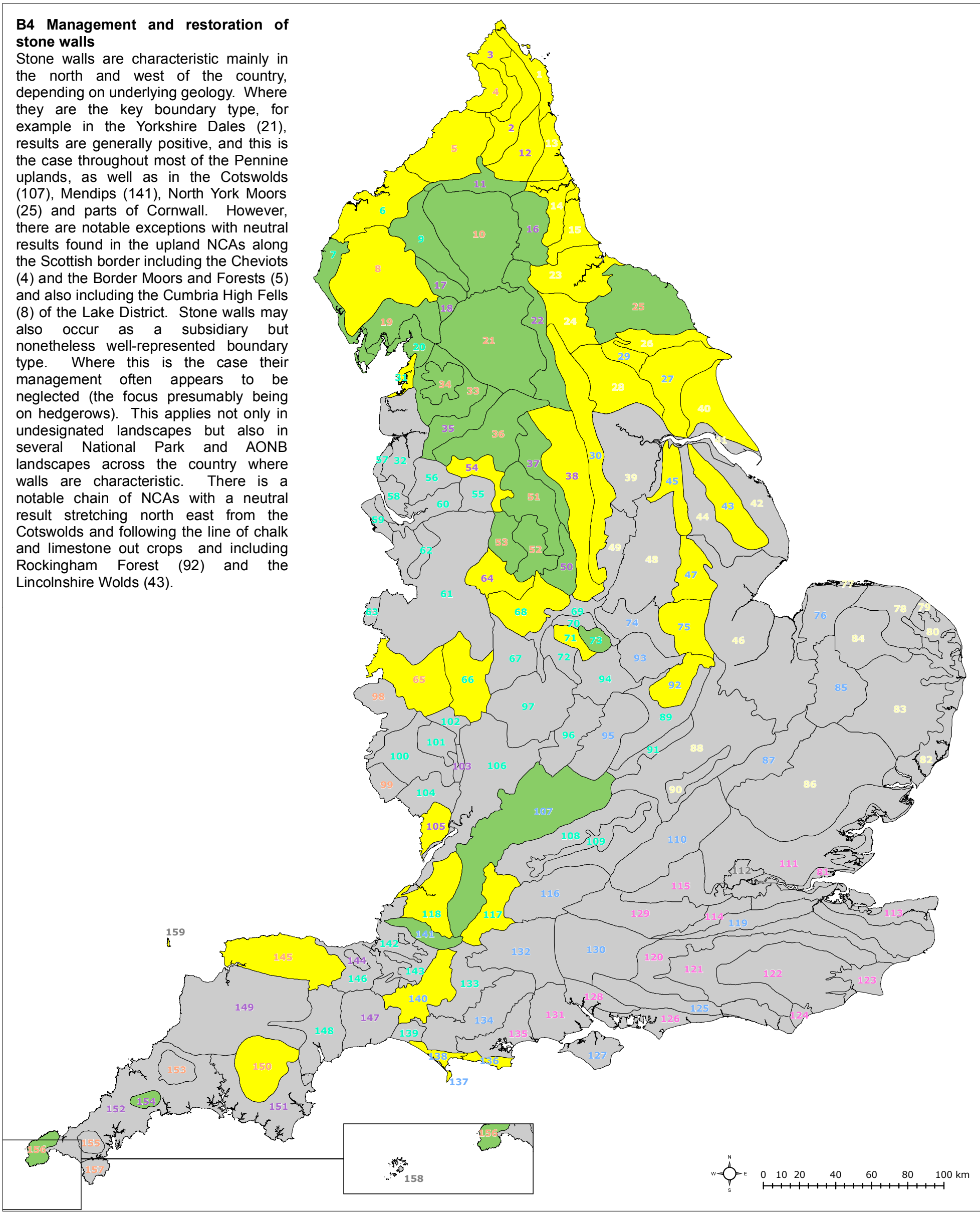
LUC

NATURAL ENGLAND

Source: Natural England and LUC

B4 Management and restoration of stone walls

Stone walls are characteristic mainly in the north and west of the country, depending on underlying geology. Where they are the key boundary type, for example in the Yorkshire Dales (21), results are generally positive, and this is the case throughout most of the Pennine uplands, as well as in the Cotswolds (107), Mendips (141), North York Moors (25) and parts of Cornwall. However, there are notable exceptions with neutral results found in the upland NCAs along the Scottish border including the Cheviots (4) and the Border Moors and Forests (5) and also including the Cumbria High Fells (8) of the Lake District. Stone walls may also occur as a subsidiary but nonetheless well-represented boundary type. Where this is the case their management often appears to be neglected (the focus presumably being on hedgerows). This applies not only in undesignated landscapes but also in several National Park and AONB landscapes across the country where walls are characteristic. There is a notable chain of NCAs with a neutral result stretching north east from the Cotswolds and following the line of chalk and limestone out crops and including Rockingham Forest (92) and the Lincolnshire Wolds (43).



LUC LDN 5693-01_028_ObjB4_03/12/2013

Objective B4: Effect of ES on the management and restoration of stone walls

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.10

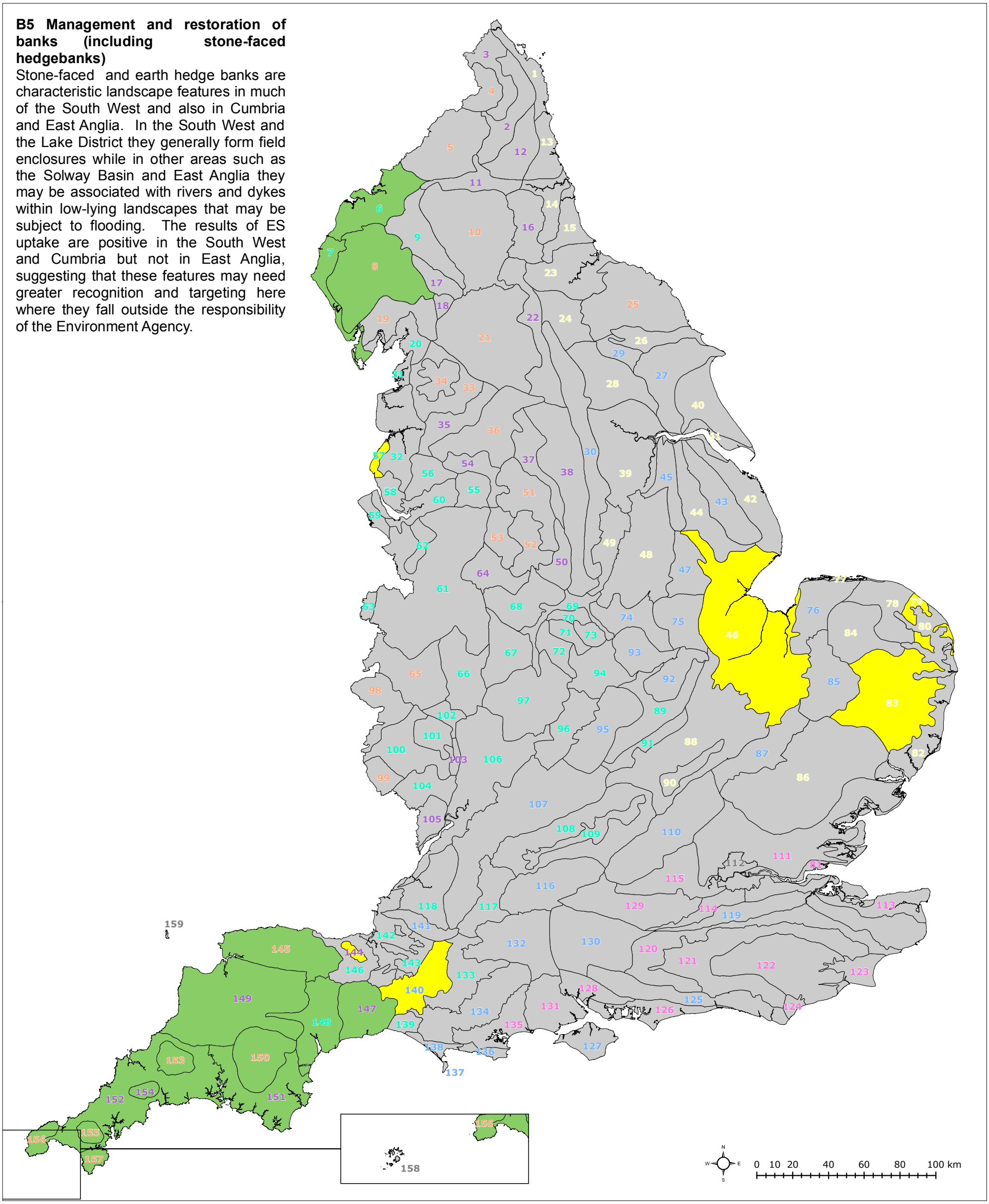
Objective B4: Effect of ES on the management and restoration of stone walls

Map Scale @ A3: 1:2,100,000

Source: Natural England and LUC

B5 Management and restoration of banks (including stone-faced hedgebanks)

Stone-faced and earth hedge banks are characteristic landscape features in much of the South West and also in Cumbria and East Anglia. In the South West and the Lake District they generally form field enclosures while in other areas such as the Solway Basin and East Anglia they may be associated with rivers and dykes within low-lying landscapes that may be subject to flooding. The results of ES uptake are positive in the South West and Cumbria but not in East Anglia, suggesting that these features may need greater recognition and targeting here where they fall outside the responsibility of the Environment Agency.



LUC LDN 5693-01_029_ObjB5_03/12/2013

Objective B5: Effect of ES on the management and restoration of banks (including stone-faced hedgebanks)

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.11

Objective B5: Effect of ES on the management and restoration of banks (including stone-faced hedgebanks)

Map Scale @ A3: 1:2,100,000

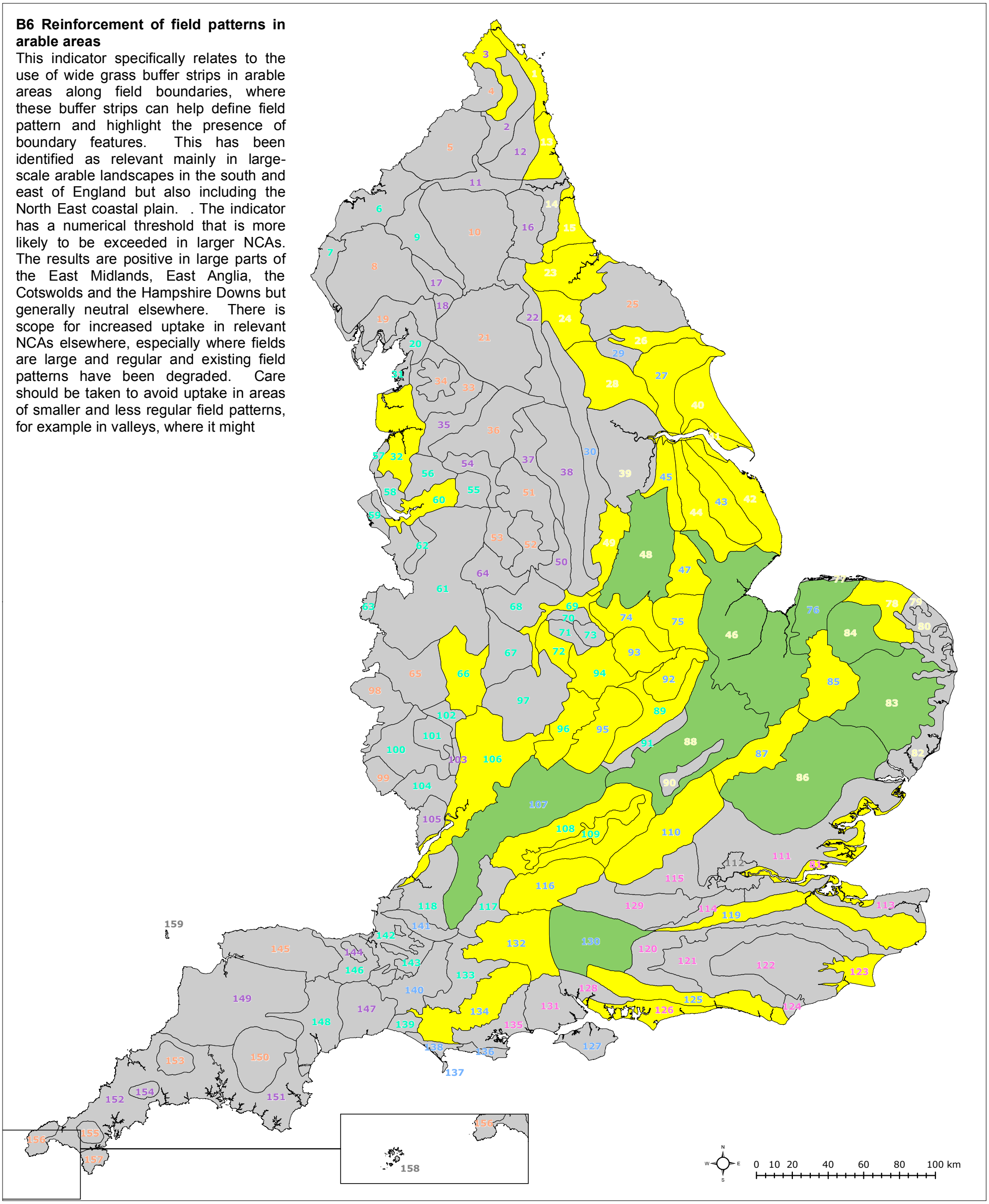
LUC

NATURAL ENGLAND

Source: Natural England and LUC

B6 Reinforcement of field patterns in arable areas

This indicator specifically relates to the use of wide grass buffer strips in arable areas along field boundaries, where these buffer strips can help define field pattern and highlight the presence of boundary features. This has been identified as relevant mainly in large-scale arable landscapes in the south and east of England but also including the North East coastal plain. . The indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. The results are positive in large parts of the East Midlands, East Anglia, the Cotswolds and the Hampshire Downs but generally neutral elsewhere. There is scope for increased uptake in relevant NCAs elsewhere, especially where fields are large and regular and existing field patterns have been degraded. Care should be taken to avoid uptake in areas of smaller and less regular field patterns, for example in valleys, where it might



LUC LDN 5693-01_030_ObjB6_03/12/2013

Objective B6: Effect of ES on the reinforcement of field patterns in arable areas

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.12

Objective B6: Effect of ES on the reinforcement of field patterns in arable areas

Map Scale @ A3: 1:2,100,000

LUC

NATURAL ENGLAND

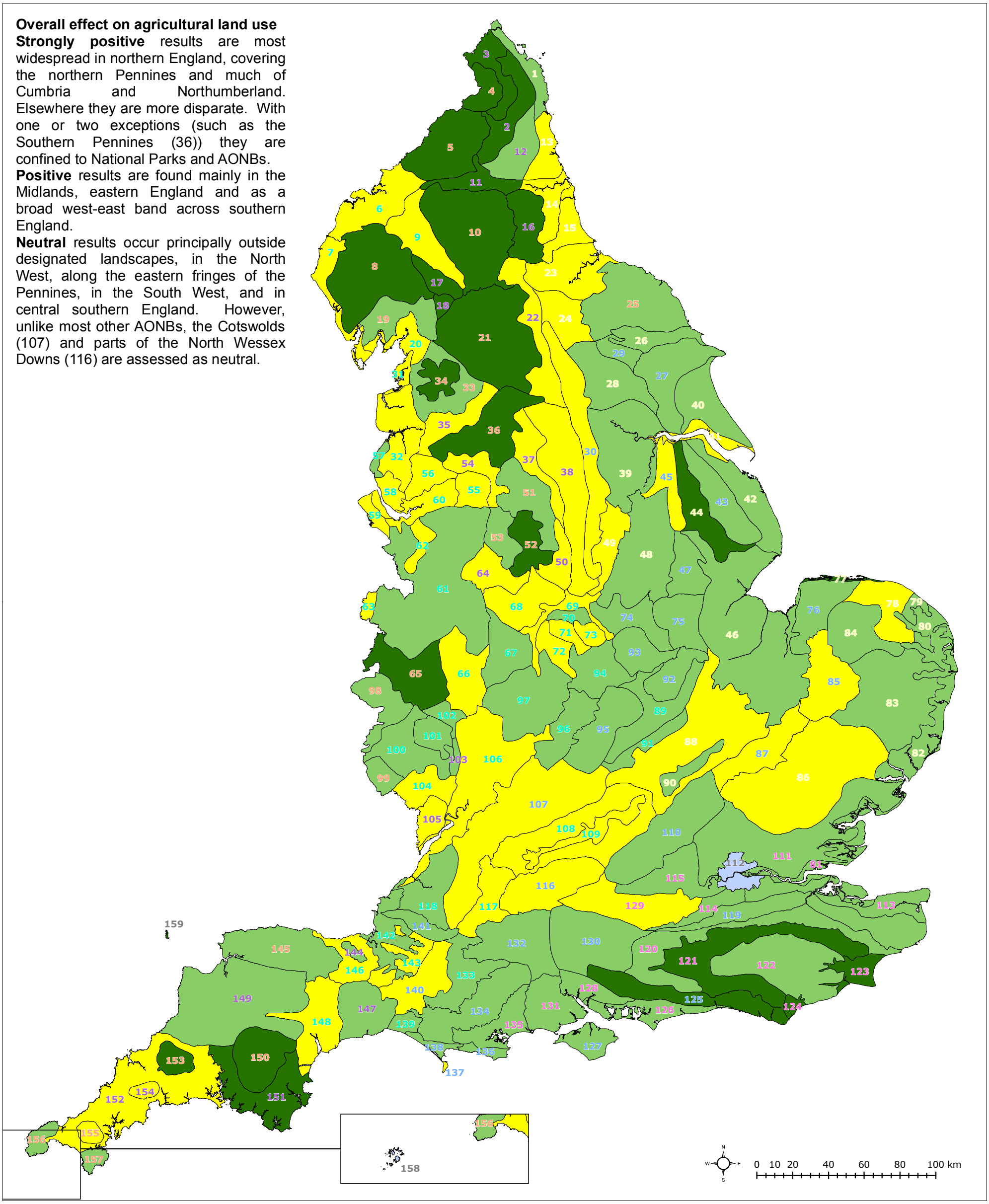
Source: Natural England and LUC

Overall effect on agricultural land use

Strongly positive results are most widespread in northern England, covering the northern Pennines and much of Cumbria and Northumberland. Elsewhere they are more disparate. With one or two exceptions (such as the Southern Pennines (36)) they are confined to National Parks and AONBs.

Positive results are found mainly in the Midlands, eastern England and as a broad west-east band across southern England.

Neutral results occur principally outside designated landscapes, in the North West, along the eastern fringes of the Pennines, in the South West, and in central southern England. However, unlike most other AONBs, the Cotswolds (107) and parts of the North Wessex Downs (116) are assessed as neutral.



LUC LDN 5693-01_017_ThemeC2 03/12/2013

Overall effect of ES on agricultural land use

- Strongly positive
- Positive
- Neutral
- No data

Colours of the NCA ID labels:

ALT 1: Chalk and Limestone Mixed
ALT 2: Eastern Arable
ALT 3: SE Mixed (Wooded)
ALT 4: Western mixed
ALT 5: Upland Fringe
ALT 6: Upland
ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.13

Overall effect of ES on agricultural land use

Map Scale @ A3: 1:2,100,000

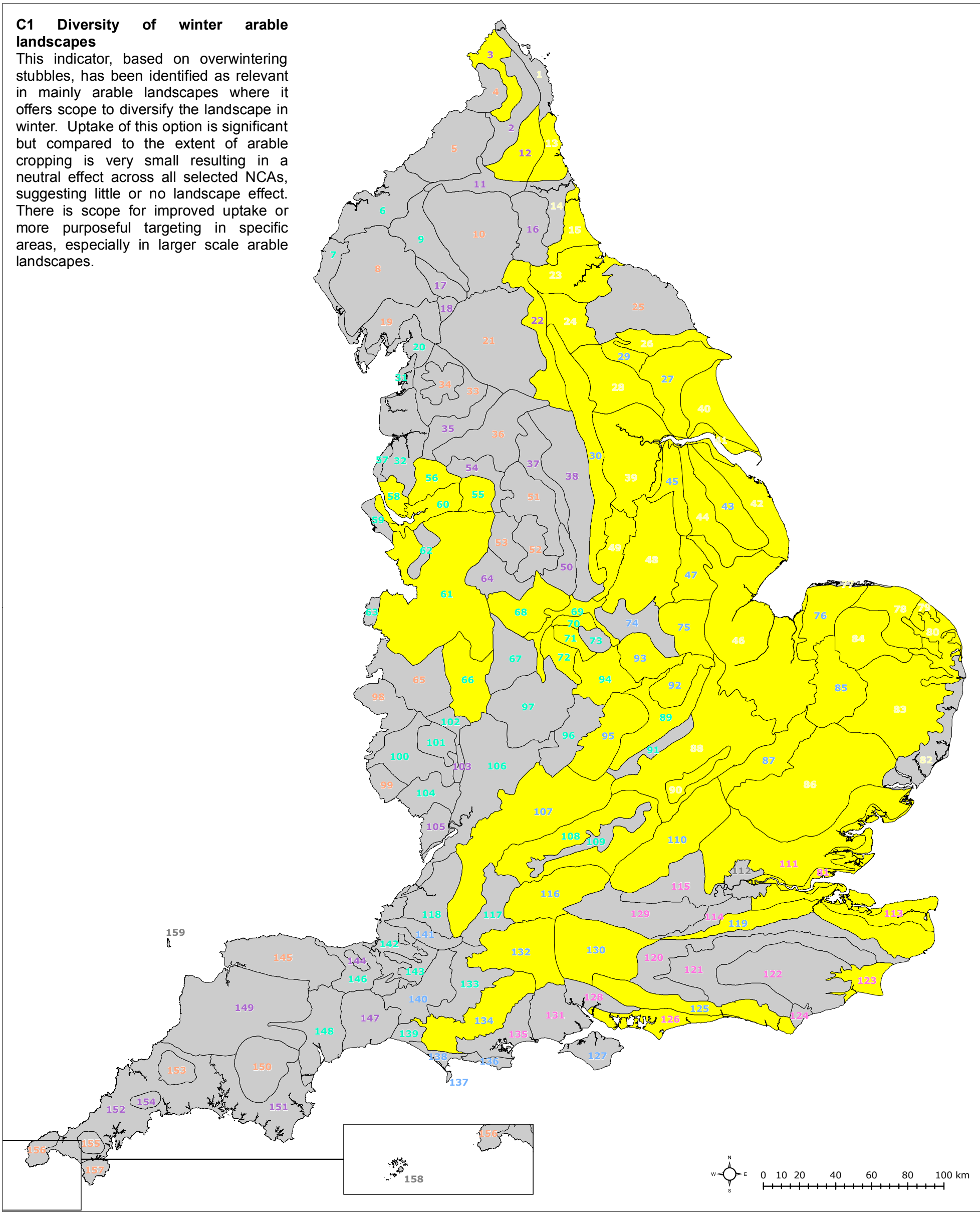
LUC

NATURAL ENGLAND

Source: Natural England and LUC

C1 Diversity of winter arable landscapes

This indicator, based on overwintering stubbles, has been identified as relevant in mainly arable landscapes where it offers scope to diversify the landscape in winter. Uptake of this option is significant but compared to the extent of arable cropping is very small resulting in a neutral effect across all selected NCAs, suggesting little or no landscape effect. There is scope for improved uptake or more purposeful targeting in specific areas, especially in larger scale arable landscapes.



LUC LDN 5693-01_031_ObjC1_03/12/2013

Objective C1: Effect of ES on the diversity of winter arable landscapes

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.14

Objective C1: Effect of ES on the diversity of winter arable landscapes

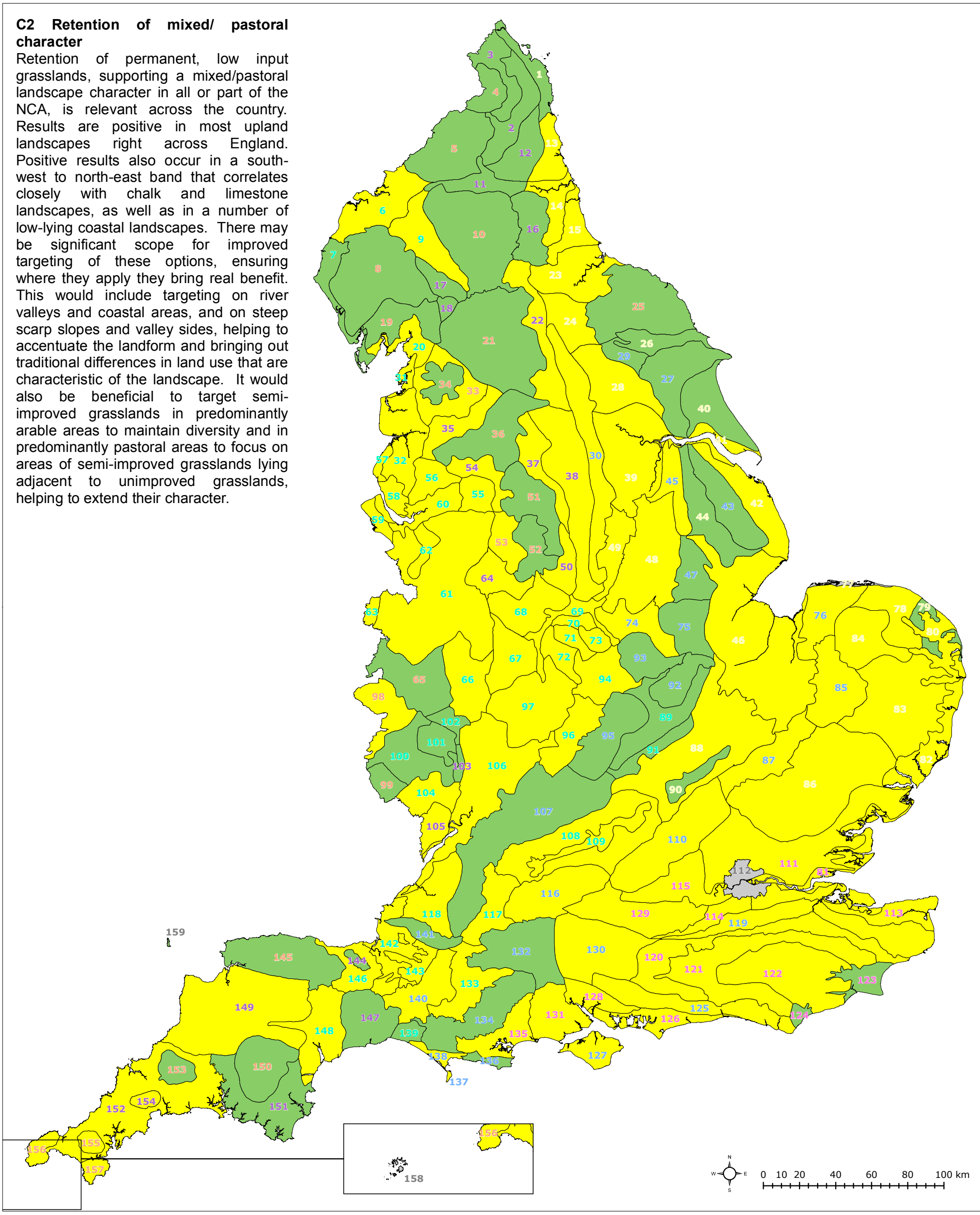
Map Scale @ A3: 1:2,100,000

LUC NATURAL ENGLAND

Source: Natural England and LUC

C2 Retention of mixed/ pastoral character

Retention of permanent, low input grasslands, supporting a mixed/pastoral landscape character in all or part of the NCA, is relevant across the country. Results are positive in most upland landscapes right across England. Positive results also occur in a south-west to north-east band that correlates closely with chalk and limestone landscapes, as well as in a number of low-lying coastal landscapes. There may be significant scope for improved targeting of these options, ensuring where they apply they bring real benefit. This would include targeting on river valleys and coastal areas, and on steep scarp slopes and valley sides, helping to accentuate the landform and bringing out traditional differences in land use that are characteristic of the landscape. It would also be beneficial to target semi-improved grasslands in predominantly arable areas to maintain diversity and in predominantly pastoral areas to focus on areas of semi-improved grasslands lying adjacent to unimproved grasslands, helping to extend their character.



LUC LDN 5693-01_032_ObjC2_03/12/2013

Objective C2: Effect of ES on the retention of mixed/ pastoral character

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.15

Objective C2: Effect of ES on the retention of mixed/ pastoral character

Map Scale @ A3: 1:2,100,000

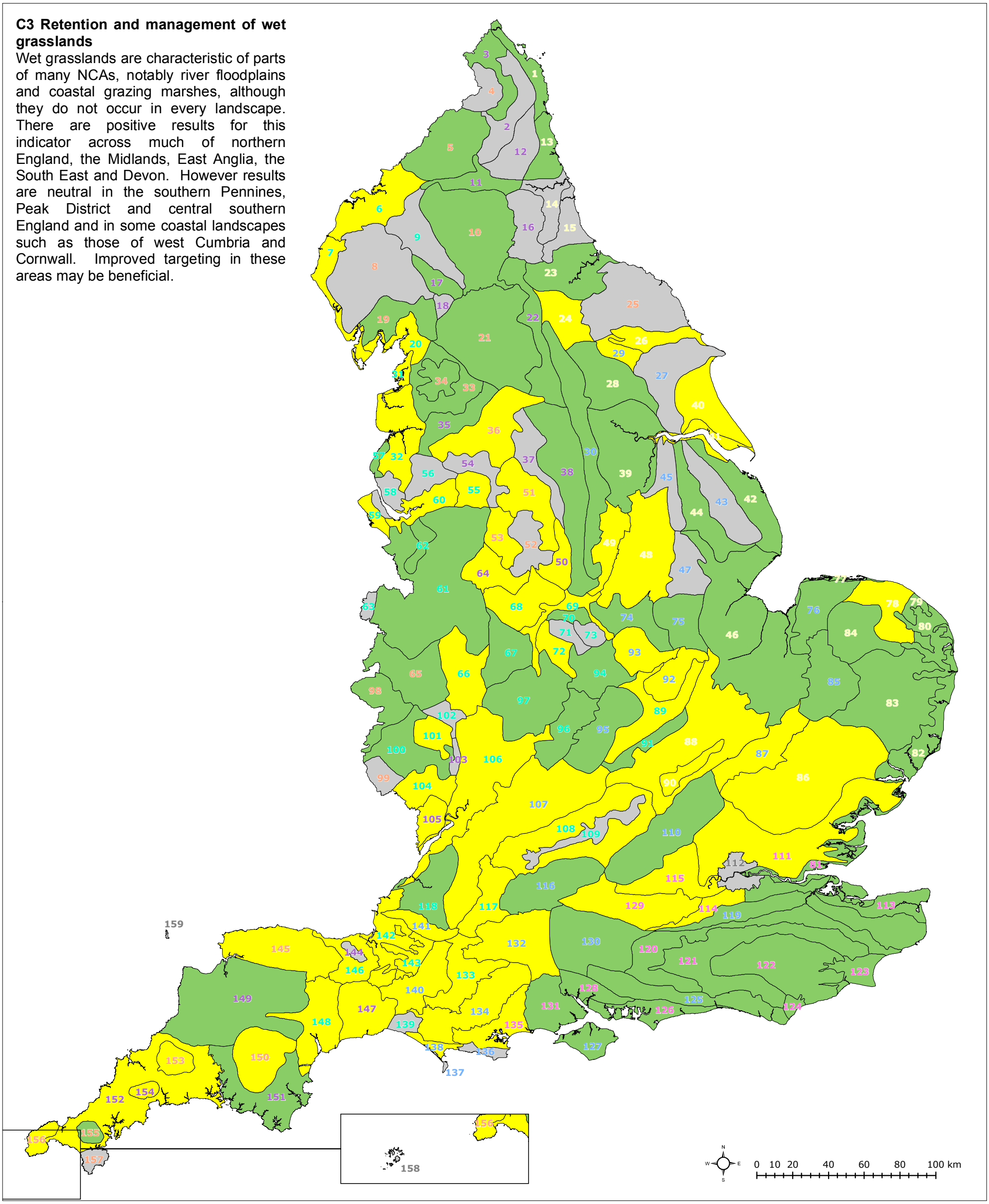
LUC

NATURAL ENGLAND

Source: Natural England and LUC

C3 Retention and management of wet grasslands

Wet grasslands are characteristic of parts of many NCAs, notably river floodplains and coastal grazing marshes, although they do not occur in every landscape. There are positive results for this indicator across much of northern England, the Midlands, East Anglia, the South East and Devon. However results are neutral in the southern Pennines, Peak District and central southern England and in some coastal landscapes such as those of west Cumbria and Cornwall. Improved targeting in these areas may be beneficial.



LUC LDN 5693-01_033_ObjC3_03/12/2013

Objective C3: Effect of ES on the retention and management of wet grasslands

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.16

Objective C3: Effect of ES on the retention and management of wet grasslands

Map Scale @ A3: 1:2,100,000

LUC

NATURAL ENGLAND

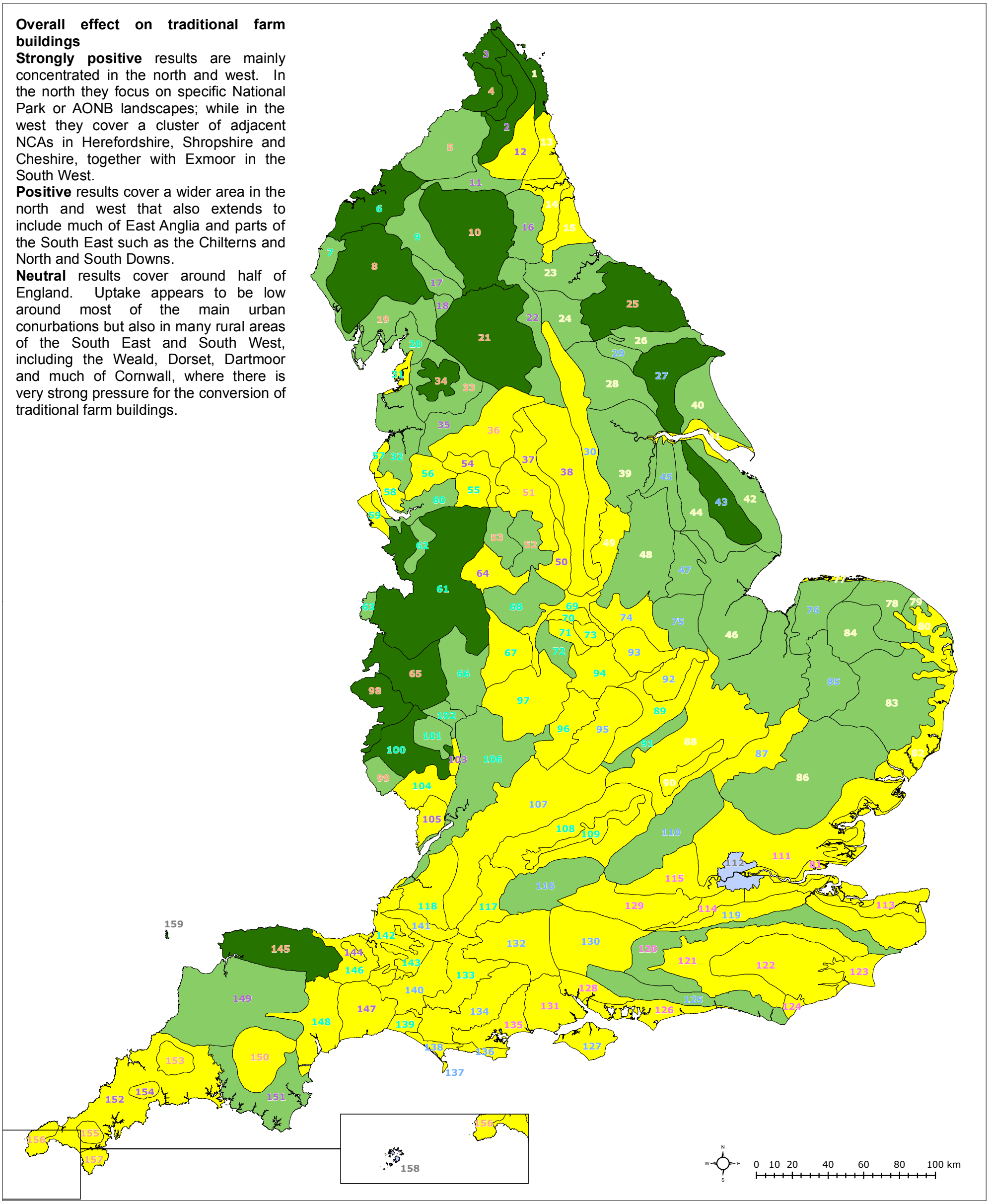
Source: Natural England and LUC

Overall effect on traditional farm buildings

Strongly positive results are mainly concentrated in the north and west. In the north they focus on specific National Park or AONB landscapes; while in the west they cover a cluster of adjacent NCAs in Herefordshire, Shropshire and Cheshire, together with Exmoor in the South West.

Positive results cover a wider area in the north and west that also extends to include much of East Anglia and parts of the South East such as the Chilterns and North and South Downs.

Neutral results cover around half of England. Uptake appears to be low around most of the main urban conurbations but also in many rural areas of the South East and South West, including the Weald, Dorset, Dartmoor and much of Cornwall, where there is very strong pressure for the conversion of traditional farm buildings.



LUC LDN 5693-01_018_ThemeD_03/12/2013

Overall effect of ES on traditional farm buildings

- Strongly positive
- Positive
- Neutral
- No data

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.17

Overall effect of ES on traditional farm buildings

Map Scale @ A3: 1:2,100,000

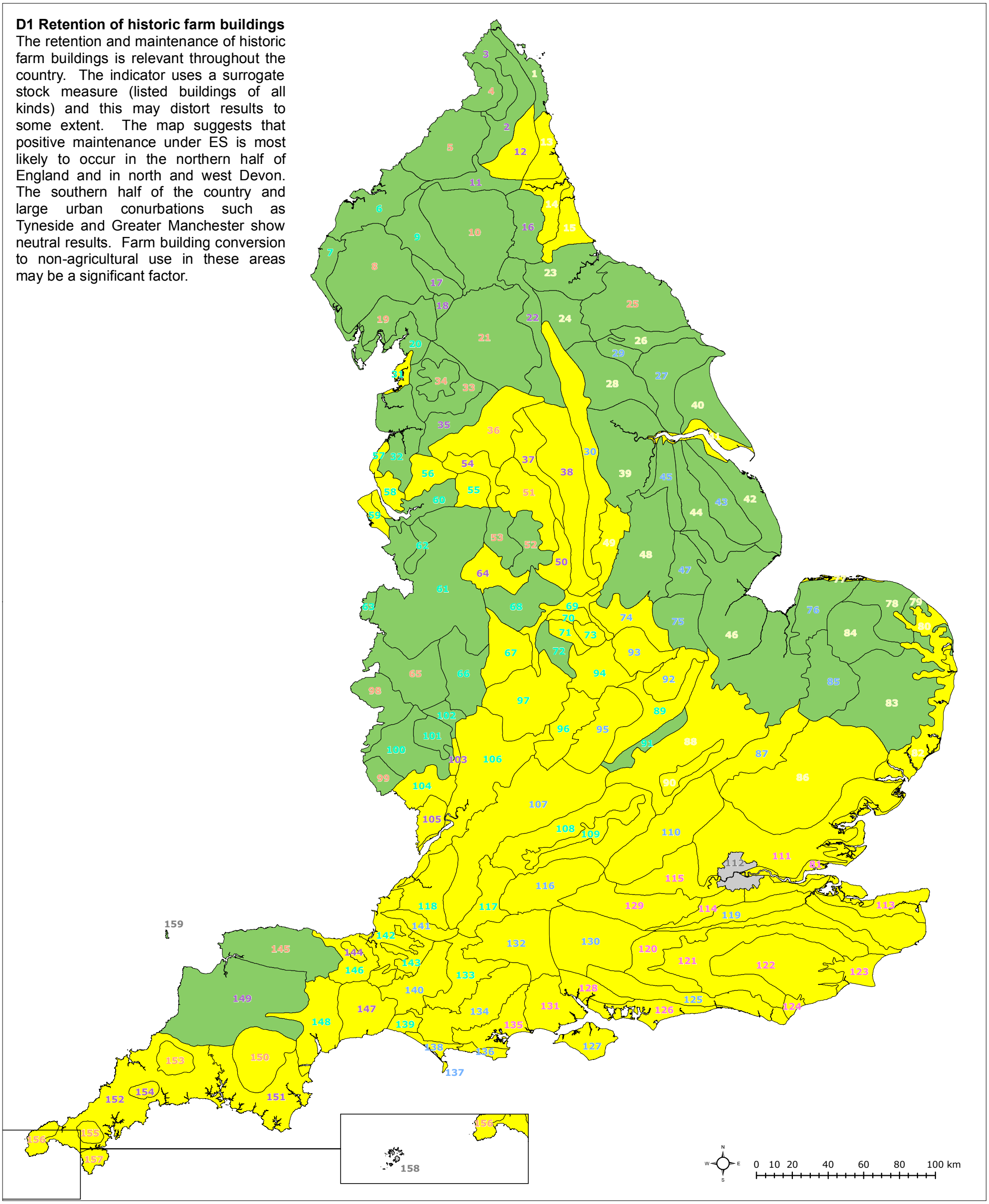
LUC

NATURAL ENGLAND

Source: Natural England and LUC

D1 Retention of historic farm buildings

The retention and maintenance of historic farm buildings is relevant throughout the country. The indicator uses a surrogate stock measure (listed buildings of all kinds) and this may distort results to some extent. The map suggests that positive maintenance under ES is most likely to occur in the northern half of England and in north and west Devon. The southern half of the country and large urban conurbations such as Tyneside and Greater Manchester show neutral results. Farm building conversion to non-agricultural use in these areas may be a significant factor.



LUC LDN 5693-01_034_ObjD1_03/12/2013

Objective D1: Effect of ES on the retention of historic farm buildings

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.18

Objective D1: Effect of ES on the retention of historic farm buildings

Map Scale @ A3: 1:2,100,000

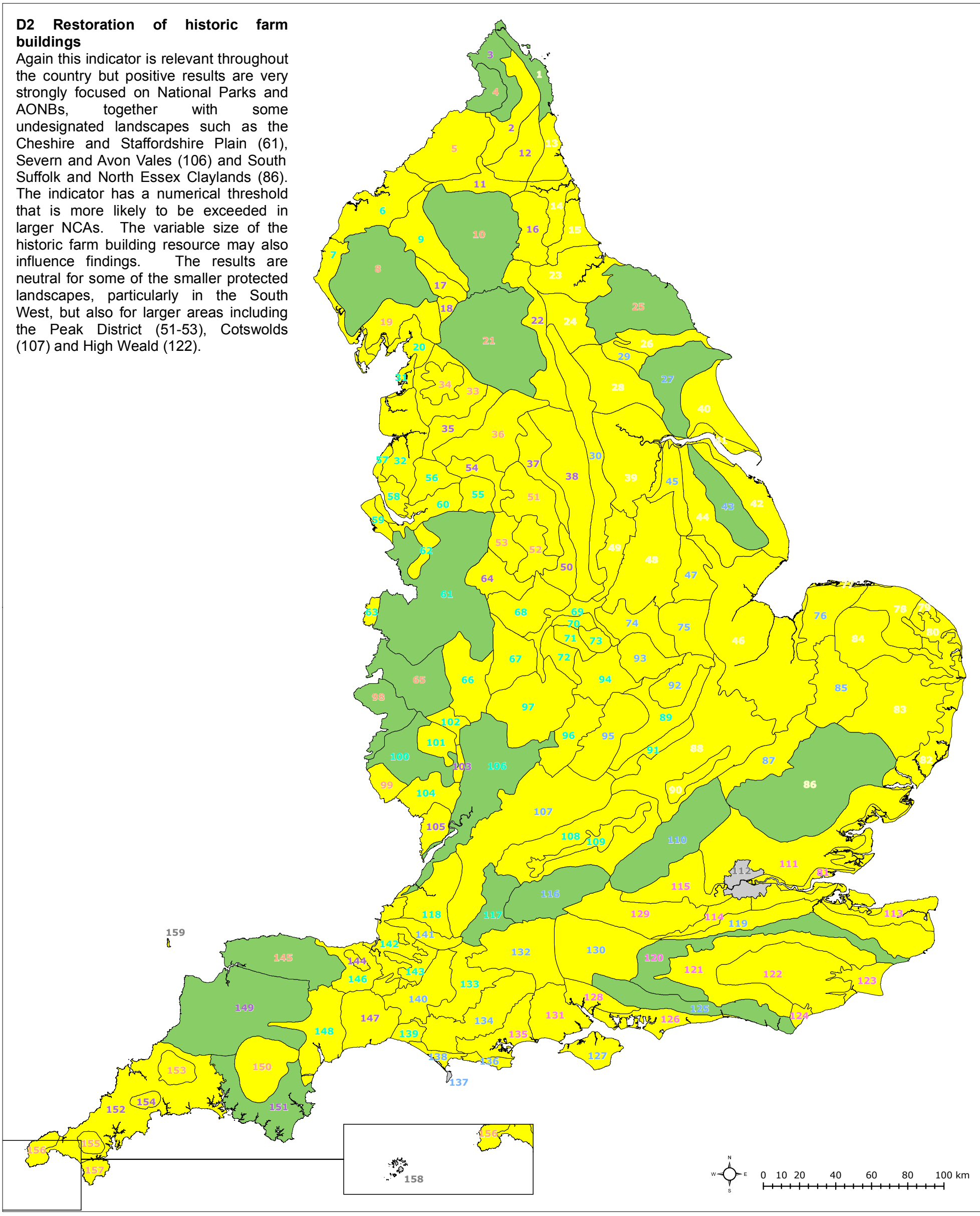
LUC

NATURAL ENGLAND

Source: Natural England and LUC

D2 Restoration of historic farm buildings

Again this indicator is relevant throughout the country but positive results are very strongly focused on National Parks and AONBs, together with some undesignated landscapes such as the Cheshire and Staffordshire Plain (61), Severn and Avon Vales (106) and South Suffolk and North Essex Claylands (86). The indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. The variable size of the historic farm building resource may also influence findings. The results are neutral for some of the smaller protected landscapes, particularly in the South West, but also for larger areas including the Peak District (51-53), Cotswolds (107) and High Weald (122).



LUC LDN 5693-01_035_ObjD2 03/12/2013

Objective D2: Effect of ES on the restoration of historic farm buildings

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.19

Objective D2: Effect of ES on the restoration of historic farm buildings

Map Scale @ A3: 1:2,100,000

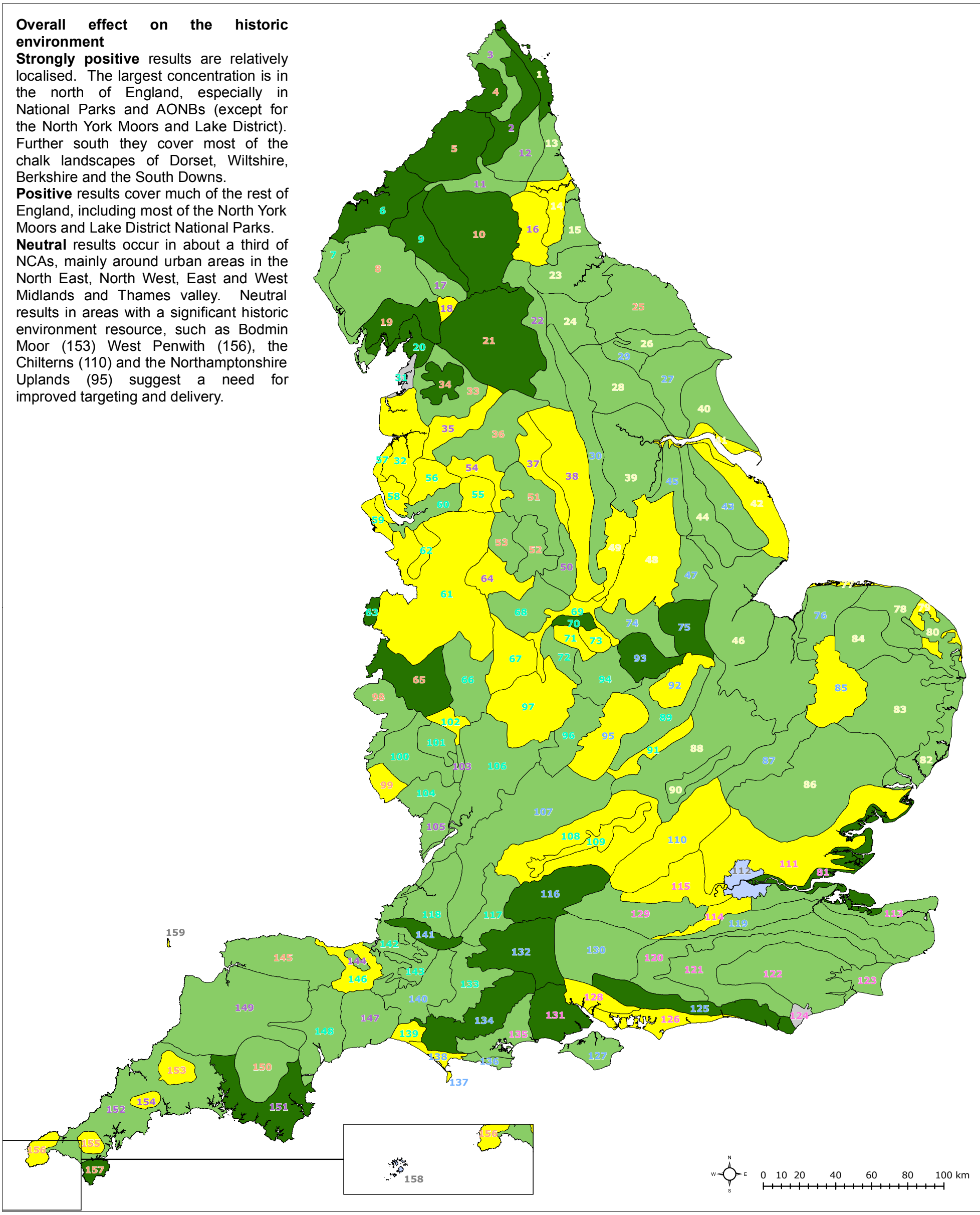
Source: Natural England and LUC

Overall effect on the historic environment

Strongly positive results are relatively localised. The largest concentration is in the north of England, especially in National Parks and AONBs (except for the North York Moors and Lake District). Further south they cover most of the chalk landscapes of Dorset, Wiltshire, Berkshire and the South Downs.

Positive results cover much of the rest of England, including most of the North York Moors and Lake District National Parks.

Neutral results occur in about a third of NCAs, mainly around urban areas in the North East, North West, East and West Midlands and Thames valley. Neutral results in areas with a significant historic environment resource, such as Bodmin Moor (153) West Penwith (156), the Chilterns (110) and the Northamptonshire Uplands (95) suggest a need for improved targeting and delivery.



LUC LDN 5693-01_019_ThemeE 03/12/2013

Overall effect of ES on historic environment

- Strongly positive
- Positive
- Neutral
- N/A
- No data

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.20

Overall effect of ES on the historic environment

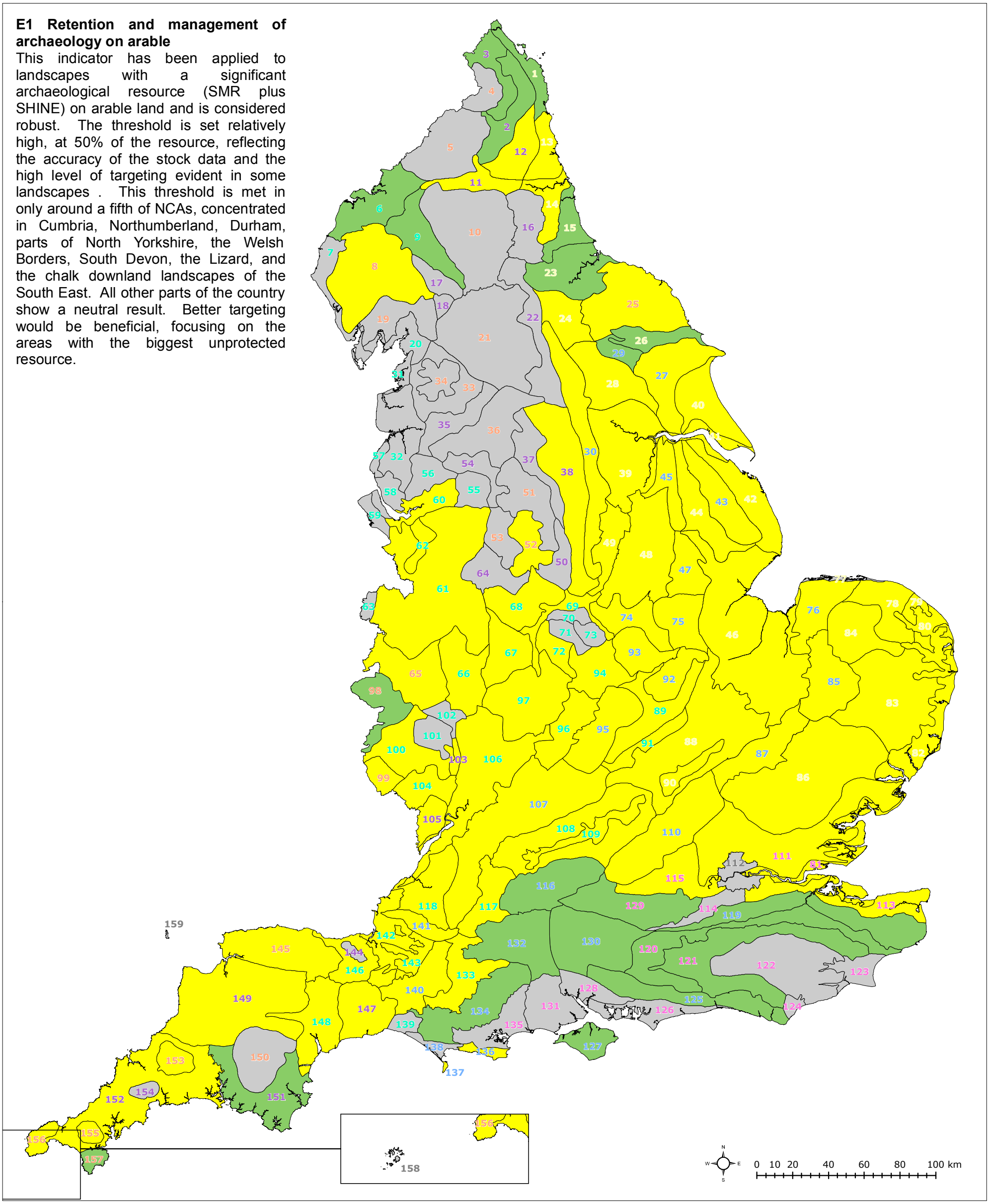
Map Scale @ A3: 1:2,100,000

LUC NATURAL ENGLAND

Source: Natural England and LUC

E1 Retention and management of archaeology on arable

This indicator has been applied to landscapes with a significant archaeological resource (SMR plus SHINE) on arable land and is considered robust. The threshold is set relatively high, at 50% of the resource, reflecting the accuracy of the stock data and the high level of targeting evident in some landscapes . This threshold is met in only around a fifth of NCAs, concentrated in Cumbria, Northumberland, Durham, parts of North Yorkshire, the Welsh Borders, South Devon, the Lizard, and the chalk downland landscapes of the South East. All other parts of the country show a neutral result. Better targeting would be beneficial, focusing on the areas with the biggest unprotected resource.



LUC LDN 5693-01_036_ObjE1_03/12/2013

Objective E1: Effect of ES on the retention and management of archaeology on arable

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.21

Objective E1: Effect of ES on the retention and management of archaeology on arable

Map Scale @ A3: 1:2,100,000

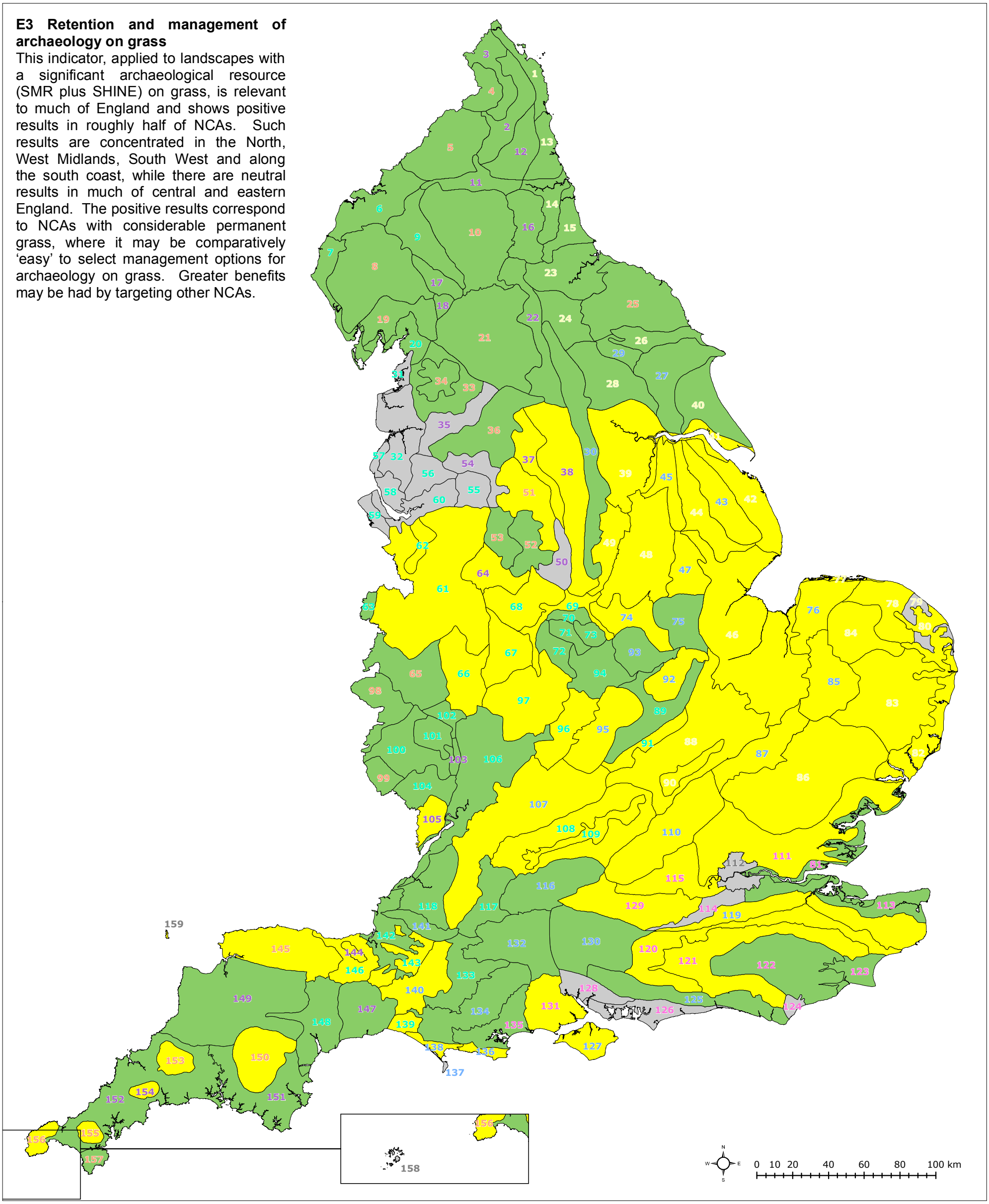
LUC

NATURAL ENGLAND

Source: Natural England and LUC

E3 Retention and management of archaeology on grass

This indicator, applied to landscapes with a significant archaeological resource (SMR plus SHINE) on grass, is relevant to much of England and shows positive results in roughly half of NCAs. Such results are concentrated in the North, West Midlands, South West and along the south coast, while there are neutral results in much of central and eastern England. The positive results correspond to NCAs with considerable permanent grass, where it may be comparatively 'easy' to select management options for archaeology on grass. Greater benefits may be had by targeting other NCAs.



LUC LDN 5693-01_038_ObjE3_03/12/2013

Objective E3: Effect of ES on the retention and management of archaeology on grass

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.22

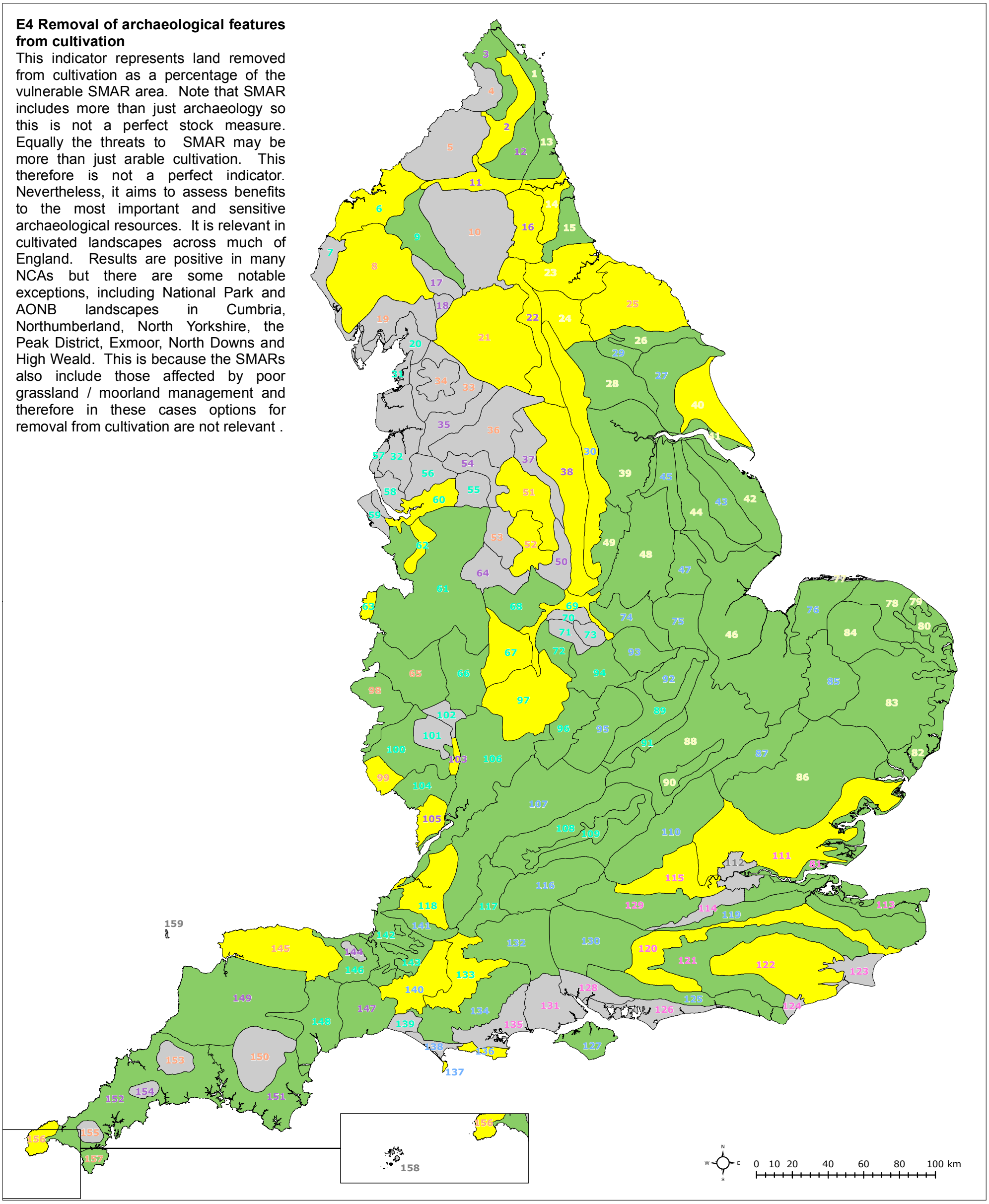
Objective E3: Effect of ES on the retention and management of archaeology on grass

Map Scale @ A3: 1:2,100,000

Source: Natural England and LUC

E4 Removal of archaeological features from cultivation

This indicator represents land removed from cultivation as a percentage of the vulnerable SMAR area. Note that SMAR includes more than just archaeology so this is not a perfect stock measure. Equally the threats to SMAR may be more than just arable cultivation. This therefore is not a perfect indicator. Nevertheless, it aims to assess benefits to the most important and sensitive archaeological resources. It is relevant in cultivated landscapes across much of England. Results are positive in many NCAs but there are some notable exceptions, including National Park and AONB landscapes in Cumbria, Northumberland, North Yorkshire, the Peak District, Exmoor, North Downs and High Weald. This is because the SMARs also include those affected by poor grassland / moorland management and therefore in these cases options for removal from cultivation are not relevant .



LUC LDN 5693-01_039_ObjE4_03/12/2013

Objective E4: Effect of ES on the removal of archaeological features from cultivation

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.23

Objective E4: Effect of ES on the removal of archaeological features from cultivation

Map Scale @ A3: 1:2,100,000

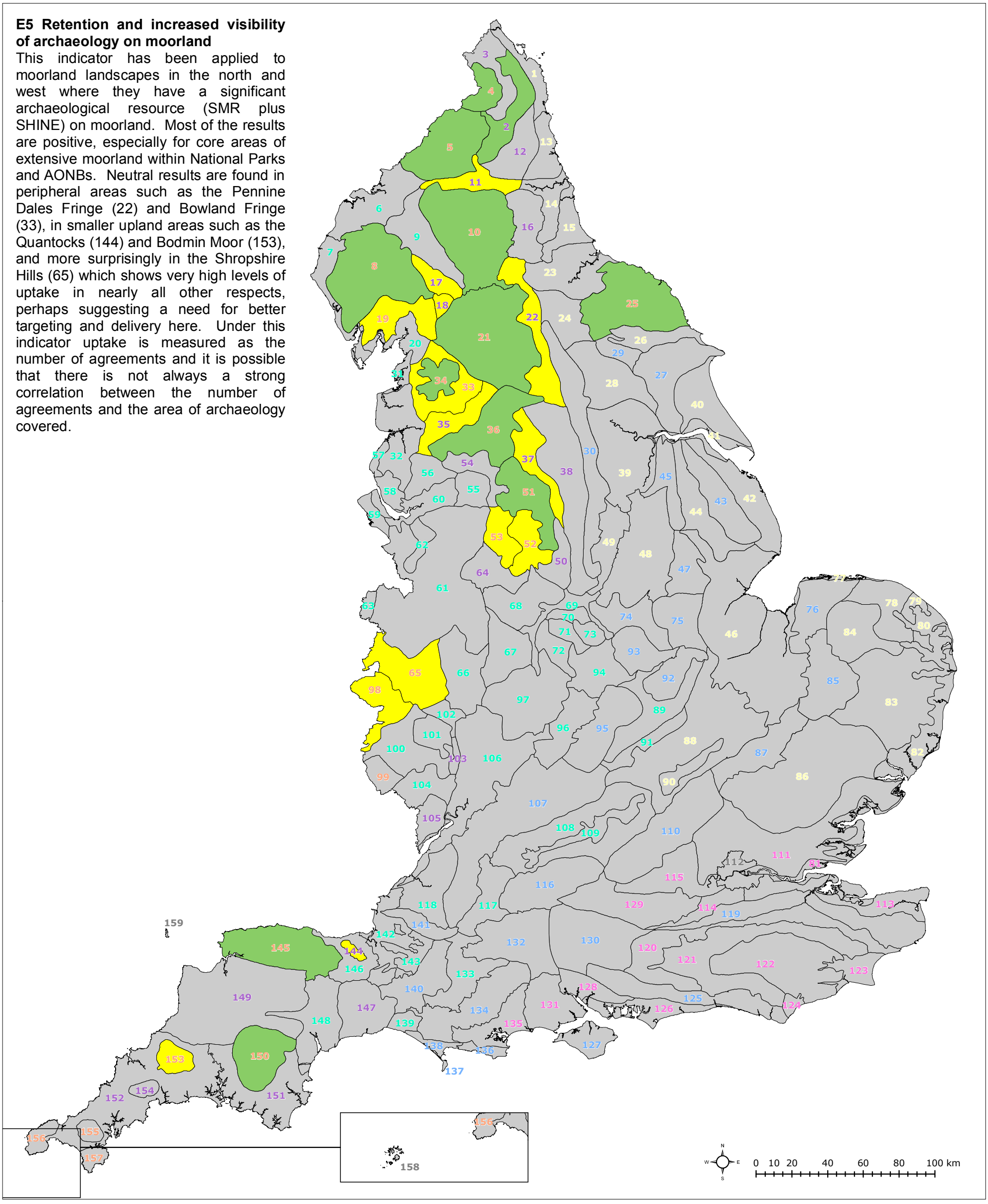
LUC

NATURAL ENGLAND

Source: Natural England and LUC

E5 Retention and increased visibility of archaeology on moorland

This indicator has been applied to moorland landscapes in the north and west where they have a significant archaeological resource (SMR plus SHINE) on moorland. Most of the results are positive, especially for core areas of extensive moorland within National Parks and AONBs. Neutral results are found in peripheral areas such as the Pennine Dales Fringe (22) and Bowland Fringe (33), in smaller upland areas such as the Quantocks (144) and Bodmin Moor (153), and more surprisingly in the Shropshire Hills (65) which shows very high levels of uptake in nearly all other respects, perhaps suggesting a need for better targeting and delivery here. Under this indicator uptake is measured as the number of agreements and it is possible that there is not always a strong correlation between the number of agreements and the area of archaeology covered.



LUC LDN 5693-01_040_ObjE5_03/12/2013

Objective E5: Effect of ES on the retention and increased visibility of archaeology on moorland

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.24

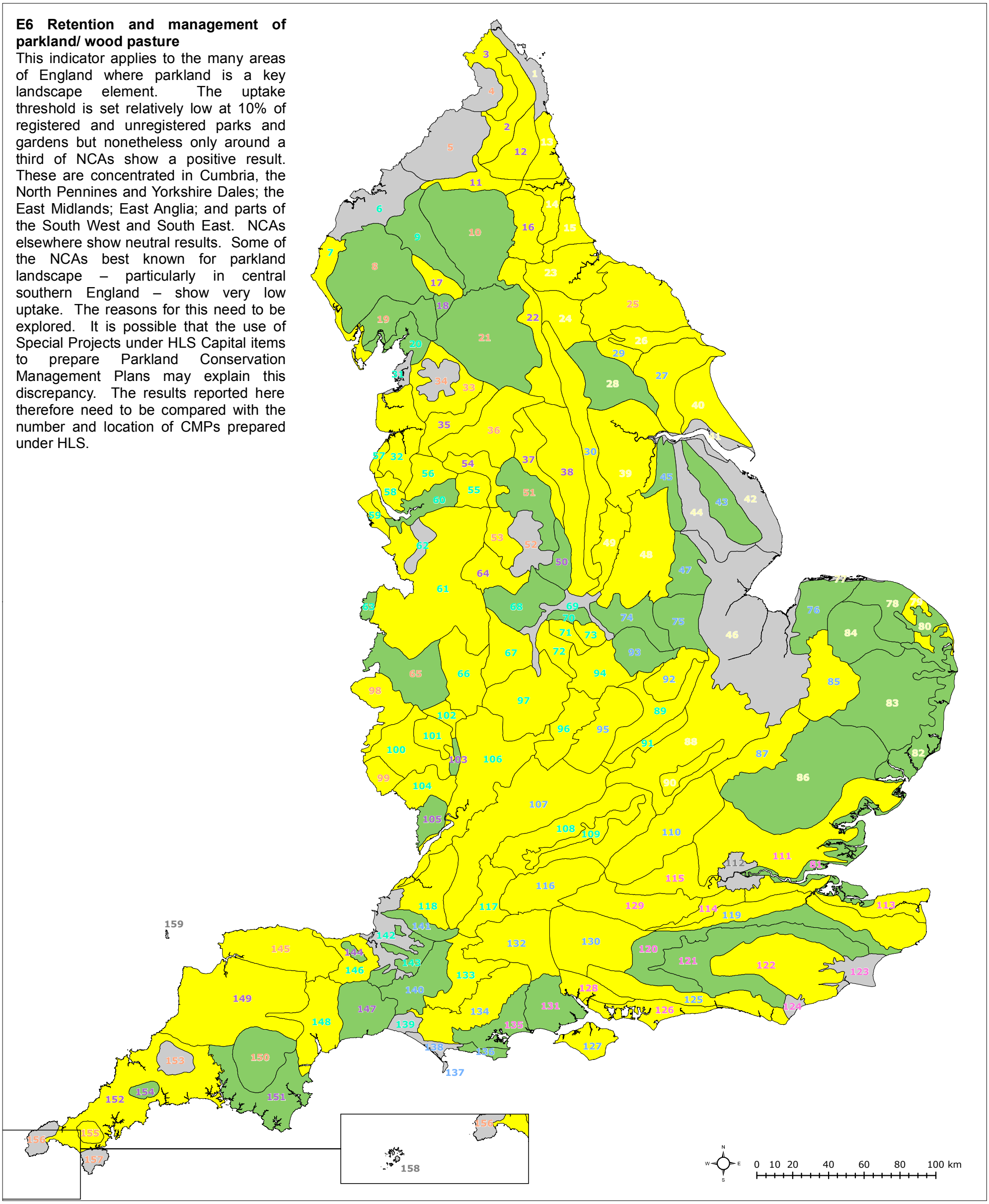
Objective E5: Effect of ES on the retention and increased visibility of archaeology on moorland

Map Scale @ A3: 1:2,100,000

Source: Natural England and LUC

E6 Retention and management of parkland/ wood pasture

This indicator applies to the many areas of England where parkland is a key landscape element. The uptake threshold is set relatively low at 10% of registered and unregistered parks and gardens but nonetheless only around a third of NCAs show a positive result. These are concentrated in Cumbria, the North Pennines and Yorkshire Dales; the East Midlands; East Anglia; and parts of the South West and South East. NCAs elsewhere show neutral results. Some of the NCAs best known for parkland landscape – particularly in central southern England – show very low uptake. The reasons for this need to be explored. It is possible that the use of Special Projects under HLS Capital items to prepare Parkland Conservation Management Plans may explain this discrepancy. The results reported here therefore need to be compared with the number and location of CMPs prepared under HLS.



LUC LDN 5693-01_041_ObjE6 03/12/2013

Objective E6: Effect of ES on the retention and management of parkland/ wood pasture

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.25

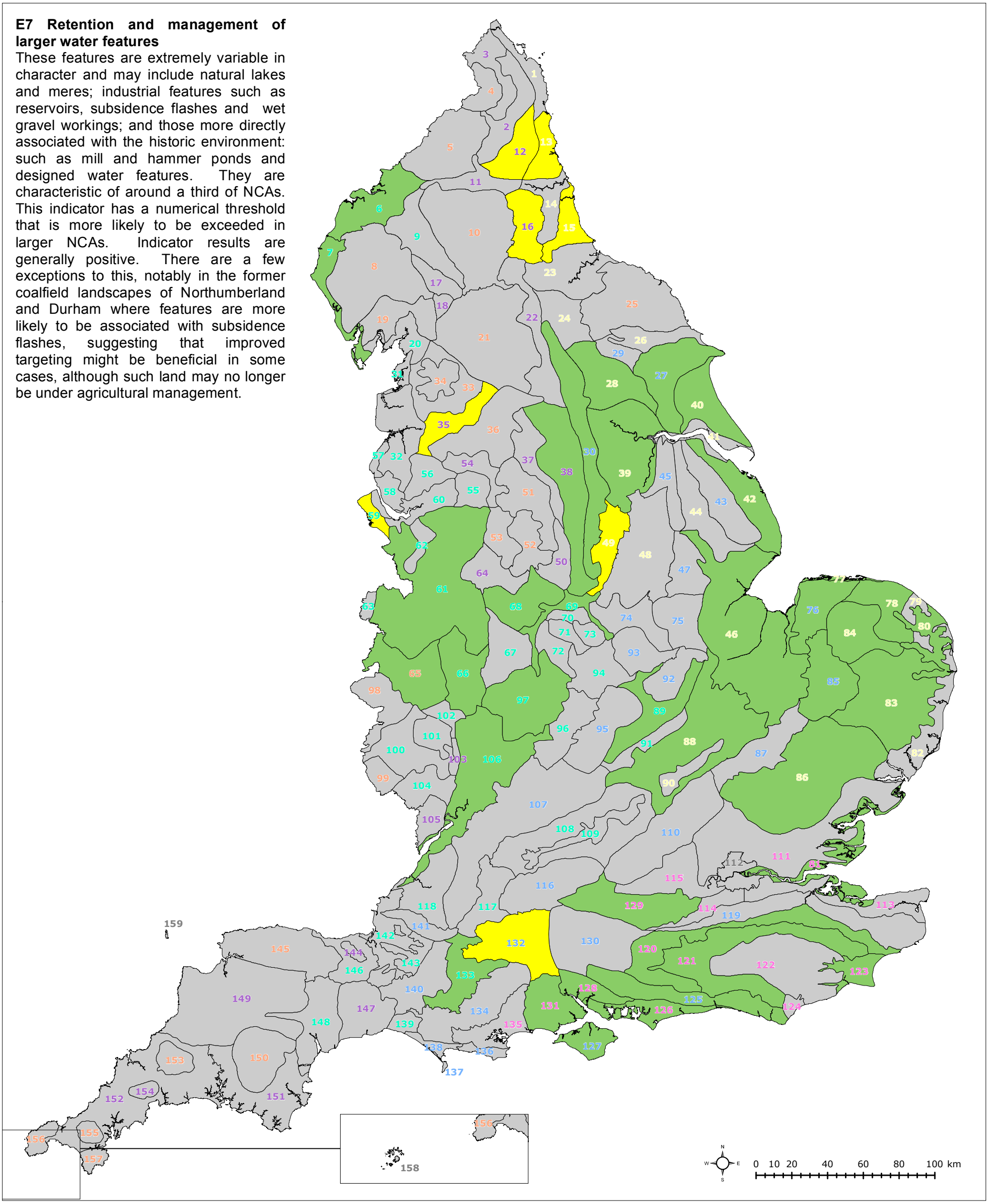
Objective E6: Effect of ES on the retention and management of parkland/ wood pasture

Map Scale @ A3: 1:2,100,000

Source: Natural England and LUC

E7 Retention and management of larger water features

These features are extremely variable in character and may include natural lakes and meres; industrial features such as reservoirs, subsidence flashes and wet gravel workings; and those more directly associated with the historic environment: such as mill and hammer ponds and designed water features. They are characteristic of around a third of NCAs. This indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. Indicator results are generally positive. There are a few exceptions to this, notably in the former coalfield landscapes of Northumberland and Durham where features are more likely to be associated with subsidence flashes, suggesting that improved targeting might be beneficial in some cases, although such land may no longer be under agricultural management.



LUC LDN 5693-01_054_ObjE7_17/10/2013

Objective E7: Effect of ES on the retention and management of larger water features

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.26

Objective E7: Effect of ES on the retention and management of larger water features

Map Scale @ A3: 1:2,100,000

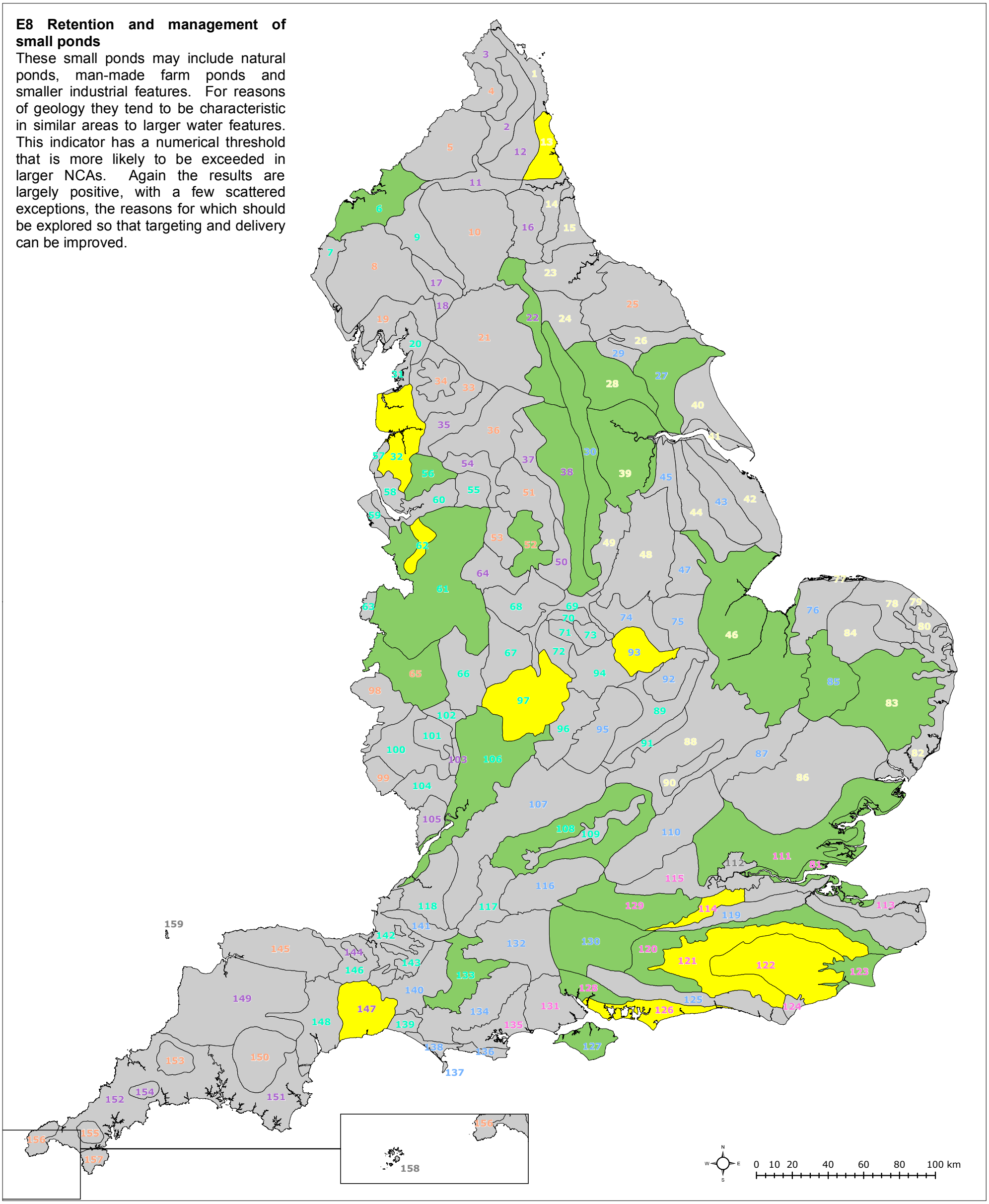
LUC

NATURAL ENGLAND

Source: Natural England and LUC

E8 Retention and management of small ponds

These small ponds may include natural ponds, man-made farm ponds and smaller industrial features. For reasons of geology they tend to be characteristic in similar areas to larger water features. This indicator has a numerical threshold that is more likely to be exceeded in larger NCAs. Again the results are largely positive, with a few scattered exceptions, the reasons for which should be explored so that targeting and delivery can be improved.



LUC LDN 5693-01_042_ObjE8_03/12/2013

Objective E8: Effect of ES on the retention and management of small ponds

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.27

Objective E8: Effect of ES on the retention and management of small ponds

Map Scale @ A3: 1:2,100,000

LUC

NATURAL ENGLAND

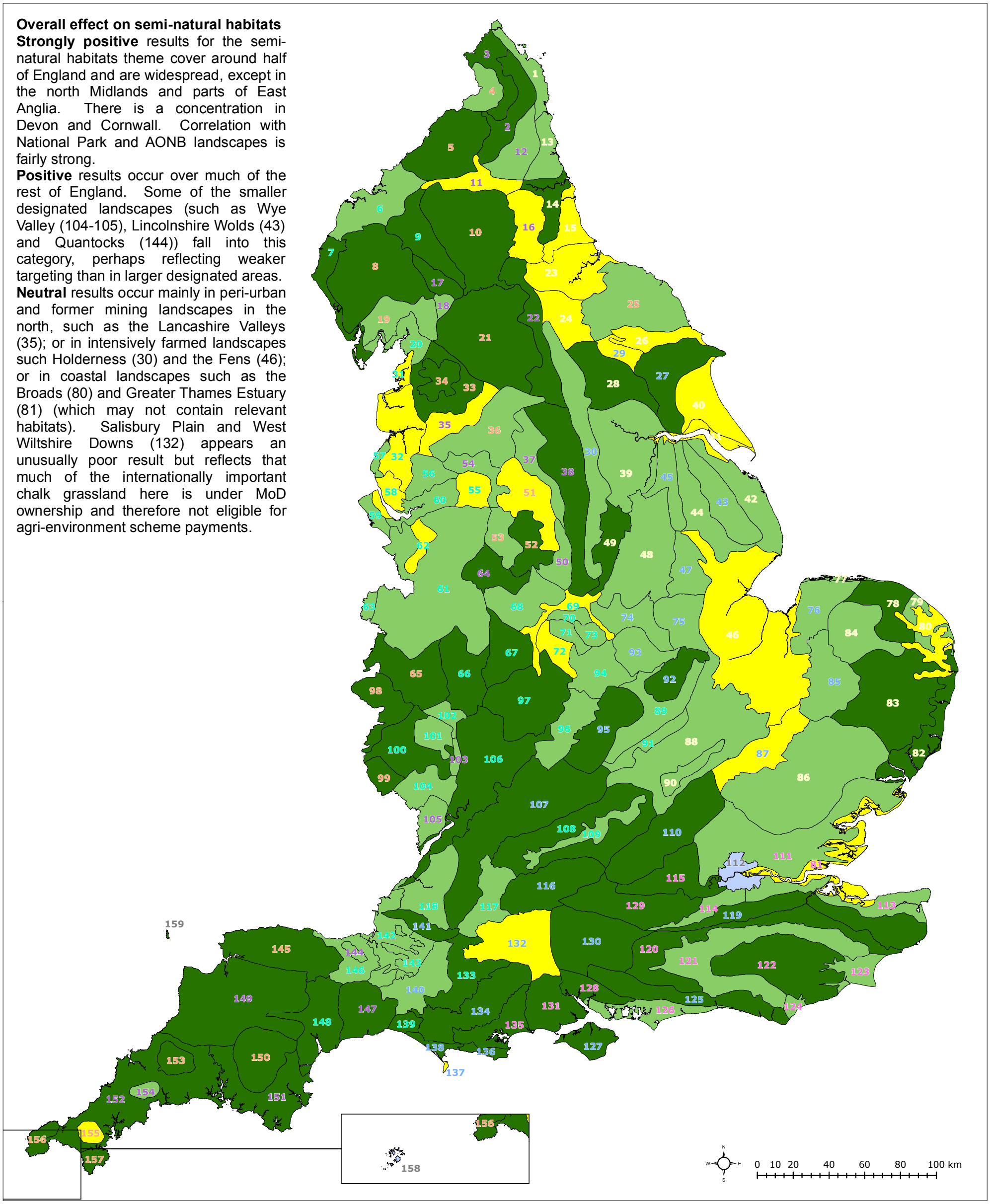
Source: Natural England and LUC

Overall effect on semi-natural habitats

Strongly positive results for the semi-natural habitats theme cover around half of England and are widespread, except in the north Midlands and parts of East Anglia. There is a concentration in Devon and Cornwall. Correlation with National Park and AONB landscapes is fairly strong.

Positive results occur over much of the rest of England. Some of the smaller designated landscapes (such as Wye Valley (104-105), Lincolnshire Wolds (43) and Quantocks (144)) fall into this category, perhaps reflecting weaker targeting than in larger designated areas.

Neutral results occur mainly in peri-urban and former mining landscapes in the north, such as the Lancashire Valleys (35); or in intensively farmed landscapes such Holderness (30) and the Fens (46); or in coastal landscapes such as the Broads (80) and Greater Thames Estuary (81) (which may not contain relevant habitats). Salisbury Plain and West Wiltshire Downs (132) appears an unusually poor result but reflects that much of the internationally important chalk grassland here is under MoD ownership and therefore not eligible for agri-environment scheme payments.



LUC LDN 5693-01_020_ThemeF 03/12/2013

Overall effect of ES on semi-natural habitats

- Strongly positive
- Positive
- Neutral
- No data

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.28

Overall effectof ES on semi-natural habitats

Map Scale @ A3: 1:2,100,000

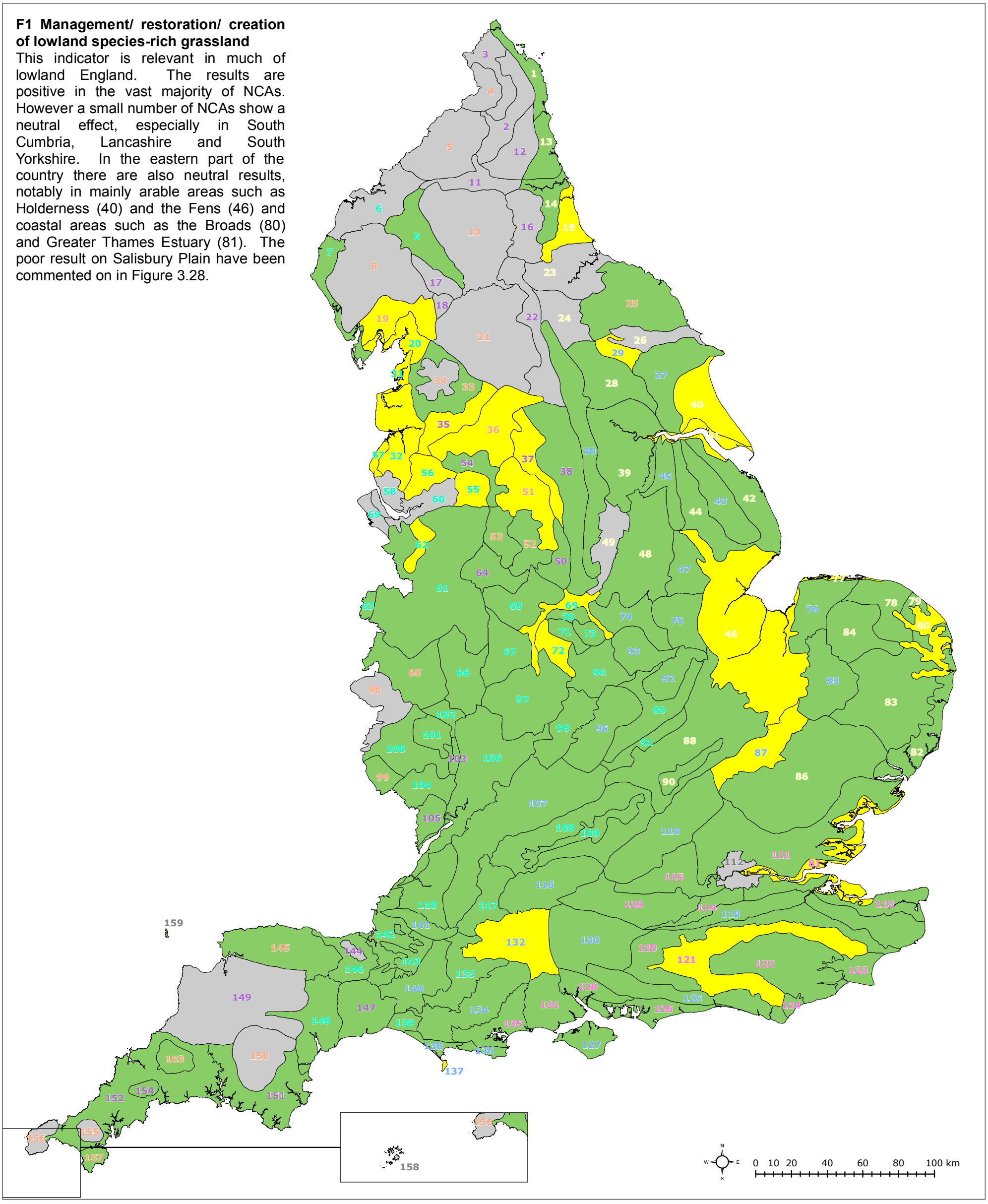
LUC

NATURAL ENGLAND

Source: Natural England and LUC

F1 Management/ restoration/ creation of lowland species-rich grassland

This indicator is relevant in much of lowland England. The results are positive in the vast majority of NCAs. However a small number of NCAs show a neutral effect, especially in South Cumbria, Lancashire and South Yorkshire. In the eastern part of the country there are also neutral results, notably in mainly arable areas such as Holderness (40) and the Fens (46) and coastal areas such as the Broads (80) and Greater Thames Estuary (81). The poor result on Salisbury Plain have been commented on in Figure 3.28.



LUC LDN 5693-01_043_ObjF1_03/12/2013

Objective F1: Effect of ES on the management/ restoration/ creation of lowland species-rich grassland

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.29

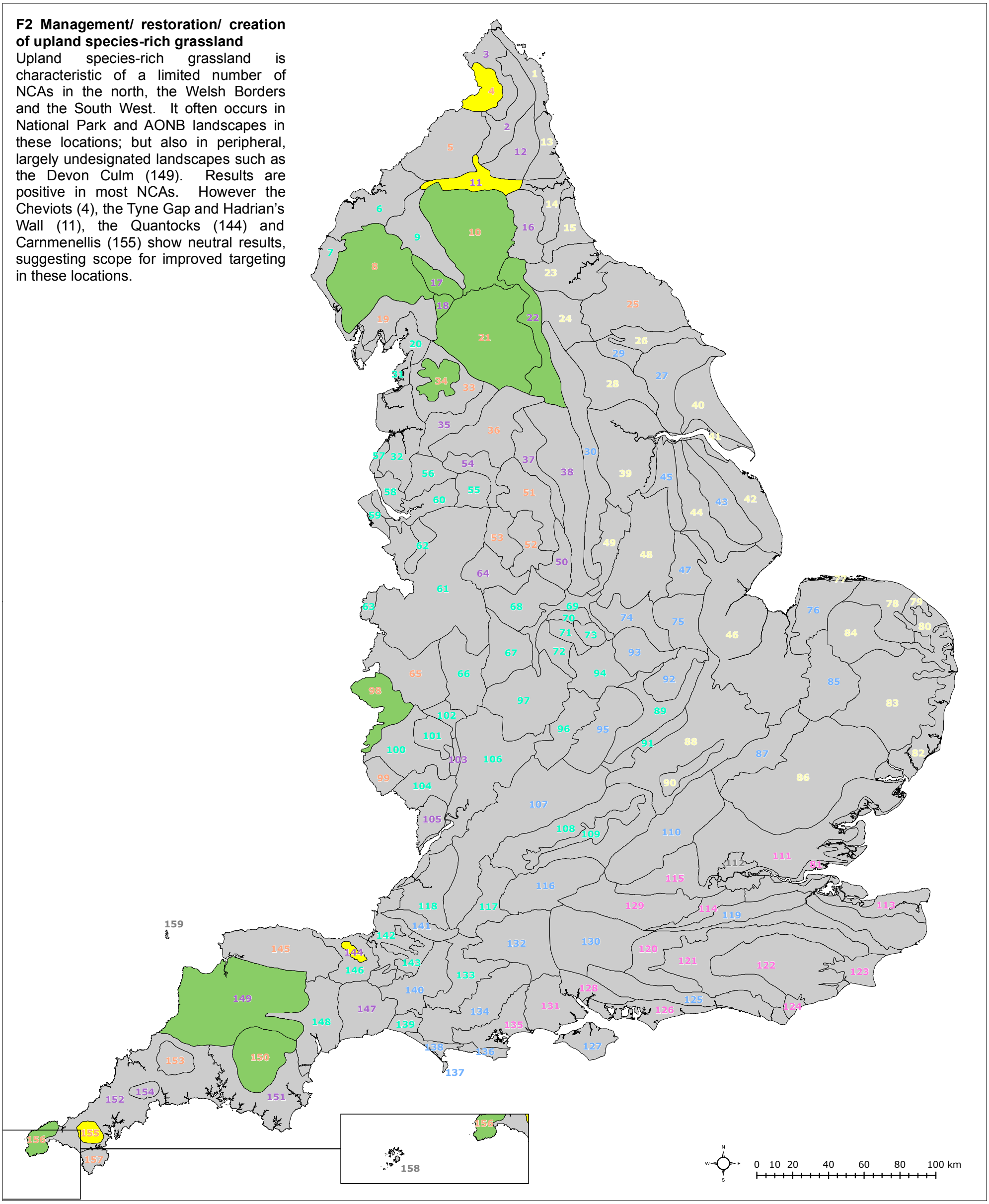
Objective F1: Effect of ES on the management/ restoration/ creation of lowland species-rich grassland

Map Scale @ A3: 1:2,100,000

Source: Natural England and LUC

F2 Management/ restoration/ creation of upland species-rich grassland

Upland species-rich grassland is characteristic of a limited number of NCAs in the north, the Welsh Borders and the South West. It often occurs in National Park and AONB landscapes in these locations; but also in peripheral, largely undesignated landscapes such as the Devon Culm (149). Results are positive in most NCAs. However the Cheviots (4), the Tyne Gap and Hadrian's Wall (11), the Quantocks (144) and Carnmenellis (155) show neutral results, suggesting scope for improved targeting in these locations.



LUC LDN 5693-01_044_ObjF2_03/12/2013

Objective F2: Effect of ES on the management/ restoration/ creation of upland species-rich grassland

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.30

Objective F2: Effect of ES on the management/ restoration/ creation of upland species-rich grassland

Map Scale @ A3: 1:2,100,000

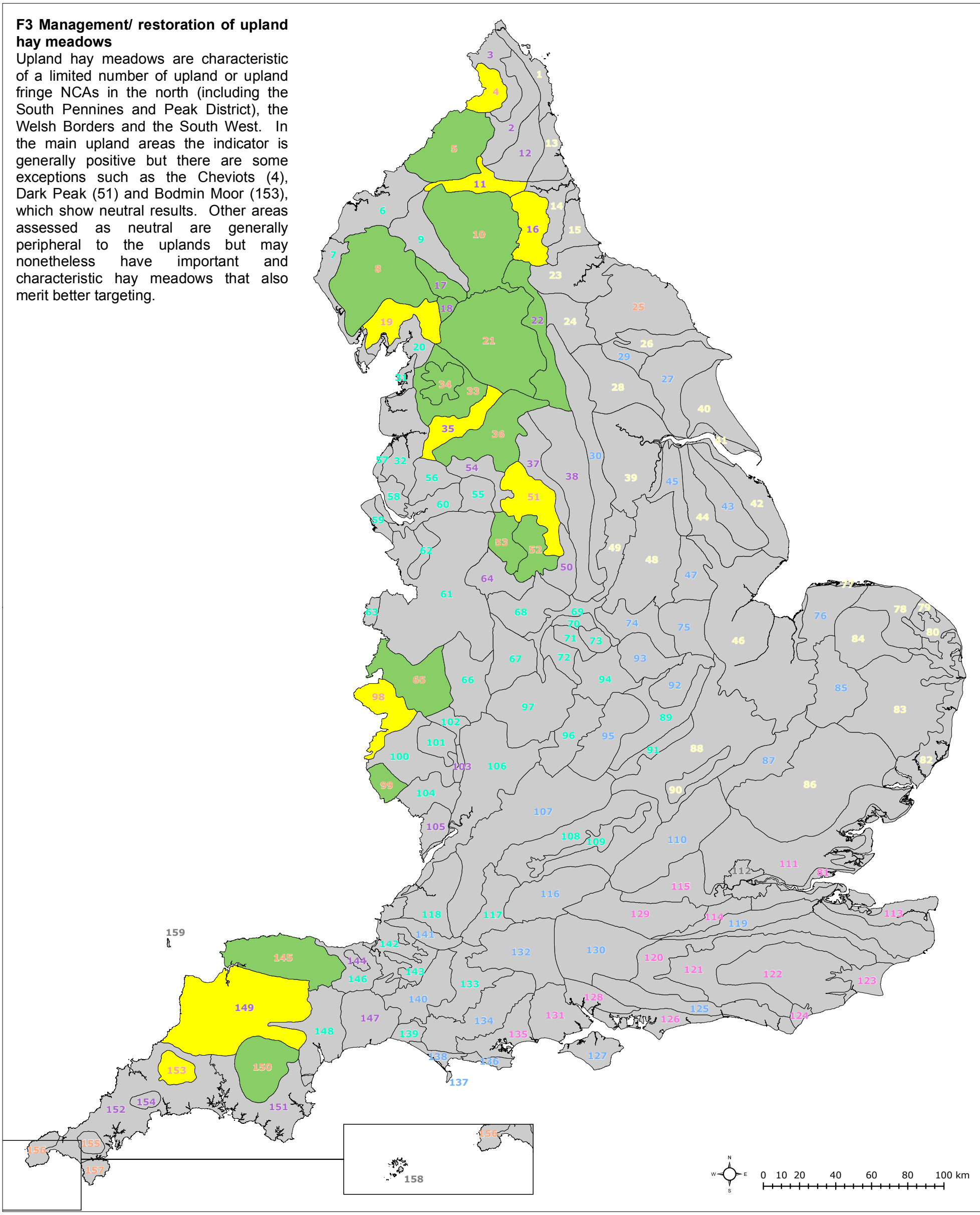
LUC

NATURAL ENGLAND

Source: Natural England and LUC

F3 Management/ restoration of upland hay meadows

Upland hay meadows are characteristic of a limited number of upland or upland fringe NCAs in the north (including the South Pennines and Peak District), the Welsh Borders and the South West. In the main upland areas the indicator is generally positive but there are some exceptions such as the Cheviots (4), Dark Peak (51) and Bodmin Moor (153), which show neutral results. Other areas assessed as neutral are generally peripheral to the uplands but may nonetheless have important and characteristic hay meadows that also merit better targeting.



LUC LDN 5693-01_045_ObjF3 03/12/2013

Objective F3: Effect of ES on the management/ restoration of upland hay meadows

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.31

Objective F3: Effect of ES on the management/ restoration of upland hay meadows

Map Scale @ A3: 1:2,100,000

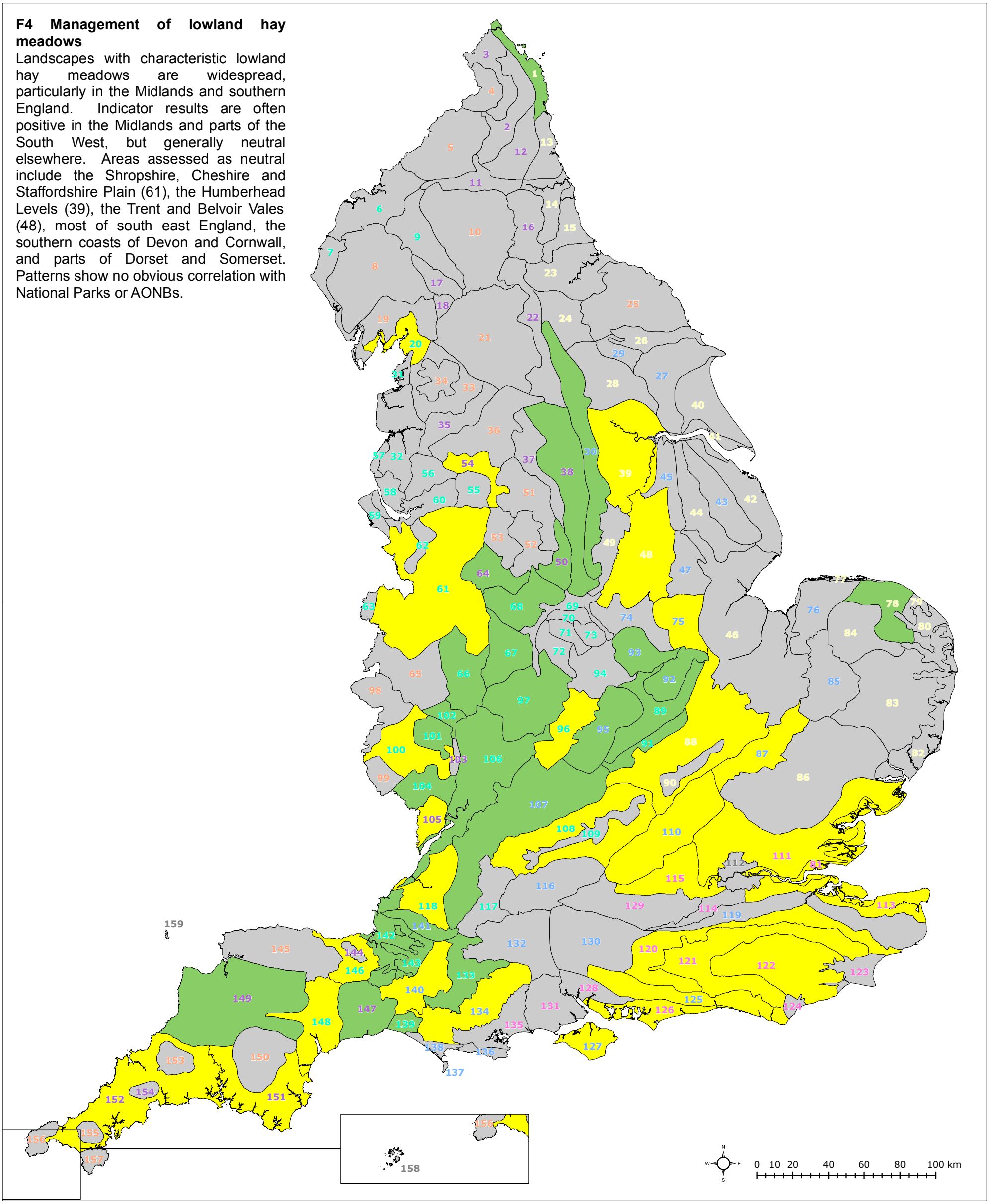
LUC

NATURAL ENGLAND

Source: Natural England and LUC

F4 Management of lowland hay meadows

Landscapes with characteristic lowland hay meadows are widespread, particularly in the Midlands and southern England. Indicator results are often positive in the Midlands and parts of the South West, but generally neutral elsewhere. Areas assessed as neutral include the Shropshire, Cheshire and Staffordshire Plain (61), the Humberhead Levels (39), the Trent and Belvoir Vales (48), most of south east England, the southern coasts of Devon and Cornwall, and parts of Dorset and Somerset. Patterns show no obvious correlation with National Parks or AONBs.



LUC LDN 5693-01_046_ObjF4 03/12/2013

Objective F4: Effect of ES on the management of lowland hay meadows

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.32

Objective F4: Effect of ES on the management of lowland hay meadows

Map Scale @ A3: 1:2,100,000

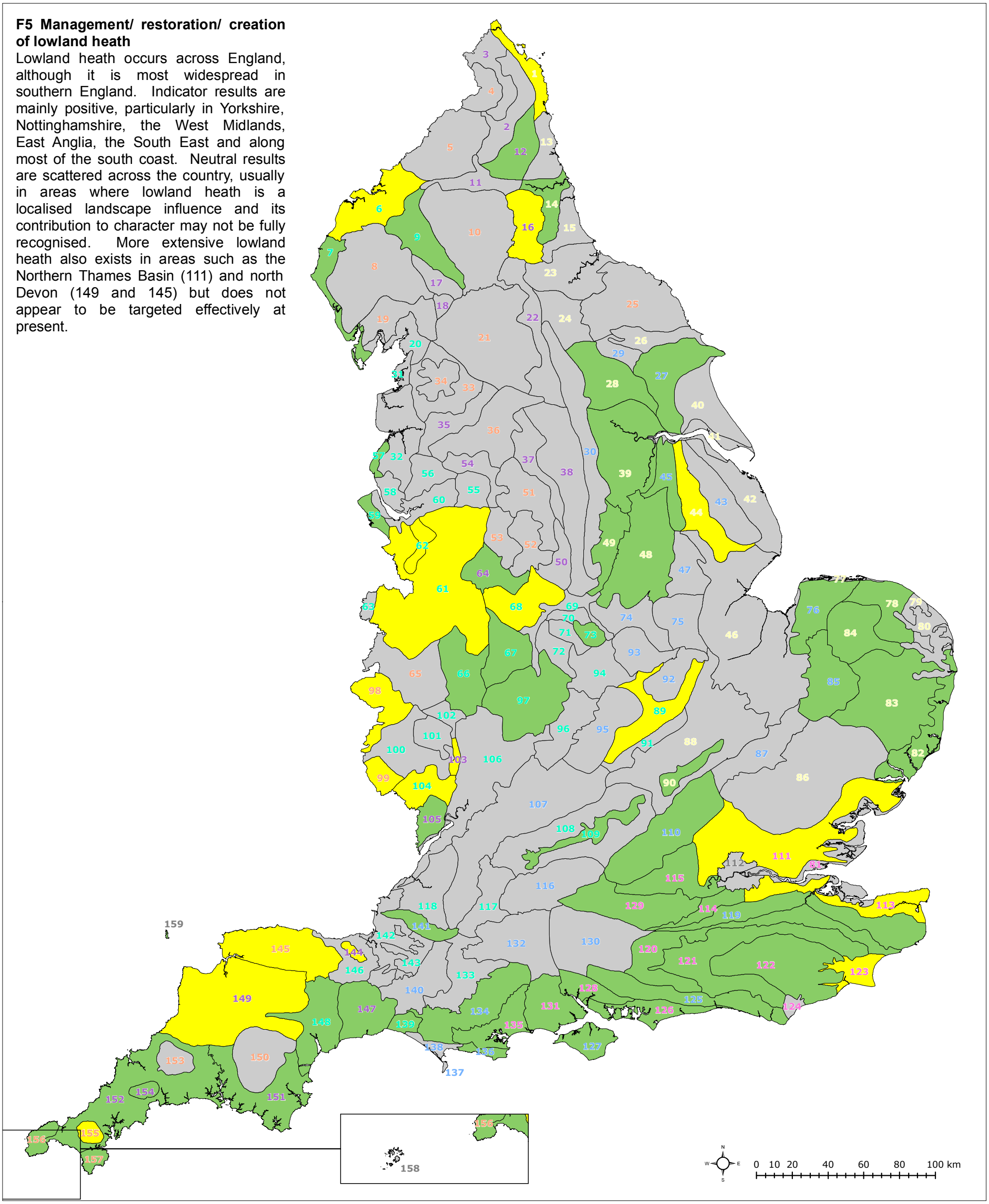
LUC

NATURAL ENGLAND

Source: Natural England and LUC

F5 Management/ restoration/ creation of lowland heath

Lowland heath occurs across England, although it is most widespread in southern England. Indicator results are mainly positive, particularly in Yorkshire, Nottinghamshire, the West Midlands, East Anglia, the South East and along most of the south coast. Neutral results are scattered across the country, usually in areas where lowland heath is a localised landscape influence and its contribution to character may not be fully recognised. More extensive lowland heath also exists in areas such as the Northern Thames Basin (111) and north Devon (149 and 145) but does not appear to be targeted effectively at present.



LUC LDN 5693-01_047_ObjF5 03/12/2013

Objective F5: Effect of ES on the management/ restoration/ creation of lowland heathland

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.33

Objective F5: Effect of ES on the management/ restoration/creation of lowland heathland

Map Scale @ A3: 1:2,100,000

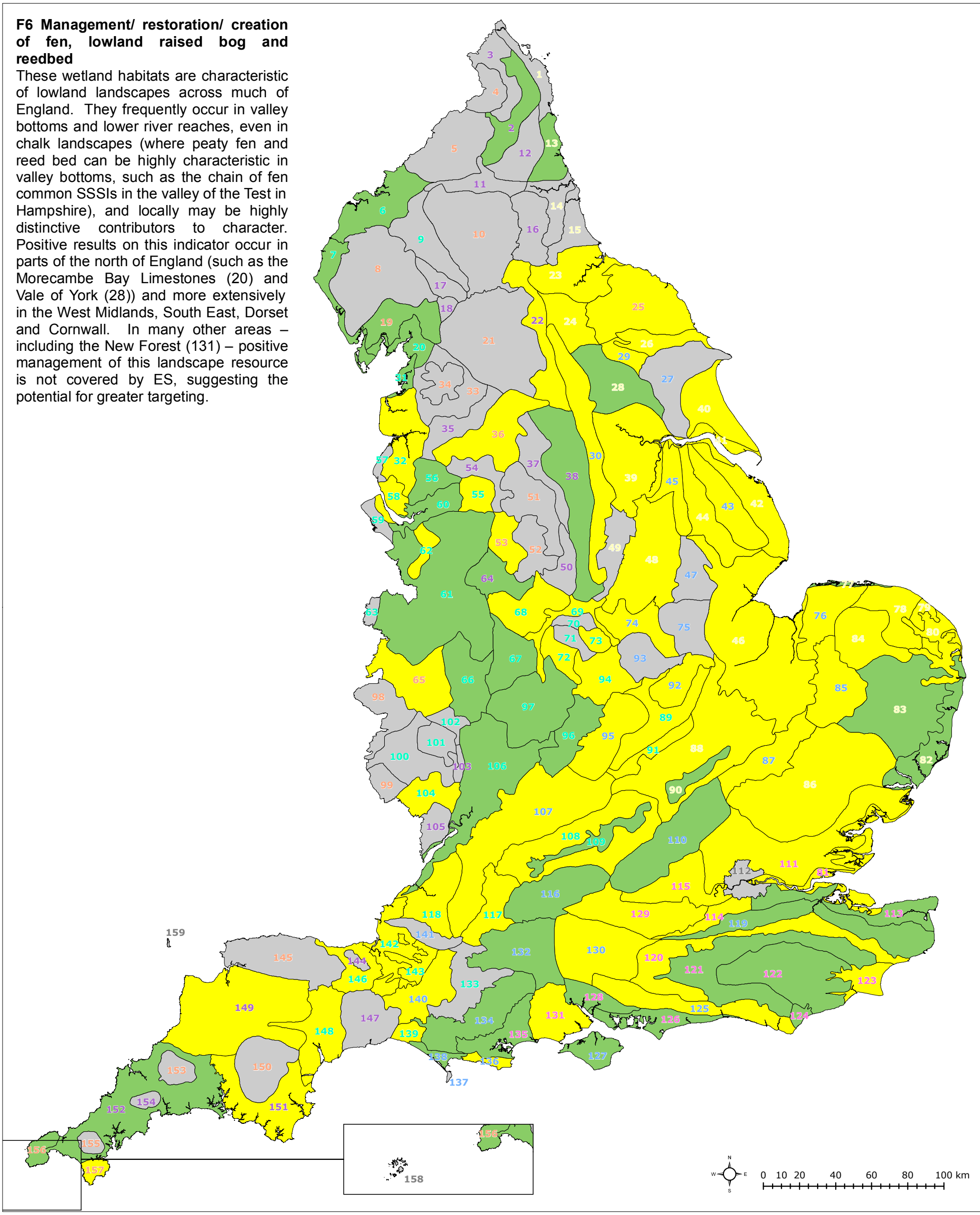
LUC

NATURAL ENGLAND

Source: Natural England and LUC

F6 Management/ restoration/ creation of fen, lowland raised bog and reedbed

These wetland habitats are characteristic of lowland landscapes across much of England. They frequently occur in valley bottoms and lower river reaches, even in chalk landscapes (where peaty fen and reed bed can be highly characteristic in valley bottoms, such as the chain of fen common SSSIs in the valley of the Test in Hampshire), and locally may be highly distinctive contributors to character. Positive results on this indicator occur in parts of the north of England (such as the Morecambe Bay Limestones (20) and Vale of York (28)) and more extensively in the West Midlands, South East, Dorset and Cornwall. In many other areas – including the New Forest (131) – positive management of this landscape resource is not covered by ES, suggesting the potential for greater targeting.



LUC LDN 5693-01_048_ObjF6 03/12/2013

Objective F6: Effect of ES on the management/restoration/creation of fen, lowland raised bog and reedbed

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.34

Objective F6: Effect of ES on the management/ restoration/ creation of fen, lowland raised bog and reedbed

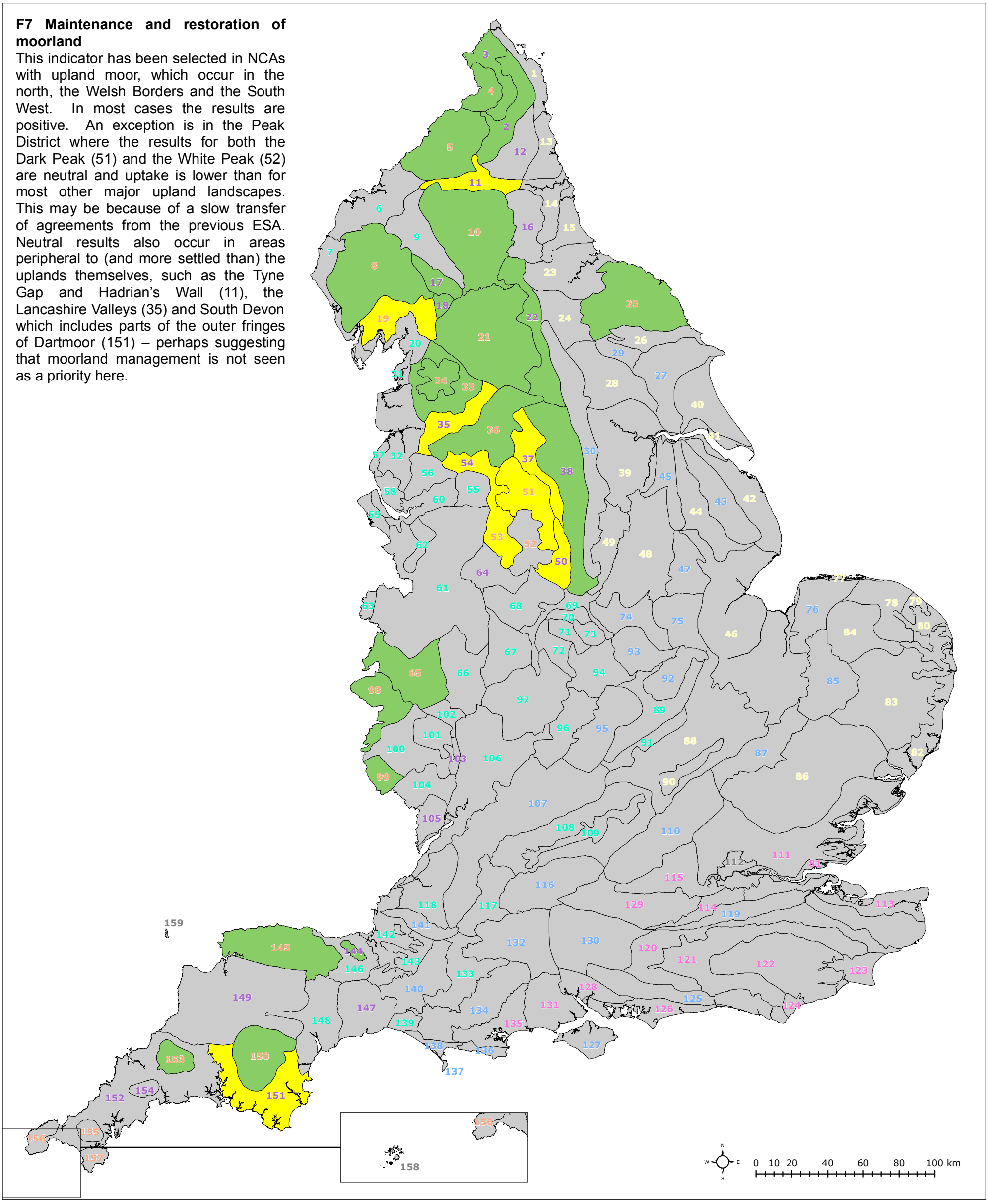
Map Scale @ A3: 1:2,100,000

LUC NATURAL ENGLAND

Source: Natural England and LUC

F7 Maintenance and restoration of moorland

This indicator has been selected in NCAs with upland moor, which occur in the north, the Welsh Borders and the South West. In most cases the results are positive. An exception is in the Peak District where the results for both the Dark Peak (51) and the White Peak (52) are neutral and uptake is lower than for most other major upland landscapes. This may be because of a slow transfer of agreements from the previous ESA. Neutral results also occur in areas peripheral to (and more settled than) the uplands themselves, such as the Tyne Gap and Hadrian's Wall (11), the Lancashire Valleys (35) and South Devon which includes parts of the outer fringes of Dartmoor (151) – perhaps suggesting that moorland management is not seen as a priority here.



LUC LDN 5693-01_049_ObjF7_03/12/2013

Objective F7: Effect of ES on the maintenance and restoration of moorland

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.35

Objective F7: Effect of ES on the maintenance and restoration of moorland

Map Scale @ A3: 1:2,100,000

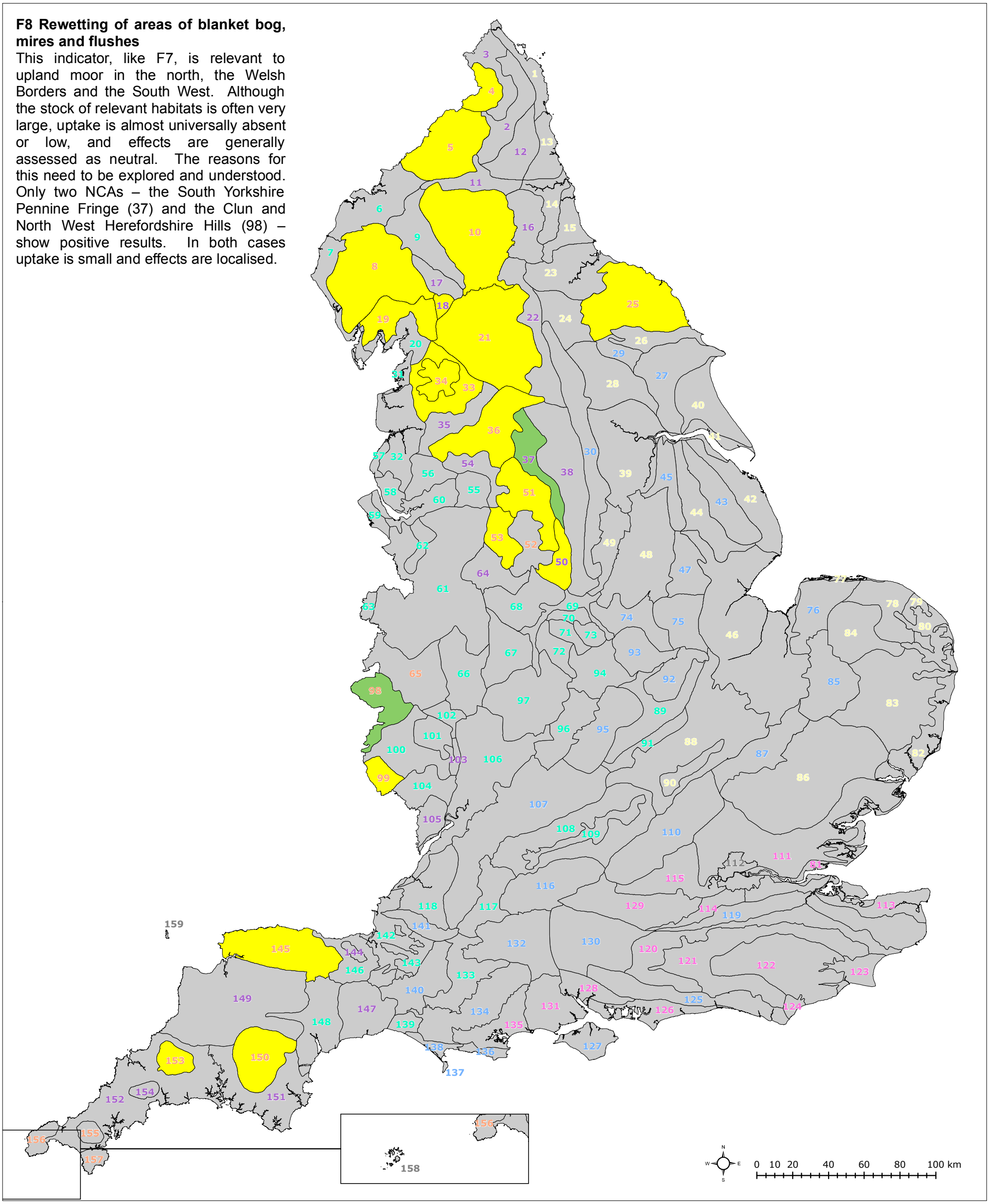
LUC

NATURAL ENGLAND

Source: Natural England and LUC

F8 Rewetting of areas of blanket bog, mires and flushes

This indicator, like F7, is relevant to upland moor in the north, the Welsh Borders and the South West. Although the stock of relevant habitats is often very large, uptake is almost universally absent or low, and effects are generally assessed as neutral. The reasons for this need to be explored and understood. Only two NCAs – the South Yorkshire Pennine Fringe (37) and the Clun and North West Herefordshire Hills (98) – show positive results. In both cases uptake is small and effects are localised.



LUC LDN 5693-01_050_ObjF8_03/12/2013

Objective F8: Effect of ES on the rewetting of areas of blanket bog, mires and flushes

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.36

Objective F8: Effect of ES on the rewetting of areas of blanket bog, mires and flushes

Map Scale @ A3: 1:2,100,000

LUC

NATURAL ENGLAND

Source: Natural England and LUC

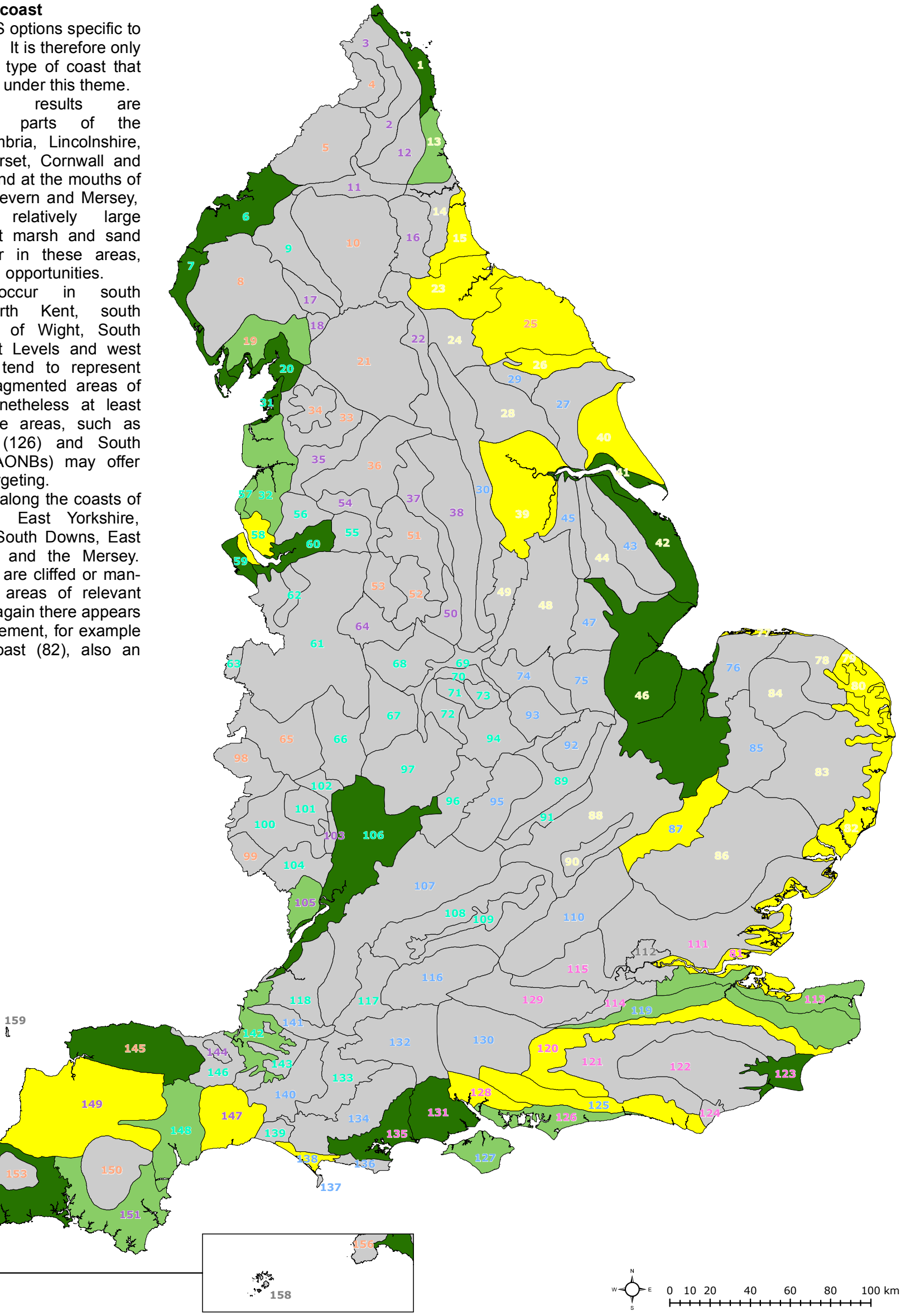
Overall effect on the coast

ES is only provides ES options specific to lowland coastal areas. It is therefore only those NCAs with this type of coast that have been considered under this theme.

Strongly positive results are concentrated along parts of the Northumberland, Cumbria, Lincolnshire, Kent, Hampshire, Dorset, Cornwall and North Devon coasts and at the mouths of the Humber, Wash, Severn and Mersey, possibly because relatively large concentrations of salt marsh and sand dune resource occur in these areas, offering good targeting opportunities.

Positive results occur in south Northumberland, north Kent, south Hampshire, the Isle of Wight, South Devon, the Somerset Levels and west Lancashire. These tend to represent smaller and more fragmented areas of coastal habitat. Nonetheless at least some NCAs in these areas, such as South Coast Plain (126) and South Devon (151) (both AONBs) may offer scope for improved targeting.

Neutral results occur along the coasts of Durham, North and East Yorkshire, Norfolk, Suffolk, the South Downs, East Devon, West Devon and the Mersey. Many of these coasts are cliffed or man-modified, with fewer areas of relevant coastal resource, but again there appears to be room for improvement, for example along the Suffolk Coast (82), also an AONB.



LUC LDN 5693-01_021_ThemeG 03/12/2013

Overall effect of ES on the coast

- Strongly positive
- Positive
- Neutral
- N/A

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.37

Overall effect of ES on the coast

Map Scale @ A3: 1:2,100,000

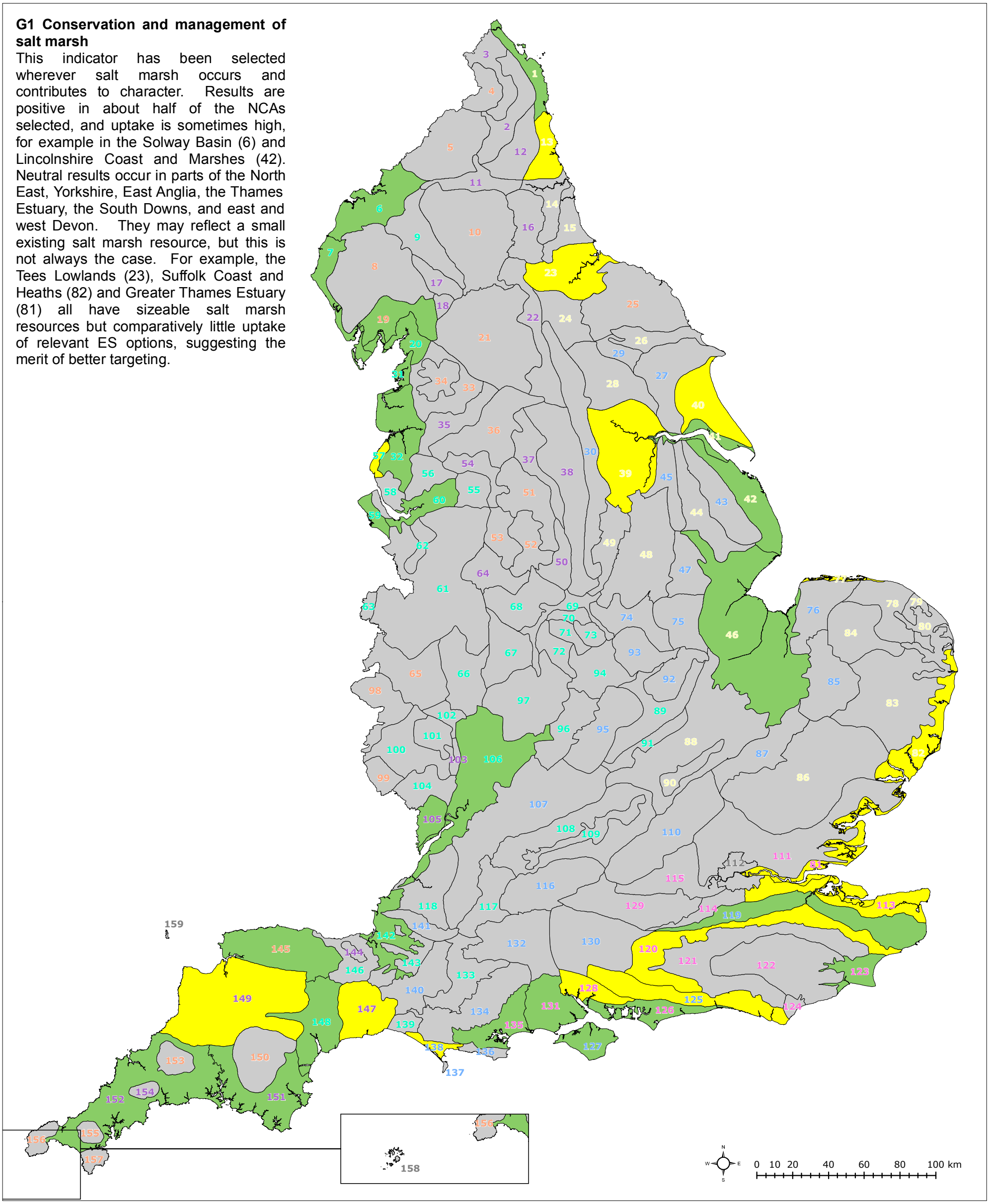
LUC

NATURAL ENGLAND

Source: Natural England and LUC

G1 Conservation and management of salt marsh

This indicator has been selected wherever salt marsh occurs and contributes to character. Results are positive in about half of the NCAs selected, and uptake is sometimes high, for example in the Solway Basin (6) and Lincolnshire Coast and Marshes (42). Neutral results occur in parts of the North East, Yorkshire, East Anglia, the Thames Estuary, the South Downs, and east and west Devon. They may reflect a small existing salt marsh resource, but this is not always the case. For example, the Tees Lowlands (23), Suffolk Coast and Heaths (82) and Greater Thames Estuary (81) all have sizeable salt marsh resources but comparatively little uptake of relevant ES options, suggesting the merit of better targeting.



LUC LDN 5693-01_051_ObjG1 03/12/2013

Objective G1: Effect of ES on the conservation and management of salt marsh

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.38

Objective G1: Effect of ES on the conservation and management of salt marsh

Map Scale @ A3: 1:2,100,000

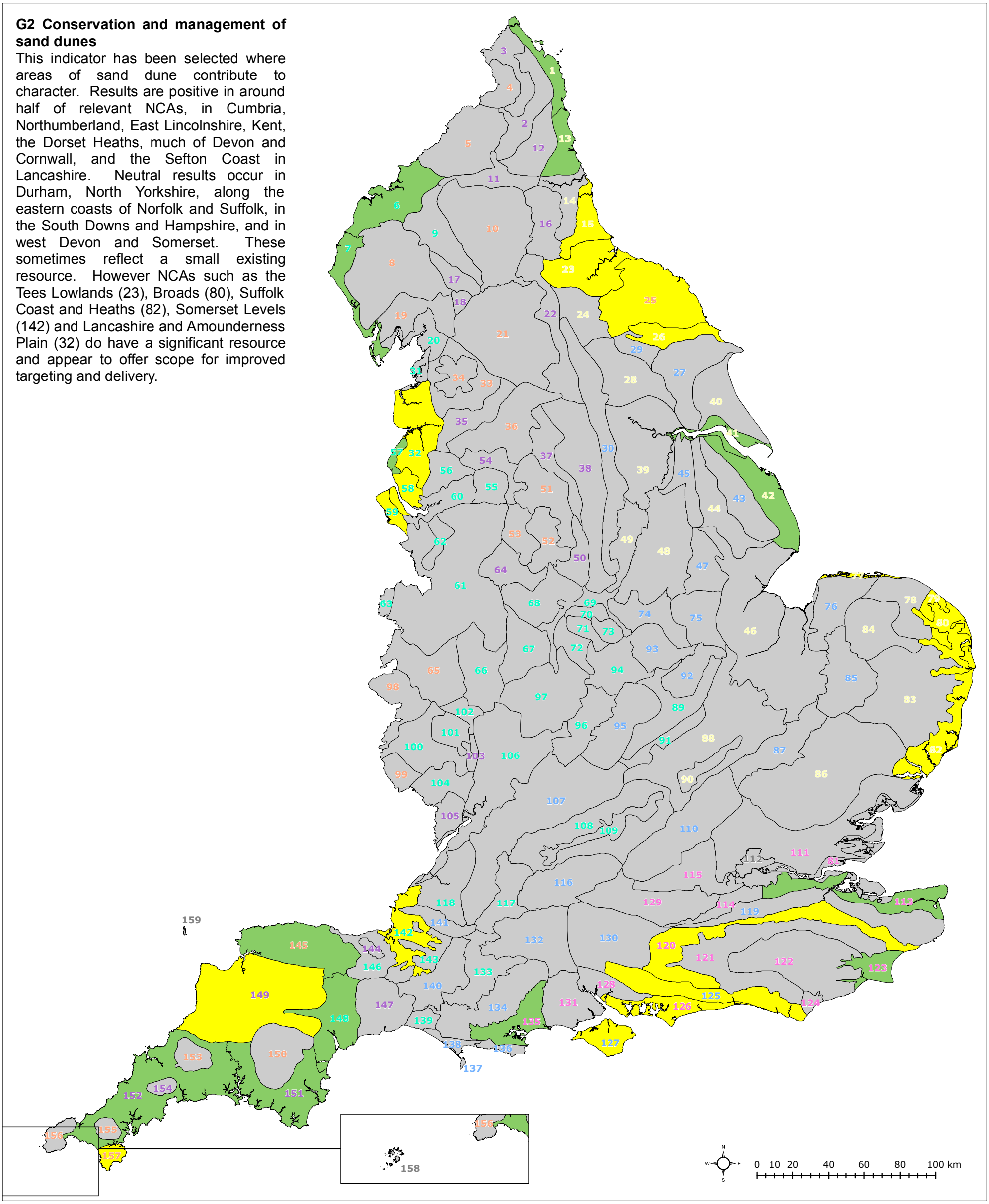
LUC

NATURAL ENGLAND

Source: Natural England and LUC

G2 Conservation and management of sand dunes

This indicator has been selected where areas of sand dune contribute to character. Results are positive in around half of relevant NCAs, in Cumbria, Northumberland, East Lincolnshire, Kent, the Dorset Heaths, much of Devon and Cornwall, and the Sefton Coast in Lancashire. Neutral results occur in Durham, North Yorkshire, along the eastern coasts of Norfolk and Suffolk, in the South Downs and Hampshire, and in west Devon and Somerset. These sometimes reflect a small existing resource. However NCAs such as the Tees Lowlands (23), Broads (80), Suffolk Coast and Heaths (82), Somerset Levels (142) and Lancashire and Amounderness Plain (32) do have a significant resource and appear to offer scope for improved targeting and delivery.



LUC LDN 5693-01_052_ObjG2 03/12/2013

Objective G2: Effect of ES on the conservation and management of sand dunes

- Positive
- Neutral
- Not relevant to this NCA

Colours of the NCA ID labels:

- ALT 1: Chalk and Limestone Mixed
- ALT 2: Eastern Arable
- ALT 3: SE Mixed (Wooded)
- ALT 4: Western mixed
- ALT 5: Upland Fringe
- ALT 6: Upland
- ALT 7: Unclassified

NCA Indicators and Thresholds

Figure 3.39

Objective G2: Effect of ES on the conservation and management of sand dunes

Map Scale @ A3: 1:2,100,000

LUC

NATURAL ENGLAND

Source: Natural England and LUC

APPENDIX 1: Chalk and Limestone Mixed ALT: LANDSCAPE effects of the current (2013) level of ES uptake by Landscape Theme by NCA.

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
27 Yorkshire Wolds							N/A	4
29 Howardian Hills							N/A	2.5
30 Southern Magnesian Limestone							N/A	2
43 Lincolnshire Wolds							N/A	4
45 Northern Lincolnshire Edge with Coversands							N/A	2.5
47 Southern Lincolnshire Edge							N/A	3
74. Leicestershire and Nottinghamshire Wolds							N/A	2
75 Kesteven Uplands							N/A	3
76 North West Norfolk							N/A	3
85 Breckland							N/A	1.5
87 East Anglian Chalk								1
92 Rockingham Forest							N/A	2
93 High Leicestershire							N/A	3.5
95 Northamptonshire Uplands							N/A	2
107 Cotswolds							N/A	3.5
110 Chilterns							N/A	2.5
116 Berkshire and Marlborough Downs							N/A	3
119 North Downs								4
120 South Downs								4.5
127 Isle of Wight								4
130 Hampshire Downs							N/A	3.5

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
132 Salisbury Plain and West Wiltshire Downs							N/A	 2
134 Dorset Downs and Cranborne Chase							N/A	 4
136 South Purbeck							N/A	 3
137 Isle of Portland							N/A	 0
138 Weymouth Lowlands								 2.5
140 Yeovil Scarplands							N/A	2.5
141 Mendip Hills							N/A	4
Totals: Strongly positive	**2**	**13**	**1**	**2**	**7**	**13**	**0**	**1**
Positive	**11**	**14**	**19**	**9**	**15**	**11**	**2**	**24**
Neutral	**15**	**1**	**8**	**17**	**6**	**4**	**3**	**3**
N/A (28)	**-**	**-**	**-**	**-**	**-**	**-**	**23**	**-**

 1 = Strongly positive landscape effect

 0.5 = Positive landscape effect

 0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive

APPENDIX 2: Eastern Arable ALT: LANDSCAPE effects of the current (2013) level of ES uptake by Landscape Theme by NCA.

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
1. North Northumberland Coastal Plain								5
13 North Northumberland Coastal Plain								2
14 Tyne and Wear Lowlands							N/A	1.5
15 Durham Magnesian Limestone Plateau								1
23 Tees Lowlands								1.5
24 Vale of Mowbray							N/A	1.5
26 Vale of Pickering								2
28 Vale of York							N/A	3
39 Humberhead Levels								2.5
40 Holderness								2
41 Humber Estuary								1.5
42 Lincolnshire Coast and Marshes								3.5
44 Central Lincolnshire Vale							N/A	3.5
46 The Fens								3.5
48 Trent and Belvoir Vales							N/A	2.5
49 Sherwood							N/A	2.5
77 North Norfolk Coast								2.5
78 Central North Norfolk							N/A	3.5
79 North East Norfolk and Flegg								2
80 The Broads								2.5
82 Suffolk Coast and Heaths								3

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
83 South Norfolk and High Suffolk Claylands							N/A	 3.5
84 Mid Norfolk							N/A	 3
86 South Suffolk and North Essex Clayland							N/A	 3
88 Bedfordshire and Cambridgeshire Claylands							N/A	 2.5
90 Bedfordshire Greensand Ridge							N/A	 2
Totals: Strongly positive	**0**	**11**	**2**	**1**	**1**	**6**	**4**	**1**
Positive	**8**	**14**	**14**	**15**	**18**	**12**	**1**	**20**
Neutral	**18**	**1**	**10**	**10**	**7**	**8**	**9**	**5**
N/A	**-**	**-**	**-**	**-**	**-**	**-**	**12**	**-**

 1 = Strongly positive landscape effect

 0.5 = Positive landscape effect

 0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive

APPENDIX 3: South East Mixed (Wooded) ALT: LANDSCAPE effects of the current (2013) level of ES uptake by Landscape Theme by NCA.

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
81 Greater Thames Estuary								2.5
111 Northern Thames Basin							N/A	1.5
113 North Kent Plain								2
114 Thames Basin Lowlands							N/A	1
115 Thames Valley							N/A	1.5
120 Wealden Greensand								3
121 Low Weald							N/A	3
122 High Weald							N/A	2.5
123 Romney Marshes								4
124 Pevensey Levels					N/A		N/A	1.5
126 South Coast Plain								2
128 South Hampshire Lowlands								1.5
129 Thames Basin Heaths							N/A	1.5
131 New Forest								3.5
135 Dorset Heaths								3.5
Totals: Strongly positive	**0**	**0**	**3**	**0**	**2**	**7**	**3**	**0**
Positive	**7**	**4**	**11**	**1**	**7**	**7**	**2**	**9**
Neutral	**8**	**11**	**1**	**14**	**5**	**1**	**3**	**6**
N/A	**-**	**-**	**-**	**-**	**1**	**-**	**7**	**-**

1 = Strongly positive landscape effect

0.5 = Positive landscape effect

0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive

APPENDIX 4: Western Mixed ALT: LANDSCAPE effects of the current (2013) level of ES uptake by Landscape Theme by NCA.

CA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
6 Solway Basin								5
7 West Cumbria Coastal Plain								4.5
9 Eden Valley							N/A	4.5
20 Morecambe Bay Limestones								4
31 Morecambe Coast and Lune Estuary					N/A			1.5
32 Lancashire and Amounderness Plain								1
55 Manchester Conurbation							N/A	0
56 Lancashire Coal Measures							N/A	1
57 Sefton Coast								2
58 Merseyside Conurbation								0
59 Wirral								2.5
60 Mersey Valley								3
61 Shropshire, Cheshire and Staffordshire Plain							N/A	3.5
62 Cheshire Sandstone Ridge							N/A	2
63 Oswestry Uplands							N/A	3.5
66 Mid Severn Sandstone Plateau							N/A	3
67 Cannock Chase And Cank Wood							N/A	2
68 Needwood and South Derbyshire Claylands							N/A	2.5
69 Trent Valley Washlands							N/A	0
70 Melbourne Parklands							N/A	2.5

CA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
71 Leicestershire and South Derbyshire Coalfield							N/A	 1
72 Mease/Sence Lowlands							N/A	 2
73 Charnwood							N/A	 1
89 Northamptonshire Vales							N/A	 2
91 Yardley-Whittlewood Ridge							N/A	 2.5
94 Leicestershire Vales							N/A	2.5
96 Dunsmore and Feldon							N/A	3
97 Arden							N/A	2.5
100Herefordshire Lowlands							N/A	4.5
101 Herefordshire Plateau							N/A	3.5
102 Teme Valley							N/A	3
104 South Herefordshire and Over Severn							N/A	2
106 Severn and Avon Vales								4.5
108 Upper Thames Clay Vales							N/A	1
109 Midvale Ridge							N/A	1
117 Avon Vales							N/A	1.5
118 Bristol, Avon Valleys and Ridges							N/A	2.5
133 Blackmoor Vale and the Vale Of Wardour							N/A	3
139 Marshwood and Powerstock Vales							N/A	2.5
142 Somerset Levels and Moors								3
143 Mid Somerset Hills							N/A	2

CA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
146 Vale Of Taunton and Quantock Fringes							N/A	 1
148 Devon Redlands								 3.5
Totals: Strongly positive	**7**	**11**	**0**	**4**	**5**	**11**	**7**	**5**
Positive	**16**	**25**	**16**	**12**	**18**	**25**	**4**	**26**
Neutral	**20**	**7**	**27**	**27**	**19**	**7**	**1**	**12**
N/A (43)	**-**	**-**	**-**	**-**	**1**	**-**	**31**	**-**

 1 = Strongly positive landscape effect

 0.5 = Positive landscape effect

 0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive

APPENDIX 5: Upland Fringe: LANDSCAPE effects of the current (2013) level of ES uptake by Landscape Theme by NCA.

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
2 Northumberland Sandstone Hills							N/A	 5.5
3 Cheviot Fringe							N/A	 4.5
11 Tyne Gap and Hadrian's Wall							N/A	 3
12 Mid Northumberland							N/A	 2
16 Durham Coalfield Pennine Fringe							N/A	 2.5
17 Orton Fells							N/A	5
18 Howgill Fells							N/A	3
22 Pennine Dales Fringe							N/A	3.5
35 Lancashire Valleys							N/A	1.5
37 Yorkshire Southern Pennine Fringe							N/A	1
38 Nottinghamshire, Derbyshire and Yorkshire Coalfield							N/A	1.5
50 Derbyshire Peak Fringe and Lower Derwent							N/A	1.5
54 Manchester Pennine Fringe							N/A	0.5
64 Potteries and Churnet Valley							N/A	2
103 Malvern Hills							N/A	2.5
105 Forest Of Dean and Lower Wye								2
144 Quantock Hills							N/A	1.5
147 Blackdowns								3
149 The Culm								4

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
151 South Devon								 5
152 Cornish Killas								 4
154 Hensbarrow							N/A	 2
Totals: Strongly positive	**2**	**8**	**7**	**2**	**2**	**10**	**1**	**4**
Positive	**11**	**11**	**5**	**8**	**12**	**9**	**2**	**12**
Neutral	**9**	**3**	**10**	**12**	**8**	**3**	**2**	**6**
N/A (22)	**-**	**-**	**-**	**-**	**-**	**-**	**17**	**-**

 1 = Strongly positive landscape effect

 0.5 = Positive landscape effect

 0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive

APPENDIX 6: Uplands ALT: LANDSCAPE effects of the current (2013) level of ES uptake by Landscape Theme by NCA.

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
4 Cheviots							N/A	4.5
5 Border Moors and Forests							N/A	4
8 Cumbria High Fells							N/A	5
10 North Pennines							N/A	6
19 South Cumbria Low Fells								4.5
21 Yorkshire Dales							N/A	6
25 North Yorkshire Moors and Cleveland Hills								4.5
33 Bowland Fringe and Pendle Hill							N/A	4
34 Bowland Fells							N/A	6
36 Southern Pennines							N/A	2.5
51 Dark Peak							N/A	1.5
52 White Peak							N/A	4
53 South West Peak							N/A	3
65 Shropshire Hills							N/A	6
98 Clun and North West Herefordshire Hills							N/A	4.5
99 Black Mountains and Golden Valley							N/A	3
145 Exmoor								5.5
150 Dartmoor							N/A	3.5
153 Bodmin Moor							N/A	3
155 Carnmenellis							N/A	1
156 West Penwith							N/A	2.5
157 The Lizard								4.5

NCA	Woodlands and trees	Boundaries	Agricultural land use	Traditional farm buildings	Historic environment	Semi-natural habitats	Coast	Overall result
Totals: Strongly positive	**8**	**12**	**11**	**9**	**8**	**15**	**1**	**11**
Positive	**10**	**8**	**10**	**6**	**10**	**5**	**1**	**9**
Neutral	**4**	**2**	**1**	**7**	**4**	**2**	**2**	**2**
N/A (22)	**-**	**-**	**-**	**-**	**-**		**18**	**-**

1 = Strongly positive landscape effect

0.5 = Positive landscape effect

0 = Neutral landscape effect

For the overall results for the landscape

0 - 1.5 = Neutral

2 – 4 = Positive

>.4 = Strongly positive