



New Spaces for Nature: the re-territorialization of biodiversity conservation under neoliberalism in the UK

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Abstract:	<p>Biodiversity conservation is a fundamentally spatial practice. For more than a century, conservation's leading strategy has been the establishment of protected areas. Governance by the state has been central to conservation's claim to territory. In the UK, the established approach to biodiversity conservation concentrated on spatial strategies of territorialization to secure particular outcomes in relatively small pieces of land, set aside as protected areas. However, this strategy has begun to change, and conservation's expanding territorial claims have been expressed through new models of large-scale conservation. A series of projects developed by non governmental conservation organisations seek to extend conservation management over larger areas of land. In this paper we consider these developments as a form of re-territorialisation, a reframing and extension of conservation's spatial claims. We describe how conservation's ambitions have been reformed and extended and discuss evidence on the growth of large-scale biodiversity conservation projects in the UK. We then consider the implications of these changes in the light of the neoliberalization of conservation.</p>

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Abstract

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13 conservation's leading strategy has been the establishment of protected areas.
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15 UK, the established approach to biodiversity conservation concentrated on spatial
16 strategies of territorialization to secure particular outcomes in relatively small pieces
17 of land, set aside as protected areas. However, this strategy has begun to change, and
18 conservation's expanding territorial claims have been expressed through new models
19 of large-scale conservation. A series of projects developed by non governmental
20 conservation organisations seek to extend conservation management over larger areas
21 of land. In this paper we consider these developments as a form of re-
22 territorialisation, a reframing and extension of conservation's spatial claims. We
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26 neoliberalization of conservation.
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Keywords

45 Conservation, biodiversity, territorialization, neoliberalization, landscape ecology,
46 ecological restoration.
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Introduction

In June 2011, the UK government published a White Paper on the natural environment, *The Natural Choice: securing the value of nature* (DEFRA 2011a). This was described as ‘a bold and ambitious statement outlining the Government’s vision for the natural environment over the next 50 years, backed up with practical action to deliver that ambition’ (DEFRA 2011a).

The White Paper’s purpose was to restate a public policy vision for conservation in England. Its language was economistic and ambitious. In line with the neoliberal turn in the management of nature (Peck and Tickell 2002; McCarthy and Prudham 2004; Robertson 2006, Castree 2008) and in the conservation of nature (Brockington and Duffy 2010, Hodge and Adams 2012, Büscher *et al.* 2012), it spoke of growth, prosperity, security and benefits. Conservation was presented not in terms of a narrow concern with preservation, but as a means of meeting wider social and economic purposes, not only ‘reconnecting nature’, but ‘connecting people and nature for better quality of life’, and ‘capturing and improving the value of nature’. DEFRA observed that a ‘healthy, properly functioning natural environment’ was ‘the foundation of sustained economic growth, prospering communities and personal wellbeing’ (DEFRA 2011b). This economistic language about nature built directly on the idea of nature as providing ‘services’ to human society, which underpinned the the UK’s National Ecosystem Assessment (NEA), published the previous month (UK NEA 2011).

This neoliberal market-based framing of biodiversity was tied closely to a new expansive intent in UK conservation. The White Paper adopted the positive language of success and expansion, rather than the more familiar conservation tropes of threat and retreat, offering a British version of ‘wild hope’ (Futerra 2010, Balmford 2012). In this it drew heavily on the recommendations of a committee reviewing provision for wildlife conservation in England, set up under the Labour administration but published three months after the election of the Conservative/Liberal Democrat coalition government in July 2010. Their report, *Making Space for Nature*, found that areas rich in wildlife in England were small and widely separated (‘highly fragmented’), and unsuited to coping with pressures such as climate and population change and economic growth. Existing nature reserves and designated wildlife sites in

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3 England did not form a ‘coherent and resilient’ ecological network (Lawton *et al.*
4 2010, v). The committee recommended the establishment of an ecological network of
5 ‘more, bigger, better and joined’ areas of wildlife habitat to prevent extinctions
6 (Lawton *et al.* 2010, 3). *Making Space for Nature* provided the scientific case for the
7 White Paper’s language of physical extension and connectivity of conservation sites.
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13 The England Biodiversity Group (comprising conservation, landowning, farming
14 organisations and statutory bodies) captured this new spirit in a report published
15 alongside the White Paper entitled *Think Big: how and why landscape-scale*
16 *conservation benefits wildlife, people and the wider economy* (England Biodiversity
17 Group 2011). This sought to tie conservation’s new spatial ambition to claims about
18 its benefits to society, arguing that ‘landscape-scale conservation’ (the pursuit of
19 multiple benefits across a defined area) showed that ‘enhancing nature can provide
20 benefits to the local economy and quality of life’ (England Biodiversity Group 2011,
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30 Conservation’s growing territorial ambition in the UK is matched by developments
31 elsewhere. In 2011, an editorial in *Nature* challenged conservation planners in the
32 USA to also ‘think big’ (Anon 2011). The 1990s saw the development of massive
33 trans-frontier conservation areas, for example in the work of the Peace Parks
34 Foundation in South Africa (Duffy 2006, Büscher 2010). The idea of transfrontier
35 conservation had ‘taken South Africa by storm’, expanding across political and
36 economic boundaries (Dressler and Büscher 2008, 452). Globally, the number and
37 extent of protected areas had expanded steadily since the United Nations adopted a
38 ‘World List of National Parks and Equivalent Reserves’ in 1962 (Holdgate 1999). By
39 the end of the twentieth century, there were protected area systems in every country,
40 covering more than 2 million km², 12 per cent of the Earth’s land (Chape *et al.*, 2005).
41 In 2011, international targets for protected areas were expanded significantly at the
42 Conference of the Parties to the Convention on Biological Diversity in 2010: Target
43 11 in the new Strategic Plan for Biodiversity 2011-2020 was to conserve at least 17
44 per cent of terrestrial and inland waters, and 10 per cent of coastal and marine areas
45 by 2020 (CBD 2010).
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3 In this paper, we analyse factors associated with the development of large-scale
4 conservation in the UK, and we present new evidence on the expanding territorial
5 ambitions, drawing on a survey of the large conservation areas proposed by non-
6 governmental conservation organisations. We then situate these developments in the
7 context of the neoliberalization of conservation and the changing role of the state as a
8 conservation actor. First, we consider the importance of territorialization in the
9 conservation strategies of state and non-state actors.
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18 **Conservation territorialization**

19 Conservation is a fundamentally spatial practice (e.g. Tunbridge 1978). The
20 establishment of protected areas has been a central strategy of conservation since the
21 end of the nineteenth century (Sheail 2010), and a variety of forms of protected area
22 are recognised (Ravenel and Redford 2005). From their commencement, the state has
23 been the chief protagonist in conservation's spatial practices. The earliest national
24 parks, in the American west, were created by the Federal Government, a model of
25 state leadership and control emulated by colonial and independent governments
26 across the world (Runte 1987, Adams 2004, Sheail 2010). Neumann (2004) locates
27 the development of protected areas, both in the USA and British colonial Africa,
28 firmly in the context of the state's proprietary claims. He argues that it comprises an
29 integral element of the modern state's rationalizing and organizing enterprise (Scott
30 1998), 'as much an expression of modernism as skyscrapers' (Neumann 2004, 212).
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41 The work of conservation involves the conceptual and practical placing of nature
42 within specific spatial bounds, making both places and spaces (Hughes 2005). Thus
43 Zimmerer (2000, 356) notes 'the expansive new geographies' involved in what he
44 calls the 'conservation boom' of the 1990s, and describes how conservation
45 territories take shape, 'through a spatiality inscribed as a result of various forces, such
46 as science, governance and economics' (2006, 9). In the 1990s, satellite-based
47 imaging systems, GIS software running on laptop computers and handheld GPS
48 devices allowed scientists to make new assessments of land cover change globally in
49 a practice of 'conservation biogeography' (Ladle and Whittaker 2011). Using such
50 technologies of observation and analysis, international NGOs engaged in intensive
51 and competitive science-based conservation planning (Margules and Pressey 2000),
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3 most notably Conservation International's identification of biodiversity 'hotspots',
4 Myers *et al.*, 2000).
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8 The aim of such priority setting was to expand coverage of protected areas. Its
9 method, making biomes and communities legible through mapping, produced
10 'topologies for environmental intervention', and zones of exclusion and inclusion
11 (Brosius and Russell 2003, 49): as Bear (2012) notes in his study of scallop dredging
12 in Wales, territorialization is implicitly exclusionary. In the case of conservation,
13 protected areas are in most cases *explicitly* exclusionary, conceived and managed as
14 places without people. The process of 'mapping, bounding, containing and charting
15 and controlling nature and citizenry' (Neumann 2004, 202) tends to silence or sideline
16 alternative (especially local) views (Bryant 2002; Fairhead and Leach 2003). The
17 complex zoning systems of protected areas create new categories of illegal acts, such
18 that poaching or the encroachment of settlements become construed as 'a defence of
19 national sovereignty as well as a defence of the environment' (Schroeder 1999, 366).
20 The creation of protected areas tends to lead towards coercive strategies (Peluso
21 1993), displacing local people, creating conservation refugees (Cernea and Schmidt-
22 Soltau 2006, Dowie 2009).
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34 The process of territorialization is never completed, but is 'an iterative process which
35 states must continually perform' (Wainwright and Roberts 2003, 201). Elden,
36 following Foucault's lectures at the Collège de France 1977-8, notes that territory
37 should be understood as an object of governance, 'a rendering of the emergent
38 concept of 'space' as a political category: owned, distributed, mapped, calculated,
39 bordered and controlled' (2010, 810). The state's territorial claim is central to these
40 transformations. Territory is something 'shaped by and a shaper of, continual
41 processes of transformation, regulation and governance' (Elden 2013, 13). Thus
42 Löwbrand and Stripple (2006) note the simultaneous 'deterritorialisation and
43 reterritorialisation of the climate as political space' (*sic*, 218), at once treated as a
44 'global' issue and locked into national territories by the spatially explicit patterns of
45 carbon sequestration and accounting. Braun (2000, 28) describes how geology
46 'rendered the space of the Canadian state vertical' at the end of the nineteenth
47 century: not just an extensive and primarily agricultural territory, but a territory with
48 depth.
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However, under the complex and contradictory processes of neoliberalization, conservation territorialization is no longer the preserve of the state. Non-state actors in the form of private and voluntary organisations (McCarthy and Prudham 2004; Hodge and Adams 2012) have become increasingly important agents, with the expansion of privately owned protected areas (Carter *et al.* 2008) and the growing capacity of conservation trusts (Dwyer and Hodge 1996). Non-state actors lead many large-scale conservation initiatives, even where they are linked to state-controlled protected areas. Thus in southern Africa, the Peace Parks Foundation has led the development of transfrontier conservation areas (Büscher 2010), while in Tanzania the African Wildlife Foundation has been a leading actor in the creation of wildlife management areas and conservation corridors around national parks (Goldman 2009, Sachedina 2010).

The ceding by governments of capability to define and regulate environmental territorialization has been far from straightforward or uniform, reflecting the complex hybridity of neoliberalization (Peck and Tickell 2002). The neoliberalization of conservation is characterised by complex processes of de-regulation and re-regulation, and changing patterns of spatial demarcation and control over nature (McCarthy 2005; Büscher *et al.* 2012). It involves close collaboration between state and non-state actors as new commodities are created and traded in new markets (MacDonald 2010, Sullivan 2012, Pawlicezek and Sullivan 2011).

In this paper, we use the term territorialization to refer to the demarcation and mapping inherent in the creation of protected areas and areas of conservation concern, and re-territorialization to refer to changes in conservation's spatial claims. We consider a shift towards large-scale conservation in the UK as a form of re-territorialisation, a scalar shift in conservation narrative and practice, equivalent, for instance, to that between community, ecoregional and ecosystem-based approaches to marine management and conservation in Fiji (Sievanan *et al.* 2013). We identify the leading role of non-state actors in this process, but observe that the state remains central to the achievement of their aspirations through regulation and funding, particularly through the provision of agri-environment payments. In the next section, we analyse the origins and development of large-scale conservation thinking.

The idea of large-scale conservation

Historically, spatial conservation strategies in the UK have been based on relatively small protected areas that held species or habitats of particular rarity or value (Sheail 1998). Until the end of World War Two, nature reserves were established privately on the whim of landowners interested in nature or by early conservation organisations such as the Royal Society for the Protection of Birds or the Society for the Promotion of Nature Reserves (Sheail 1976; Adams 2003). Growing calls for government involvement in conservation in the 1930s and 1940s separated the need for such small nature reserves to protect wildlife, from the protection larger landscapes for recreation and natural beauty. The legislation eventually passed in 1949 as the National Parks and Access to the Countryside Act enshrined this distinction in the work of the Nature Conservancy and the National Parks Commission and their successors (Sheail 1998). Nature (or ‘wildlife’ or most recently ‘biodiversity’) conservation in the UK centred on protection of mostly small sites through National Nature Reserves (owned or leased by the Nature Conservancy, or held under agreement with their owners) and Sites of Special Scientific Interest (essentially planning designations on private land).

However, even in the 1940s, there was recognition of the benefits of designating larger tracts of land for conservation. The Wildlife Conservation Special Committee, which met in parallel with the National Parks Committees as part of planning for post-war reconstruction in the UK (Huxley 1947) identified 35 extensive ‘Scientific Areas’ (Figure 1), ‘tracts of country’ deemed ‘worthy of preservation’ yet that did not require management as a part of a ‘strictly controlled reserve’ (Huxley 1947, para 206). Most were included among the 52 ‘Conservation Areas’ identified by the government’s National Parks Committee. In the event, neither Conservation Areas nor Scientific Areas were introduced under the 1949 Act.

[Figure 1 HERE]

Various factors influenced this failure to designate large nature conservation areas in the 1940s. First, in the immediate post-war period the imperative for economic security, and the high priority of domestic production of food and timber (e.g. the

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3 Forestry Commission afforestation plans, Sheail 1976), mitigated against large
4 territorial claims for conservation. Second, landowners (and county councils where
5 they were strongly represented) retained influence over rural affairs, as the opposition
6 to the new Nature Conservancy in the 1950s attested (Sheail 1998). Third, there was
7 a lack of flexible institutional arrangements that could have facilitated co-ordination
8 of land uses and management at a landscape scale without large-scale public land
9 acquisition. The options available to government at the time were limited to the
10 capacity to prevent development through the planning system (SSSIs) and the
11 potential to acquire land for nature reserves (NNRs). Neither of these was suitable for
12 the management of large conservation areas.
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21 In the 1980s, conservation policy began to address what was then termed the ‘wider
22 countryside’ outside nature reserves (Adams *et al.* 1992; Adams 2003). By that time,
23 the damage to species and ecosystems caused by post-war agricultural intensification
24 was clear, and fiercely debated. From 1981 a regime of costly management agreement
25 payments was in place to compensate landowners for the profits foregone from
26 protecting SSSIs. Patterns of public demand on the countryside had begun to change,
27 with a shift in balance from agricultural products to non-agricultural public and
28 private benefits such as recreation, natural beauty and biodiversity (Lowe *et al.* 1994).
29 The post-war separation between scientific conservation, achieved primarily through
30 nature conservation sites, and the conservation of scenic and recreation values,
31 achieved through more extensive countryside designations, the so-called ‘great
32 divide’ (Sheail 1988), began to blur. It was officially bridged by the merging of
33 government conservation agencies in Wales and Scotland in 1990 and in England
34 with the merger of the Countryside Agency and English Nature to form Natural
35 England in 2006. These mergers forced distinct cultures of conservation together, and
36 may have contributed to larger or ‘landscape’ scale thinking on the part of those
37 responsible for biodiversity conservation.
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51 Agricultural surpluses generated under the support of the Common Agricultural
52 Policy (CAP) catalysed this wider view of conservation, providing a rationale for a
53 reduction of the intensity of agricultural production. The shift of CAP funding from
54 support for production towards direct payments and agri-environment programmes
55 provided space and resources for more ambitious approaches to biodiversity
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3 conservation. Payments by the state to private landholders, including conservation
4 trusts, through agri-environment funds become an important element in conservation
5 strategies in the wider countryside (Kleijn and Sutherland 2003; Swetnam *et al.*
6 2004). However, concern about species and habitat loss persisted: in England, 18 out
7 of 42 priority habitats and 120 out of 390 priority species were in decline in 2008
8 (DEFRA 2011a, 9). Agri-environment schemes were extensive in coverage and
9 expensive, but seemed of limited effectiveness in protecting biodiversity (Kleijn and
10 Sutherland 2003; Kleijn *et al.* 2006).
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18 These policy experiments in conservation incentive payments at farm and landscape
19 scale were increasingly informed by developments in scientific ideas about the
20 ecology of landscapes and areas of habitat within them. From the 1960s, there was
21 recognition of the implications of research on island biogeography for small isolated
22 areas of habitat and nature reserves (Moore 1962; Diamond 1975; Terborgh 1976).
23 The development of landscape ecology (Forman and Godron 1986), a growing
24 literature on the connections between ecosystem fragments (Lindenmayer and Fischer
25 2006; Crooks and Sanjayan 2006), and on the ecology of linked or 'meta' populations
26 (Southwood 1977; Hanski 1999) provided the scientific basis for the idea that
27 conservation should be pursued through protected areas understood as part of
28 'ecological networks' (e.g. Jongman 1995; Jongman and Pungetti 2004). The idea of
29 conservation 'networks' was particularly favoured by those considering how
30 conservation action should take account of anthropogenic climate change (Thomas *et*
31 *al.* 2007). Hopkins *et al.* (2007, 10) emphasised the importance of 'ecologically
32 resilient and varied landscapes', and 'ecological networks' in a conservation response
33 to climate change in England.
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46 Although Lindenmayer *et al.* (2008) found little consensus on general principles for
47 landscape conservation, the 'landscape' approach was widely taken up in the UK in
48 the new Millennium. Hughes and Brooks (2009) set out an agenda for conservation at
49 'an ecosystem scale' in Scotland. The report of the Lawton committee, *Making Space*
50 *for Nature* (Lawton *et al.* 2010), strongly endorsed the landscape approach.
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56 Informed by this changing scientific agenda, conservationists began to focus on the
57 idea of reversing decades of habitat loss and deterioration through bold creative
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3 conservation and ecological restoration. Thus Colston (1997) called for large-scale
4 restoration as a response to a conservation ‘black hole’ in the counties of east and
5 central England, which had anomalously low proportions of SSSIs. Large restoration
6 schemes began to be developed, for example in East Anglia at Wicken Fen and Great
7 Fens (Colston 2003). The idea of restoration of lost nature became a key factor in the
8 emerging thinking about large-scale conservation by non-governmental conservation
9 organisations.
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16 Government conservation also took a creative and restorative approach aimed at large
17 areas. In 2008, Natural England published ‘a new framework for delivering priority
18 habitats and species in England’, building on the Biodiversity Action Plan. This
19 proposed adoption of ‘an ecosystem approach’ and set out to ‘achieve biodiversity
20 enhancements across whole landscapes and seascapes’ (England Biodiversity Group
21 2008, 5). Natural England went on to develop eight ‘Integrated Biodiversity Delivery
22 Areas’, representing ‘entire landscapes’ (Natural England 2008). *Making Space for
23 Nature* (Lawton *et al.* 2010) built on these initiatives, recommending the creation of a
24 series of ‘Ecological Restoration Zones’, operating ‘over large, discrete areas within
25 which significant enhancements of ecological networks are achieved, by enhancing
26 existing wildlife sites, improving ecological connections and restoring ecological
27 processes’ (Lawton 2010, 70).
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38 The ambition of restoration as a conservation strategy was also reflected in growing
39 enthusiasm for the idea of restoring the element of the ‘wild’ in the UK’s severely
40 transformed landscapes (Adams 2003; McFarlane 2007). Conservationists began to
41 focus on the idea of ‘wild land’, where ‘human intervention is minimal and natural
42 processes are respected’ (Taylor 2005, 14.), and on processes of ‘rewilding’ (e.g.
43 Buller 2004; Taylor 2005; Jeeves 2006; Ward *et al.* 2006; Cairns and Hamblin 2007;
44 Brown *et al.* 2011). British conservation looked to bold projects elsewhere, notably
45 Oostvaardesplassen in the Netherlands, where ecosystems in a former polder were
46 grazed by effectively un-managed herds of large herbivores (Taylor 2005; Vera
47 2009), and to the work of the Rewilding Institute and other thinking in the USA (e.g.
48 Foreman 2004). Several large conservation projects in the UK began to focus on
49 restoration of ecosystem function or ‘wildness’, for example Ennerdale in Cumbria
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3 (Browning and Yanik 2004), and Wicken Fen in Cambridgeshire (Hughes *et al.*
4 2011).
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10 **Large Conservation Areas in the UK**

11 In order to assess the significance of these ideas of large-scale conservation in the
12 UK, we undertook a survey of Large Conservation Areas (LCAs) being developed by
13 non-governmental conservation organisations in 2011. We defined LCAs as ‘areas
14 where an organisation or partnership directs land use change within a delineated area
15 to achieve ecological restoration for wildlife conservation, and where public benefits
16 are explicitly recognised in management aims’. We set an arbitrary minimum size for
17 our LCAs (500 ha or 5 km²) to exclude conventional nature reserves. We included
18 large private estates with a clear and explicit emphasis on conservation management,
19 but excluded estates held or managed solely by government or public bodies (e.g.
20 Forestry Commission or Defence Estates), whose management objectives were hard
21 to confirm. Unlike Macgregor *et al.* 2012, we also excluded government zonation
22 schemes, whether protected areas with special planning controls (e.g. National Parks,
23 Areas of Outstanding Natural Beauty, Green Belts) or area-based land management
24 incentive schemes (e.g. Higher Level Stewardship target areas, Catchment Sensitive
25 Farming Initiative, Scotland Rural Development Programme), since we wished to
26 focus on active attempts to direct change and judged these too open-ended to meet our
27 criteria.
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41 We took data from public websites describing three well-known programmes of large-
42 scale conservation: Living Landscapes (Wildlife Trusts), Futurescapes (RSPB 2010),
43 and Landscape Target Areas (Butterfly Conservation, Ellis *et al.* 2012). We used
44 telephone and email discussions to clarify and supplement data, and a snowball
45 approach to extend coverage to other conservation NGOs in England and Scotland
46 (John Muir Trust, Wildfowl and Wetlands Trust, National Trust for Scotland,
47 Woodland Trust). The database and a preliminary analysis were shared with all
48 respondents. Sites with insufficient data were excluded from the analysis: our results
49 are therefore minimum figures.
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3 By 2011, most landowning conservation NGOs in the UK had established LCA
4 programmes. The National Trust, with a substantial existing landholding of large
5 estates, began to think explicitly about landscape scale conservation around the time
6 of their centenary in 1995 (Harvey 1995); the Wicken Fen Vision project was
7 officially launched in 1999, a hundred years after the first strip of fen was acquired by
8 the Trust. The RSPB proposed the development of 'Futurescapes' in 2001, arguing
9 that action was needed at a larger scale than the historical protected area approach,
10 which had failed to halt the overall decline of biodiversity (RSPB 2001). In 2002, the
11 Woodland Trust (2002) published a report on 'landscape scale action for woodland
12 biodiversity'; Butterfly Conservation published its ideas about landscape-scale
13 conservation three years later (Bourn and Bulman 2005). The Wildlife Trusts 'Living
14 Landscapes' programme was launched in 2005 (Wildlife Trusts 2011), and the RSPB
15 re-launched a rejuvenated 'Futurescapes' programme in 2010, hoping to 'achieve a
16 step change in sustainable countryside management... at a scale capable of making a
17 real difference' (RSPB 2010, 23).

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30 Overall, in our survey we found a total of 244 projects across the UK: 72% in
31 England, 19% in Scotland, 6% in Wales and 2% in Northern Ireland (one project
32 crossed the English/Scottish border, The Tweed Catchment Plan). The number of
33 Scottish projects was almost certainly underestimated, reflecting the lack of
34 information on the conservation intentions of large estates (Adams 2012).

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40 In total, 18 different organisations led LCA Projects (if the 42 Wildlife Trusts are
41 collectively considered to be one organisation). The vast majority (86%) were led by
42 three organisations, the Wildlife Trusts (46%), Butterfly Conservation (24%), and
43 RSPB (16%), although our methods may well mean that we missed a larger
44 proportion of projects led by other organisations. Other key organisations included the
45 National Trust, John Muir Trust, National Trust for Scotland, and the Woodland
46 Trust.

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53 LCAs are highly diverse in their aims, embracing a mix of ecological restoration,
54 creative conservation and work with landowner stakeholders. Thus the Wildlife
55 Trusts' 'Living Landscapes' programme aims to 'restore the UK's battered
56 ecosystems, for wildlife and people', 'restoring, recreating and reconnecting wildlife
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3 rich spaces in rural and urban areas' (Wildlife Trusts 2011, 2). Butterfly
4 Conservation's 'Landscape Target Areas', chosen for their importance for threatened
5 butterfly and moth species, focus on the restoration of networks of sites, improving
6 occupied and unoccupied habitat fragments, and improving connectivity between
7 patches (Ellis *et al.* 2012). While most projects are recent in their present form,
8 many are built around much older (and smaller) nature reserves, and the knowledge,
9 logistics and local relationships built up over time. Thus most of the 120 Wildlife
10 Trusts' Living Landscape projects have been created around the extended network of
11 2,250 (mostly small) existing nature reserves owned or managed by individual county
12 Wildlife Trusts. Most of the RSPB Futurescapes also have established nature reserves
13 at their core, as do schemes such as the National Trust's Wicken Fen Vision and Wild
14 Ennerdale.

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25 Large-scale projects involved a wide diversity of actions to achieve their conservation
26 goals. Almost three quarters of projects involved improving existing sites (73%), and
27 about half involved improving the wider countryside (55%), or 'physically linking
28 sites' (47% of projects). These actions are usually combined: thus the RSPB combines
29 four forms of action in its Futurescapes: site expansion or creation, physical linkages,
30 softening the 'matrix' (land management that is more sympathetic to biodiversity
31 conservation), and buffering wildlife sites from external pressures (Symes *et al.*
32 2011). Butterfly Conservation also mixes methods, advising landowners and
33 encouraging the uptake of grant schemes, undertaking direct management through
34 project officers, and arranging surveying and monitoring through volunteers.

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43 The most striking feature of these LCAs, however, is their overall spatial extent. Our
44 search did not attempt the challenge of mapping precise area boundaries (see
45 Macgregor *et al.* 2012). Many initiatives overlap, with different organisations having
46 competing projects in the same areas. Thus Macgregor *et al.* describe the multiple
47 overlaps in the Nene Valley, of an RSPB 'Futurescape', a Wildlife Trust 'Living
48 Landscape', as well as a Higher Level Stewardship agri-environment scheme.
49 However, those LCAs we surveyed covered nearly 6 million ha, equivalent to about
50 one third of the total land area in the UK. The mean size of all UK projects was
51 25,590 ha, with 83 projects over 10,000 ha and 8 projects over 100,000 ha (Figure 2).
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8 **Conservation Re-territorialization and Conservation Trusts**

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10 The re-territorialization of conservation in the UK represented by the newly created
11 networks of LCAs is the physical evidence of the growth in reach and ambition of
12 non-governmental conservation organizations (Armsworth *et al.* 2012). Conservation
13 trusts have an important role in creating institutional frameworks for the delivery of
14 conservation (Dwyer and Hodge 1996), bringing together networks of public and
15 private actors to collaborate in large-scale conservation schemes (Logan and Wekerle
16 2008). Since 1990, the land holdings of the three largest UK conservation trusts have
17 grown by some 20 per cent, although some have grown faster (e.g. the Wildlife Trusts
18 by nearly 50 per cent), while younger organisations such as the John Muir Trust have
19 also expanded their conservation land holdings. LCAs reflect a growth of
20 conservation authority and capacity, as well as the importance of bold and positive
21 messaging to public profile and associated fundraising.
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31 This growth in the power and reach of conservation trusts has taken place as
32 neoliberal strategies have gained ground in biodiversity conservation (Lockie and
33 Higgins 2007; Brockington *et al.* 2008; Büscher *et al.* 2010). NGOs have begun to
34 take over the lead in the direction of biodiversity planning from the state. Governance
35 strategies based on public–private partnership have been seen to combine the benefits
36 of ‘small government’ with the empowerment of communities and the democratic
37 benefits of local action (McCarthy 2005, Lockie and Higgins 2007). In the UK,
38 conservation strategies based on land purchase and regulation by the state have been
39 progressively supplemented since the 1980s by more plural strategies based on
40 various kinds of partnerships between state, private sector and non-governmental
41 organizations.
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51 In the context of a neoliberal era of ‘small government’, NGOs have come to play a
52 key role in the coordination of private landowners to deliver conservation outcomes.
53 The kind of mixed approach to conservation governance, in which state and private
54 actors engage under broad processes of neoliberalization, can be characterised in
55 terms of ‘institutional blending’ (Hodge and Adams 2012). Among the elements of
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3 institutional blending are: 1) the formal legal transfer of ownership between different
4 property regimes and between different categories of owner; 2) the decomposition of
5 property into separate property rights and their subsequent reassignment amongst
6 different agents; 3) the shaping of incentives for land management; and 4) the
7 evolution of informal arrangements for internal governance and partnerships (Hodge
8 and Adams 2012). The operation of large-scale conservation territorializations relies
9 heavily on these elements.
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16 However, the state has sought to retain a position as a key actor in the promotion of
17 cross-sector conservation partnerships. These sit alongside, in some cases
18 overlapping with, the NGO-led large conservation initiatives discussed above. The
19 government wishes to direct land use change and management in support of its vision
20 to restore ecosystems across the country (DEFRA 2011a, 15), but rather than
21 intervene directly in order to achieve this outcome, it has sought to incentivise others.
22 This move is revealed by two specific initiatives proposed in the 2011 White Paper,
23 Local Nature Partnerships (LNPs) and Nature Improvement Areas (NIAs).
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31 Local Nature Partnerships were conceived as growing from the bottom-up,
32 established 'where local areas wish to establish them', and with a strongly
33 communitarian role, aiming to 'engage and win the support of the local people and
34 communities they serve' (DEFRA 2011a, 19-20). LNPs were intended to co-ordinate
35 actions across individual organisations, 'aligning efforts and making the best use of
36 resources'. Partnerships that were 'recognised' by government would be eligible for
37 financial support from a one-off fund worth £1million in 2011/12. Indeed, the idea of
38 LNPs was strongly promoted within DEFRA by conservation NGOs. LNPs reflected
39 their approach to existing LCAs: the Wildlife Trusts emphasised the importance of
40 partnership with 'local communities, landowners, schools and businesses' in Living
41 Landscapes (Wildlife Trusts 2011), and the RSPB described their Futurescapes as
42 rooted in partnerships with other environmental organisations, local communities,
43 businesses and government bodies (RSPB 2010).
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55 The hand of government was more strongly expressed in Nature Improvement Areas.
56 These drew on the same rhetorical frame, proposed for establishment by 'partnerships
57 of local authorities, local communities and landowners, the private sector and
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3 conservation organisations’, based on ‘a local assessment of opportunities for
4 restoring and connecting nature on a significant scale’ (DEFRA 2011a, 21).
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6 Government provided £7.5 million to support the creation of 12 initial NIAs as seed
7 funds: partners would be expected to pool resources and draw together funding from a
8 variety of sources, such as the National Lottery, environmental charities, business,
9 local authorities and communities. A competitive bidding process was organised, with
10 government support targeted to NIAs ‘where joint priorities have been agreed which
11 meet national and local needs’ (DEFRA 2011a, 21).
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18 The successful NIAs were announced in February 2012 (DEFRA 2012; Figure 3).
19 They ranged from peri-urban environments such as the Birmingham and Black
20 Country NIA, a partnership of over 50 organisations involved in Birmingham,
21 Dudley, Sandwell, Walsall and Wolverhampton, to the Marlborough Downs NIA on
22 chalk downland south of Swindon, which was ‘farmer-led’, a ‘bottom-up approach’
23 that its organisers hope will lead to ‘far greater and more wide-reaching benefits as a
24 result of the “ownership” conferred on us by this project’ (Natural England 2013).
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26 Nonetheless, the aggregate area within NIAs remains relatively small compared to the
27 much large area within the numerous NGO-led LCAs.
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35 **[Figure 3 here]**
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38 The interaction between government, landowners and private conservation trusts is
39 critical to this new landscape approach to conservation. The challenge for
40 government conservation in an era of neoliberalization is how to ensure appropriate
41 management of land under different ownerships for a sufficiently long period of time
42 to secure substantial biodiversity gains? In the UK, government remains explicit in
43 its wish to retain control of land already designated for conservation: the White Paper
44 comments that ‘special protection of sites that are especially rich in wildlife or
45 particularly fragile must continue’ (DEFRA 2011a, 10). However, the re-
46 territorialization of conservation represented by large-scale conservation initiatives in
47 the UK involves a shift in the balance of public and private in the delivery of
48 conservation outcomes.
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3 Large conservation areas demand a new scalar politics of conservation, and in the
4 UK, NGOs are at its heart. The coordination of the actions of diverse governmental
5 and private landowners and interests across large areas is difficult (Anon 2011).
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8 Critical factors are the level of control needed to achieve conservation outcomes, the
9 opportunity and transaction costs of imposing it, and the security of the management
10 regime established in the long term. Collaboration among landholders to achieve
11 conservation raises important issues of collective action (Ostrom 1990; Hodge and
12 McNally 2000; Franks and McGloin 2007), particularly where conservation agents
13 interact with other private and state actors (e.g. commercial agricultural land owners,
14 other private landholders in local communities, water companies, Internal Drainage
15 Boards, the Forestry Commission or the Environment Agency).
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23 The choices made by NGOs about LCA project areas, and of management approaches
24 within them, are the outcome of their own internal decision-making processes and the
25 willingness of others to become involved in partnership arrangements. There can be
26 no guarantee that the collective outcome of these organisations' decisions represents
27 the 'best' outcome when looked at from a broader social perspective. These decisions
28 are not driven by market incentives alone, and the NGOs are not democratically
29 accountable. Sandberg (2007) identifies the paradox between the doctrine of a 'lighter
30 state' (and associated fragmentation of government) and the 'new heavy scientific
31 paradigms of sustainable nature resource management', which would appear to
32 demand a sovereign state 'in full command of both its territory and its extractive
33 sectors' (Sandberg 2007, 614).
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43 LCAs rely on a wide range of approaches, including land ownership, conservation
44 covenants and various kinds of informal engagements with private owners (c.f. Hodge
45 2001). Partnerships to create such projects involve complex mixes of public and
46 private interests, and novel patterns of state regulation and payments. Fairfax *et al.*
47 (2005) trace the growing complexity of patterns of land ownership and control in the
48 USA, and particularly the importance of easements over land, which separate
49 ownership from control of particular land development rights. This pattern also holds
50 for the UK. Most LCA projects have multiple partners, of a wider range of kinds
51 (Table 1): only 12% of projects (29 of those sampled) were implemented by one
52 organization alone. Partners included central government departments, non-
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3 departmental public bodies, local authorities, private businesses, non-profit
4 organisations or charitable trusts, educational institutions, and utility companies. The
5 most diverse category of partners was non-governmental organisations, with many of
6 the lead organizations involved in LCAs collaborating with each other in complex
7 projects sometimes with overlapping (but not identical) spatial extent and branding.
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18 **Neoliberal Conservation Landscapes**

19 A central framing device for the large conservation areas being developed by NGOs
20 in the UK is the concept of ecosystem services. The Department for Environment,
21 Food and Rural Affairs (DEFRA) embraced the Convention on Biological Diversity's
22 'ecosystem approach' early in the new Millennium. However, of the 12 'principles'
23 in the approach, one dominated UK thinking: Principle 5 'conservation of ecosystems
24 structure and function to provide ecosystem services should be a priority' (CBD 2013;
25 Pound 2009).
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33 The construction of nature as a 'service provider' has had a profound effect on
34 thinking about conservation in the UK, as internationally. Although challenged (e.g.
35 McCauley 2006; Redford and Adams 2009), the concept of ecosystem services has
36 been widely adopted, notably in the Millennium Ecosystem Assessment in 2005, and
37 TEEB (The Economics of Ecosystems and Biodiversity, MacDonald and Corson
38 2012). Originally conceived as a way of explaining (and ensuring conservation of) the
39 values of nature, ecosystem services have become the basis of technocratic
40 environmental management, sustaining and not challenging entrenched excesses of
41 production and consumption (Norgaard 2010).
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49 In the context of large conservation areas, the concept of ecosystem services works to
50 build a rhetorical bridge to profit-orientated private landowners, and to cash-strapped
51 neoliberally minded local and national government. It positions conservation not as
52 constraining the economy, but as protecting a source of direct economic value. Two
53 thirds of the descriptions of projects surveyed mentioned promotion of cultural
54 ecosystem services as a project purpose (including the improvement of access to
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3 nature, recreation and health benefits, sustainable tourism, preservation of scenic
4 beauty, culture, and natural and historic heritage). One third mentioned regulating
5 ecosystem services (improvement of water quality and storage, flood risk
6 management, soil erosion control, carbon storage and improvement of habitat for
7 pollinators). Twenty one per cent of projects aimed to ‘support the local economy or
8 employment’, and eight per cent listed ‘provisioning ecosystem services’, such as
9 timber and sustainable local food production, as a conservation purpose.
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16 The concept of ecosystem services has a central place in the techniques by which
17 nature is rendered visible to the market (Robertson 2006; MacDonald and Corson
18 2012), commodified and financialized through monetisation and marketization
19 (Robertson 2004; Pawliczek and Sullivan 2011, Sullivan 2012). We noted above that
20 the re-territorialization of conservation within a large-scale landscape frame has
21 accompanied a significant neoliberal shift within conservation thought and practice.
22 Indeed, we would argue that it depends on and furthers the neoliberalization of
23 conservation itself, and the attempt to promote conservation in and through the
24 expansion of capitalism (Igoe and Brockington 2007; Brockington *et al.* 2008;
25 Brockington and Duffy 2010). Büscher *et al.* (2012, 23) argue that conservation
26 should be understood as a set of governmentalities that involve the extension of
27 ‘profitable commodification processes’ by extending and policing separation between
28 human society and non-human nature. So, while conservation might seem to be about
29 ‘saving nature’, it actually serves ‘to entrain nature to capitalism’ (Büscher *et al.*
30 2012, 7).
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43 The UK National Ecosystem Assessment (NEA) was published just a month before
44 the UK White Paper (UK NEA 2011). The idea of ‘ecosystem services’, used as a
45 way of measuring the value of nature and determining choices about land use, now
46 lies at the core of government environmental policy-making and delivery (DEFRA
47 2007; Hopkins 2013). Commitments in the White Paper led to establishment of
48 Ecosystem Markets Task Force ‘to review the opportunities for UK businesses from
49 expanding green goods, services, produces, investment vehicles and markets which
50 value and protect the environment’ (DEFRA 2013a), and creation of a Natural Capital
51 Committee, reporting to the Chancellor of the Exchequer (DEFRA 2013b).
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3 Biodiversity conservation in the UK has been re-framed to fit this idea of nature. The
4 2011 White Paper expressed the need to protect ‘our most precious and endangered
5 wildlife’, by ‘working together to safeguard ecosystem services and restore
6 ecosystems through more cost-effective and integrated approaches’ (DEFRA 2011a,
7 17). Natural England commissioned extensive research on the impacts of changing
8 land use and management in the uplands on the delivery of ecosystem services and
9 benefits (Natural England 2009). The UK’s *Post-2010 Biodiversity Framework*
10 emphasised the importance of ‘building and applying the evidence base to implement
11 the ecosystem approach and support ecosystem assessment’ (JNCC and DEFRA
12 2012, 7).
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23 **Conclusions**

24 The involvement of NGOs in the development of large-scale conservation projects in
25 the UK undoubtedly represents a significant transition in conservation ambition. The
26 new territorialization involved in these extended and networked claims for
27 biodiversity take a range of forms, and involve new combinations of actors, including
28 the state and private landowners as well as NGOs. Large conservation projects in the
29 UK will trigger a new politics of engagement and dispute at a number of levels and
30 different arenas of planning and governance, as has happened elsewhere (e.g. Büscher
31 2010, Sachedina 2010).
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49 It is not clear whether landscape scale conservation projects provide the level of
50 control of land use change necessary to secure intended conservation outcomes in the
51 face of present and future changes, or whether they are resilient enough to secure
52 those outcomes in the long term in the face of economic, social and climate change
53 and the increased pressures on land use that are likely to be associated with them.
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59 The sustainability of the conservation outcomes of these new large projects is hard to
60 predict. It depends on a range of factors, including the changing rural economy and
agricultural profitability, changing policy context, changing planning goals (housing,
flooding, climate change). In particular, the future development of the Common
Agricultural Policy (European Commission 2013), and particularly agri-environment
policy, will shape the framework for conservation as an element in rural land

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3 management in the UK (Hodge 2013). The success of large conservation projects
4 will also be affected by public demands on the countryside. Many existing projects
5 claim broad public benefits and local support (e.g. Wildlife Trusts 2007; RSPB 2010).
6
7 Such claims will be tested. While changes to the management of individual small
8 conservation sites may have relatively limited impacts on the wider character of local
9 landscape or local economic opportunity, the development of a landscape scale
10 project has wider implications. The interface between the NGOs leading LCAs and
11 processes of public spatial planning is important. The development of ecosystem and
12 biodiversity values requires a long-term commitment to particular land uses which
13 may not generate the highest financial return or which may change the balance of
14 local economic activity. Local public support might wane in the face of impacts on
15 local people, changes to familiar landscapes or competing demands for land.
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25 The fundamental feature of large conservation areas is that they are an attempt to
26 coordinate land use and conservation management over a larger extent than can
27 typically be maintained by a single conservation landholder (governmental or non-
28 governmental), or by a single private owner or manager responding to conservation
29 management agreements or agri-environment payments. Large scale conservation
30 potentially demands novel institutional architectures, which blend categories of
31 governmental and private tenure and management (Hodge and Adams 2012). Hybrid
32 institutions, emerging through the work of evolving partnerships between state and
33 non-state actors, involve on a range of governance tools, including novel market-
34 based mechanisms to secure biodiversity, targeted payments by the state to
35 landowners and market and biodiversity-friendly regulation (Pawliczek and Sullivan
36 2010, Büscher *et al.* 2010, MacDonald and Corson 2012). In the UK, the key
37 instrument for government is the agri-environment scheme, which underpins the
38 funding model of many large conservation areas.
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50 Shucksmith and Ronningen (2011) suggest that the financial crisis of 2008 might
51 open opportunities to re-imagine and rebuild a place for small farms in Europe. The
52 same hiatus may offer opportunities for creative approaches to the delivery of public
53 benefits from nature through large-scale conservation initiatives. The potential of
54 hybrid strategies and institutional *bricolage* to transform and extend patterns of
55 conservation territorialisation are potentially profound.
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However, there are limits to what may be achieved by non-state actors under existing legal institutions and incentives, and in an era of post-crisis neoliberalism (Peck *et al.* 2010). Governments cannot simply slough off responsibility for LCAs to the ‘Big Society’, however well the dependence of biodiversity conservation on partnerships seems to fit the model (Natural England 2011). The formal mechanisms required to ensure the long-term sustainability of conservation gains in LCAs may require government to take an active role in steering social and economic processes towards publicly desired outcomes, and acting as a countervailing force against the market incentives. Neoliberalism may offer a new set of mechanisms in pursuing conservation ends, but also creates new risks and challenges. The achievement of public conservation goals would seem to continue to require an active and interventionist government. It is here, in the balance of public and private interest and the question of who exercises power to strike that balance, that analytical and policy attention should focus.

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56 Acknowledgments

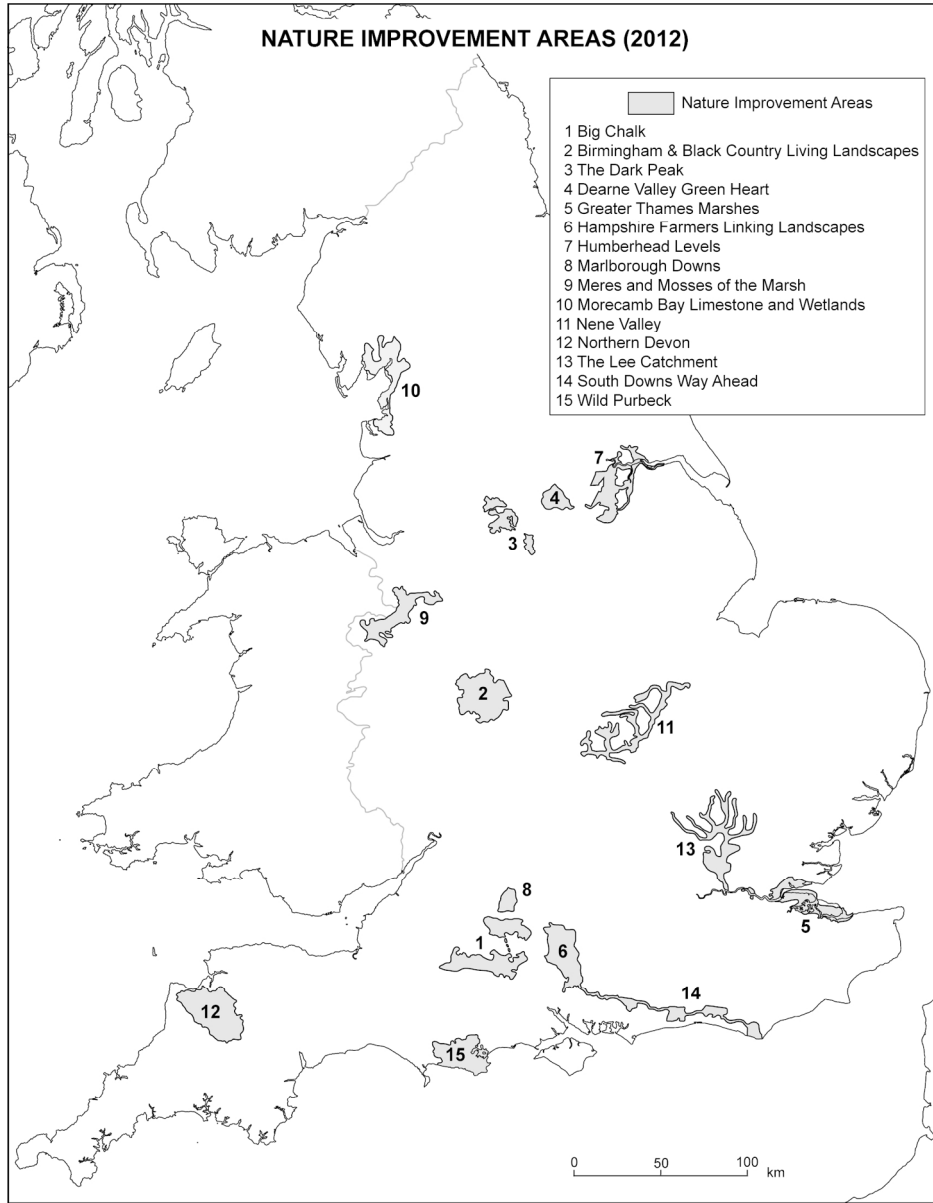
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For Peer Review

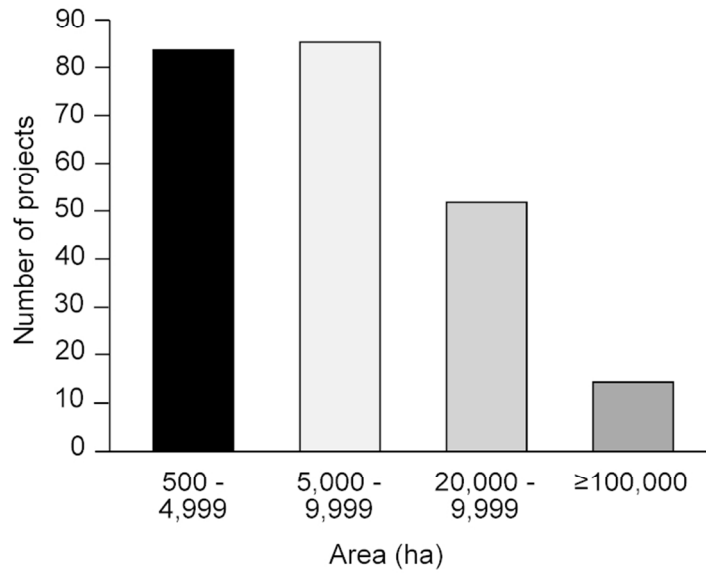
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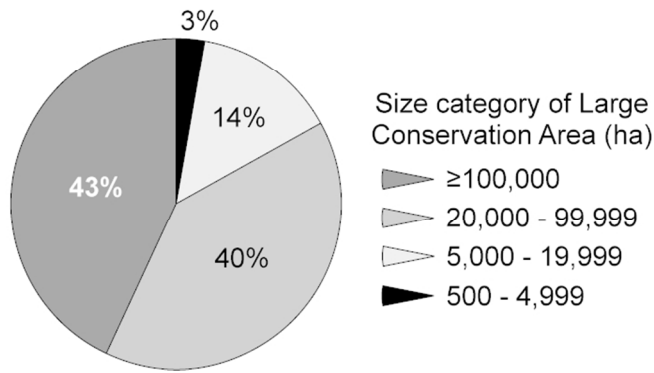
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Size distribution of Large Conservation Areas

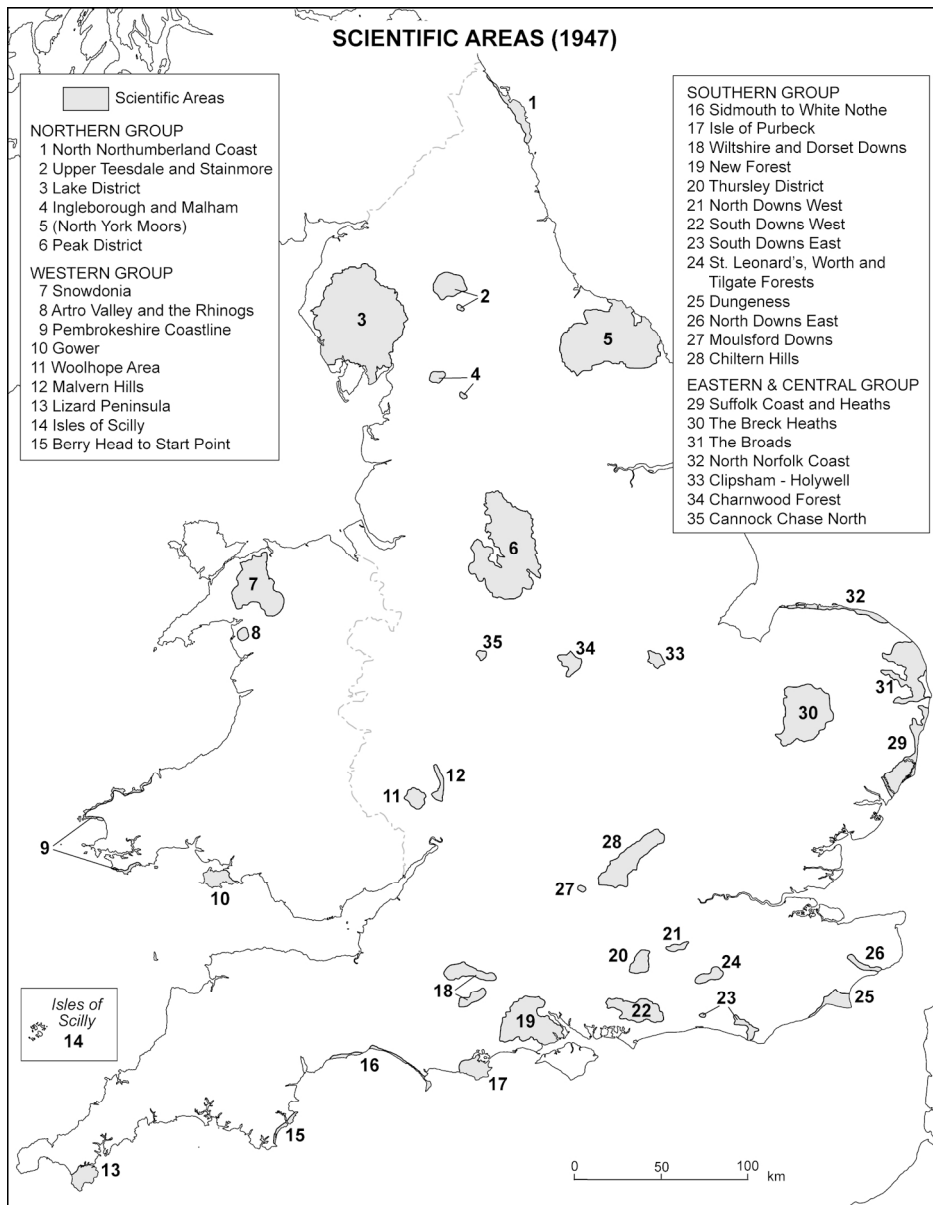


Percent of total area



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Table 1. Large conservation area project partners

Category of partner organisation	Examples
Government Departments	Defra, Ministry of Defence, Welsh Assembly Government
Non departmental public bodies	British Waterways, Centre for Ecology and Hydrology, Countryside Council for Wales, English Heritage Environment Agency, Forestry Commission (and Forest Enterprise), Natural England, Scottish Natural Heritage
Utilities	Internal Drainage Boards, Network Rail, water companies
Non-profit organisations / Charities	British Trust for Ornithology, British Trust for Conservation Volunteers; Community organisations and associations; Farming & Wildlife Advisory Group; John Muir Trust; National Trust; Royal Society for the Protection of Birds; Scottish National Trust; Wildfowl and Wetlands Trust; Woodland Trust; Wildlife Trusts.
Local Authorities / Local Government	Borough Councils, Community Councils, District Councils, , National Park and AONB Authorities (including Broads Authority)
Private Businesses;	development companies, energy companies (e.g. Mercia Energy Ltd.), estates, mineral companies (e.g. Cemex, Aggregate companies)
Education Institutions	Schools, colleges, universities (e.g. Scottish Agricultural College, Imperial College)