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Land of Limestone and Levels: Defining the West of England

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Introduction

In spite of the homogenising effects of globalisation, many people have a powerful sense of pride and identity in their location, believing that they are part of something that is distinct and immediately recognisable to a visitor. Given such perceptions, the West of England's Joint Spatial Plan team are investigating whether the West of England has special characteristics of *'place'* that engender shared interest and regional affinity to which emerging planning policies might positively respond - the ultimate aim being to promote happiness, health and wellbeing. This approach to the design, planning and management of space is often described as *'place-making'*, though it should be noted that a place is always of course already there, with all its social and environmental history, and many aspects of it may just need *'discovering'* and *'expressing'*.

As ecologists and geographers we wish to ensure that the physical environment is not treated as merely a backdrop to human experience in the emerging place-making strategy but rather is given equal emphasis with cultural influences. Our aim here therefore is to identify the West of England's unique and unifying landscape characteristics, relating to topography, rural scenery, and flora and fauna, which intertwine with human experiences to create a *'sense of place'*, thereby distinguishing the Region from adjoining areas. Furthermore, we examine whether the inhabitants of the West of England show a particularly special environmental consciousness that sets them apart from neighbouring populations, reinforcing attachment to the Region's physical environment.

Defining Boundary Features

The boundaries of the West of England (hereafter also referred to as *'the Region'*) are consistent with the former county of Avon and enclose an area of 1,343km² (Fig. 1). Avon was replaced in 1996 by the four unitary planning authorities of Bath and North East Somerset (BANES), Bristol City, North Somerset and South Gloucestershire. Recently the four authorities have been developing a West of England Joint Spatial Plan to integrate policies on transport, housing, the environment etc.

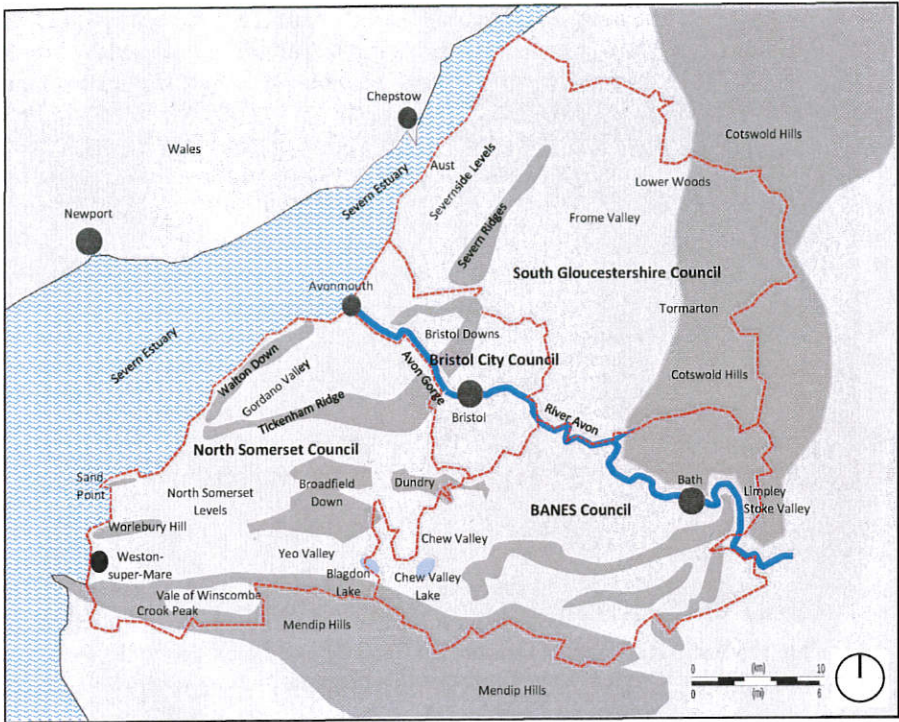


Fig. 1: West of England Region and key landscape features

Although the boundaries of the West of England were primarily envisioned to encapsulate the four unitary authorities and facilitate strategic planning, by good fortune there is also considerable logic in recognising the Region as a distinct physical geographic entity. This is because the Region, which is roughly triangular in shape, is enclosed by three distinctive natural boundary features. The West of England is bound by limestone ranges to the south and east; these being the Mendip Hills (Plate 1) and the southern spur of Cotswold Scarp (Plate 2) respectively, both of which consist of wide plateau-tops, in places over 300m in height, dissected by steep combs. The Mendips form a particularly striking frontier, rising abruptly from the low-lying patchwork expanse of the Somerset Levels to the south. Both hill ranges are designated Areas of Outstanding Natural Beauty (AONB), meaning that they are amongst the nation's most distinctive and naturally beautiful landscapes, and both incorporate multiple sites designated for their ecological importance.



Plate 1: Mendip Hills Area of Outstanding Natural Beauty; Lox Yeo Valley in foreground and Crook Peak in background (*photograph by Lincoln Garland*)



Plate 2: Cotswold Hills Area of Outstanding Natural Beauty near Bath; Kelston Park in background (*photograph by Matt Prosser*)

By contrast the Severn Estuary, which borders to the west and separates the Region from Wales, is a coastal/estuarine environment. The Severn Estuary is of international ecological importance, being designated as a Ramsar Site and Special Protection Area (SPA) on account of its wetland habitats and associated waterfowl populations. The estuary is one of the largest in Britain and has one of the highest tidal ranges in the world. While definitions of the Severn Estuary's limits differ, on the English side they are generally considered to extend from the village of Aust (at the old Severn Bridge) to Sand Point (near Weston-super-Mare), which conveniently mark the approximate northern and southern extremities of the Region's western boundary. In other words, the banks of the Severn Estuary are, on its English side, more or less exclusive to the West of England. Upstream conditions along the Severn become increasingly riverine, while to the south the Estuary empties into the open sea of the Bristol Channel.

These three significant boundary features combine to provide the West of England with physical enclosure and perhaps also instil in the population a self-awareness and sense of sanctuary, emotions that are probably much less evident in more featureless regions that morph imperceptibly into one another. There are perhaps parallels here to be made with the separateness and associated pride experienced by the Cornish whose county is also clearly physically distinguishable, being bounded by sea on three sides and the River Tamar on the fourth.

Arrival Experience: 'Gateways' to the West of England

Residents and visitors entering the West of England via its principal road links may experience a genuine '*sense of arrival*' as they breach the striking and picturesque frontiers. Accessing the Region from the North, the M5 motorway is increasingly squeezed by the Cotswolds Scarp and Severn Ridges, before the Cotswolds snake away to the east to reveal the relatively low-lying expanse of the Frome Valley. Entering from the north-east the Frome Valley is also abruptly revealed where the M4 motorway traverses the Cotswold scarp at Tormarton. From the South, the M5 enters the West of England via Loxton Pass, a narrow gap in the Mendip Hills below Crook Peak (perhaps the Mendips' most distinctive hilltop) (Plate 1). Beyond Loxton Pass is the Vale of Winscombe, considered to be one of the prettiest valleys in the Mendips (Toulson, 1983; Garland, 2016). The most dramatic of all the arrival experiences, however, is from the west, via the Severn Bridge and the Second Severn Crossing, which link the Region to Wales.

It should be emphasised that arrival experience is a particularly key consideration in place-making, as the special emotions experienced during the first moments of returning can influence, either positively or negatively, the level of anticipation, expectation and ultimately the enjoyment of homecoming.

On arrival in the west, the sense of '*apartness*' and otherness, *vis-a-vis* the far larger hub of civilisation that is Greater London, appears reinforced by a landscape that

also 'looks' west (the Cotswolds and Mendips create a west-facing bowl) and hence away from the metropolis that otherwise dominates southern England.

A Land of Limestone and Levels

The distinctive contrast between the landscape of the West of England and neighbouring areas reinforces sense of place. The alternating carboniferous limestone ridges and broad clay vales prevailing across the Region's heart contrast with the landscapes of the neighbouring Marlborough Downs (rolling chalk hills) to the east; the Somerset Levels to the south; the open low-lying Severn and Avon Vales to the north; and the Severn Estuary to the west (Natural England, 2014).

The Mendip and Cotswold chains form the Region's skeletal frame, although various other prominent ridgelines traverse the Region's heart including Worlebury Hill, Broadfield Down (on which sits Bristol Airport), Dundry Ridge, Tickenham-Failand Hills, Walton–Portishead Down, and Bristol Downs. All of these ridgelines provide splendid panoramic views across the Region and lend a sense of enclosure at a more local level to the denizens of the intervening valleys.

The steep slopes of these hills have inhibited urban encroachment and intensive agricultural practices with the consequence that they incorporate most of the West of England's biodiversity hotspots, primarily flower-rich calcareous grasslands and Ancient Woodlands. Notable calcareous grasslands include the Uphill Cliff component of Mendip Limestone Grasslands Special Area of Conservation (SAC), Dolebury Warren Site of Special Scientific Interest (SSSI) (also in the Mendips); various locations on the Cotswold Scarp; the Avon Gorge SAC; and Walton Common SSSI overlooking Gordano Valley. The conservation charity Buglife and the Avon Wildlife Trust have teamed-up to implement a landscape-scale conservation project aimed at creating a network of 'B-Lines' linking these and other wildflower-rich areas across the West of England, providing corridors for pollinating insects. Ancient Woodlands can be found clinging to the northern Mendip edge, the Cotswold Scarp, Avon Gorge (Leigh Woods), Tickenham Ridge, and the western margins of Broadfield Down (King's Wood–Brockley Wood). The undisturbed soils of these woodlands produce spectacular and much venerated displays of Wild Garlic *Allium ursinum* and Bluebells *Hyacinthoides non-scripta* each spring.

Rare Greater Horseshoe *Rhinolophus ferrumequinum* and Lesser Horseshoe *Rhinolophus hipposideros* bats particularly favour the combination of extensively grazed grasslands and Ancient Woodland in which to forage, and also roost within the dense network of limestone caves and mines that are scattered across the Mendips, Cotswolds and elsewhere.

The Region's skeletal ridges protect a softer 'underbelly' consisting of expansive clay vales, perhaps most notable of which are the Yeo and Chew Valleys adjoining

the northern Mendip scarp, with their recreationally popular Blagdon and Chew Valley lakes. Both lakes are designated as SSSIs primarily on account of their wintering waterfowl populations. Chew Valley Lake has the added protection of SPA status. These two valleys are amongst the most scenic in the West of England and consequently are included (in part) within the Mendip Hills AONB. Food and drink manufacturers with headquarters in the Yeo Valley (and adjoining Vale of Wrington), including Thatchers, Yeo Valley Farms and Butcombe Brewery, all celebrate the natural beauty of these valleys when marketing their products promoting a *'back to nature'* quality.

The Frome Valley, which covers much of the northern half of the West of England, is a more low-lying landscape with shallow winding valleys bounded by the Cotswolds scarp to the east and the Severn Ridges to the west. Although sparsely wooded this area includes the Region's woodland *'jewel in the crown'* - Lower Woods SSSI near Wickwar. At 300ha in size Lower Woods is the largest Ancient Woodland in the Region and the only one to our knowledge that still supports breeding Nightingales *Luscinia megarhynchos*.

Juxtaposed with the West of England's dominant alternating ridge and vale terrain are the flatlands of the North Somerset Levels, Gordano Valley and Severnside Levels, which prevail across the Region's south-western and north-western sides. These former swamps and marshes are now open, relatively treeless landscapes, consisting mostly of wet pasture that is divided and drained by a vast network of rhynes. Although mostly intensively farmed, pockets of biological richness remain, most notably Gordano Valley and Puxton Moor SSSIs, which include mosaics of richly vegetated wet-meadow, reedbed, carr and rhyne habitat.

Rural Setting of the Bath World Heritage Site

Special emphasis is given here to Bath's UNESCO World Heritage Site status. Although the designation is based on cultural criteria, the picturesque extensively farmed rural setting, founded around a complex system of plateau-tops and incised combs, aptly referred to by Evans (2000) as the Broken Cotswolds, is considered *'inextricably linked'* to the protective conservation status of this unique Georgian city (B&NES, 2009). The encircling hill-top plateaus consist of the honey-coloured Greater Oolitic Limestone, the much celebrated building material so evident in local farmsteads, villages and indeed much of Bath itself. This locally occurring building material has been used from time immemorial, *'making man-made structures appear to be part of the land itself'* (Cotswolds Conservation Board, 2006).

The Avon Catchment

The River Valley particularly affects the Region's landscape character, given that the catchment covers a large portion of Bristol, B&NES and South Gloucestershire, and also the north-eastern corner of North Somerset. The River Avon, on which

Bristol and Bath were founded, meanders its way for 75 miles from its source in South Gloucestershire to the Severn Estuary at Avonmouth. The river flows through land of varying topography ranging from Limpley Stoke Valley, the dramatic steep-sided vale immediately upstream of Bath, to wide flood-plain between Bristol and Bath. Towards the end of its journey the river cuts through the spectacular Avon Gorge, which extends for over 2km and is over 90m deep in places (Plate 3). The Gorge and Brunel's Clifton Suspension Bridge that spans the ravine, have become the iconic images of Bristol, and indeed the entire West of England.



Plate 3: Avon Gorge with Clifton Suspension Bridge and Bristol Balloon Festival in background (*photograph by Matt Prosser*)

The Role of Landscape-scale conservation Strategies

Establishing coherent and robust green infrastructure on a landscape-scale not only creates a permeable landscape for wildlife and strengthens ecological integrity between important wildlife sites, it also provides a greater range of more effective and robust '*ecosystem services*'. This in turn helps establish links between communities and their environment, contributes to human wellbeing, and in turn invigorates people's affection for landscape and associated wildlife.

Various landscape-scale strategies are being implemented in the West of England, key amongst which is the *Joint Ecosystem Service Evidence Project*. This project is seeking to identify and map ecosystem services so that these can be protected in emerging development and growth strategies. The Severn Estuary and adjoining levels have formed the basis for the establishment of the Severnside Wetlands

Nature Improvement Area that aims to create a vibrant, nature-rich landscape where people, business and wildlife thrive. Other key landscape-scale strategies include the B-Lines project discussed above and various city-scale projects in Bristol, most notably the *My Wild City* project that has the ambitious aim to transform gardens and open spaces into a city-wide nature reserve. Returning to the River Avon, the Bristol Avon Catchment Plan encourages a whole-system, integrated approach to water and land management, rather than relying on ‘*end of pipe*’ engineered solutions (Bristol Avon Catchment Partnership, 2016).

The West of England’s Special ‘*Environmental Psyche*’

Another factor shaping the West of England’s sense of place are the people. It would appear that there is a particularly strong link between the Region’s environment as described, the type of person choosing to live in it, and their areas of interest and endeavour. Certain personality traits may be good predictors of an individual’s level of concern about the environment (Milfont & Sibley, 2012). Specifically the trait ‘*Openness*’ (to experience and ideas) can be correlated with high levels of environmental engagement. Rentfrow *et al.* (2015) undertook a substantial UK-wide study of regional variations in personality and found the trait *Openness* to be disproportionately concentrated in Bristolians. Bristol, which sits at the centre of the West of England and is often referred to as the UK’s ‘*Green Capital*’, is the ‘*beating heart*’ of the Region’s distinctive eco-consciousness (Sawday, 2012; Douglas, 2016). Bristol includes numerous pockets of bohemian leftfield green awareness, including Montpelier, St Werburghs, Easton, Totterdown, Southville and St Andrews, and the City has a long history of community environmental action. The *Forum for the Future’s Sustainable Cities Index*, which tracked progress on sustainability in Britain’s 20 largest cities between 2007 and 2010, placed Bristol in the top four each year and in first position in 2008. Bristol was also the first UK city to be awarded European Green Capital status in 2015 (Plate 4) and is home to various celebrations of biodiversity and sustainable living, including the annual *Festival of Nature*, *Wildscreen Festival* and *Big Green Week*.

Bristol and the wider West of England appear to be a magnet for attracting environmentally-aware individuals and sustainable/green technologies and organisations (Sawday, 2012; Douglas, 2016). The celebrated creative artists, Banksy and Aardman Animations, have emerged out of Bristol, both of which have expressed strong environmental messages in their artwork. Sustrans, the Soil Association, City Farms, Forum for the Future, the Schumacher Institute, Avon Wildlife Trust, Natural England’s Wildlife Licensing Unit, the Environment Agency and the BBC’s Natural History Unit, are all based in Bristol and attract well educated environmentally-minded people. Bristol has also been called the ‘*world capital of the wildlife and environmental film industry*’, as it produces 25% of this sector’s global output (Centre for Cities, 2014).



Plate 4: Former Mayor of Bristol, George Ferguson, with European Commissioner for the Environment, Janez Potočnik, at the award of Bristol as European Green Capital 2015

Variance in the spatial distribution of personality traits can have far-ranging political outcomes. Bristol's first ever directly elected mayor George Ferguson (independent) was elected on a ticket of urban renewal and environmental sustainability, and the City has one of the UK's highest concentrations of Green Party councillors (eleven). In the Bristol West constituency the Green Party also came close to gaining its second MP in the 2015 general election, coming second with 26.8% of the vote.

Although not at the same scale and perhaps lacking the same socially activist dynamic as Bristol, the people of Bath show many similar traits to Bristolians. There is also a distinctive green consciousness evident in a number of the Region's satellite towns, perhaps most notably Stroud, Frome and Glastonbury. Stroud (and neighbouring Nailsworth) is home to Forest Green Rovers (owned by Dale Vince of Ecotricity fame), the environmentally conscious and vegan football club that has just been promoted to the Football League; while Glastonbury is home to a fairly substantial 'New Age' community and of course the world renowned music festival, both of which are associated with eco-inspired philosophies.

It is also interesting to note that the West of England's eastern boundary approximately accords with the Roman constructed Fosse Way, which in early Roman times delineated the boundary between the Empire's 'pacified heartland' to the east and a 'militarised zone' to the west (Crane, 2016). Once again the West of

England is associated with a rebellious tendency, although this is now reflected through a propensity for peaceful eco-activism. Whatever the reasons are, the Region does appear to have a 'go west' pioneering spirit and lure, attracting people towards a greener, better future.

Conclusions

While definitions of 'place' have historically focussed on cultural influences, we contend that landscape underpins place-based attachment and belonging. Although the concept of the 'West of England' was envisioned primarily for strategic planning purposes, it also has real geographical integrity as described. This 'Land of Limestone and Levels' also contrasts with neighbouring landscapes, reinforcing a sense of identity and belonging among its inhabitants.

'Place-making', or Place revealing, should seek not only to draw major inspiration from the natural environment and landscape but also to build on any progressive environmental traits within the population. Strategic progress is being made in this regard through various landscape-scale conservation projects.

When the contrasting landscape qualities of natural beauty and historic culture, enclosure and expansiveness, refuge and connectivity all combine, the result can be a powerful magnet for people with above average ecological awareness and creativity. The West of England is a unique example of this phenomenon, and this makes the Region a very special place in which to live.

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Rerum cognoscere causas – Virgil

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