DEVON'S DISTINCTIVE HEDGES

Devon's hedges are truly world class. In a nation famed for its hedgerows, Devon has a larger and more intact hedgerow heritage than any other county (53,000 km in total). Most of these hedges are ancient, dating back to Medieval times or before. Through their rich and intricate patterns they tell the story of Devon's countryside and farming traditions over many centuries.

Today, Devon's hedges remain an essential element of the farmed landscape, creating stock-proof barriers and sheltering livestock from the elements. Of huge importance to wildlife (including rare species like the dormouse and cirl bunting), they protect our soils and store carbon.

Devon is fortunate in having a rich variety of different hedge types, often reflecting the diversity of the county's underlying geology, which serves to make each part of the county distinctive and special. One key feature unifies them throughout, however - the Devon Bank, which often incorporates stone and supports the living hedge of shrubs and trees.

This document provides information on six of the most distinctive hedge types that are found throughout the county, including a map that shows indicative areas where each hedge type is prevalent. A large printed poster is available from the Devon Hedge Group that summarises the six hedge types and their distribution.

Devon Hedge Group
Devon County Council
North Devon Coast Areas of Outstanding Natural Beauty
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DEVON'S DISTINCTIVE HEDGES

Overview map

Beech hedges

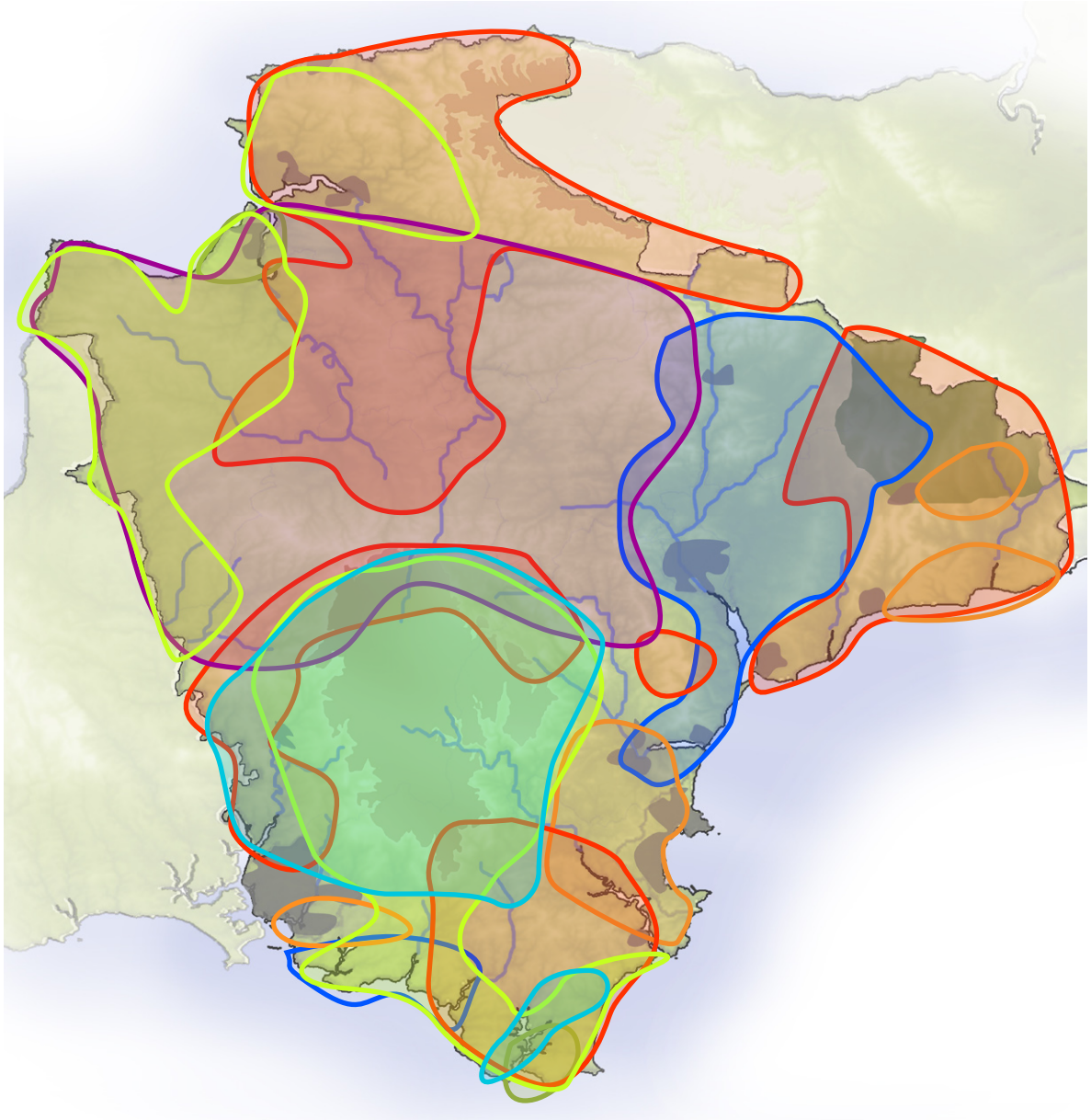
Clayland hedges with willow

Windswept hedges with gorse

Stone-faced hedges

Hedges on limestone & chalk

Elm-dominated hedges



The map on the left shows, for each part of Devon, what the main hedge type is. Hedges are grouped into six different distinctive types. In some parts of the county just one type of hedge is prevalent, in others two or more types are common.

To see information on an individual hedge type, click on its respective tab in the left-hand column.

Beech Hedges

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Beech hedges

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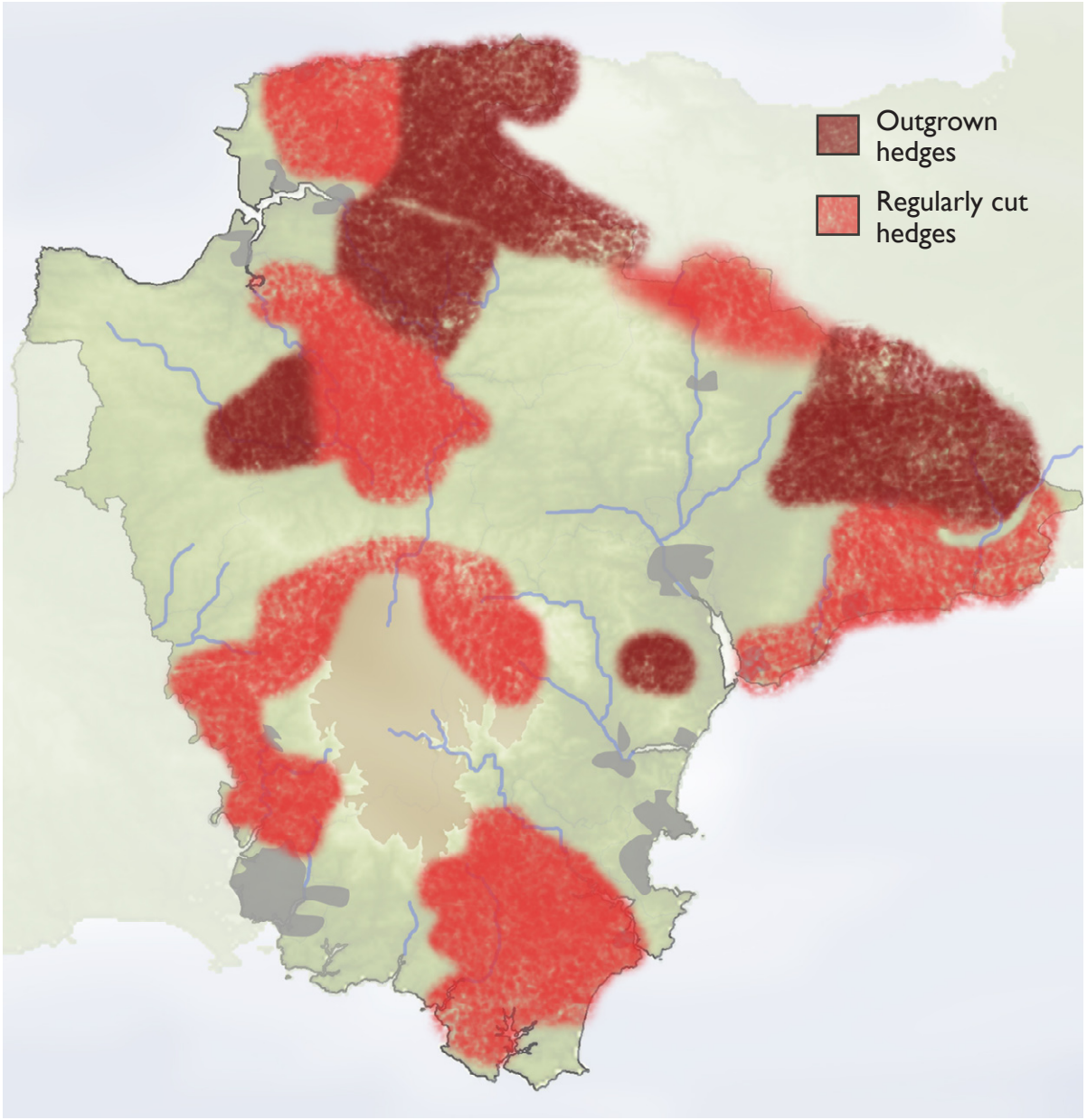

Beech hedges give bright splashes of colour to many parts of the county, with leaves which are copper in the autumn and bright green in the spring. They cast a dense cooling shade in the summer. These hedges are particularly characteristic of Exmoor and high ground on the Blackdowns.

Beech hedges differ from the others on this poster, being planted with just a single species. They were normally made by landed estates during the 18th and 19th centuries to mark out the boundaries of newly-enclosed fields.

In some areas, such as the Blackdown Hills, the hedges have been allowed to grow into lines of majestic trees, while in other areas, such as the South Hams, they are more often kept low by regular trimming or laying.

For more information click ***here***

Clayland Hedges with Willow

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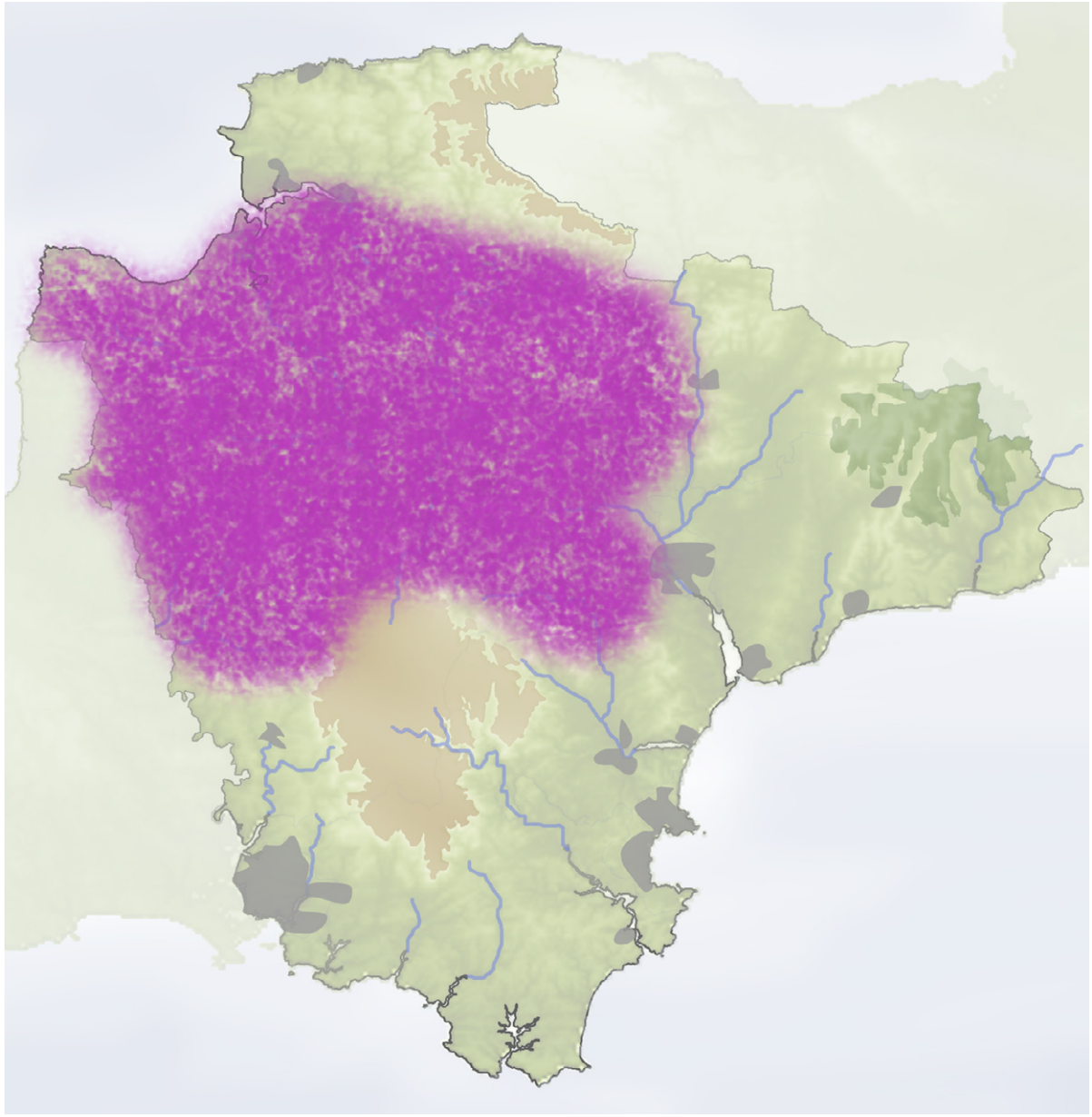
Stone-faced hedges

Hedges on limestone & chalk

Elm-dominated hedges



Across the large swathe of central, west and northern Devon lying between the moors, hedges typically contain a rich diversity of shrubs including willow, reflecting the wet clay soils. These hedges normally have turf-faced banks. Other common shrubs include blackthorn, hawthorn, rowan, hazel and holly, with oak and ash as the main trees.

The brown hairstreak, a rare butterfly whose larvae feeds on blackthorn, has a national stronghold in these hedges. In the valleys the hedges are typically of medieval origin and enclose small irregular fields, whereas on the ridge tops fields are generally large and regular, created during the 18th and 19th centuries.

For more information click ***here***

Windswept hedges with gorse

Overview map

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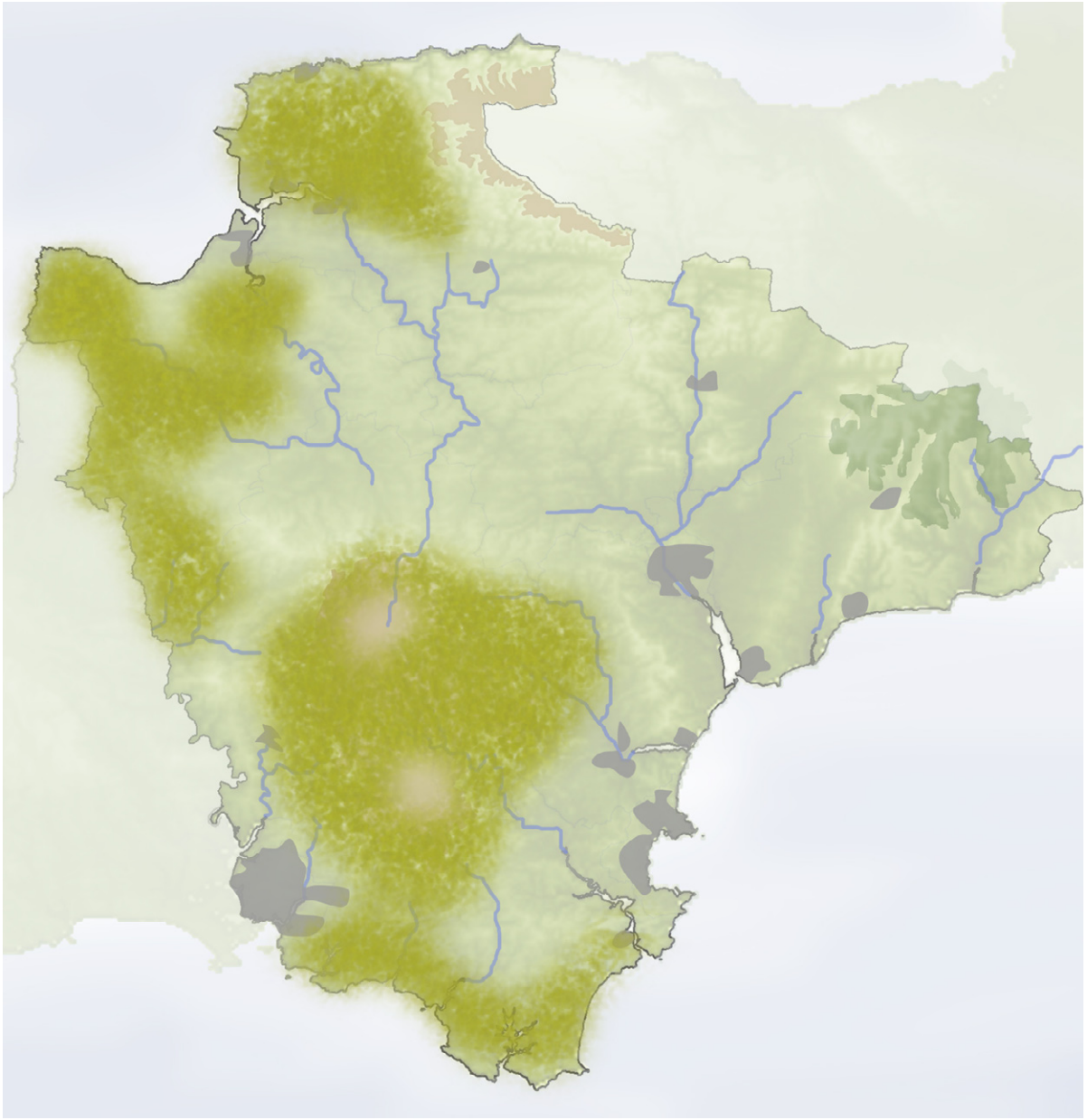
Clayland hedges with willow

Windswept hedges with gorse

Stone-faced hedges

Hedges on limestone & chalk

Elm-dominated hedges



On exposed coasts and high ground the prevailing south westerly winds create hostile conditions in which trees are bent to the wind and shrubs are tightly wind-pruned.

Hardy species such as gorse, hawthorn and blackthorn are the common shrubs here, growing on banks which may be stone-faced. Sycamore, along with beech and oak, are the main hedgerow trees.

Lichens grow profusely on tree trunks, gateposts and exposed stones. Some banks have very little scrubby growth on top, maybe just a thin scattering of heather or gorse, but these are still called hedges.

For more information click ***here***

Stone-faced hedges

Overview map

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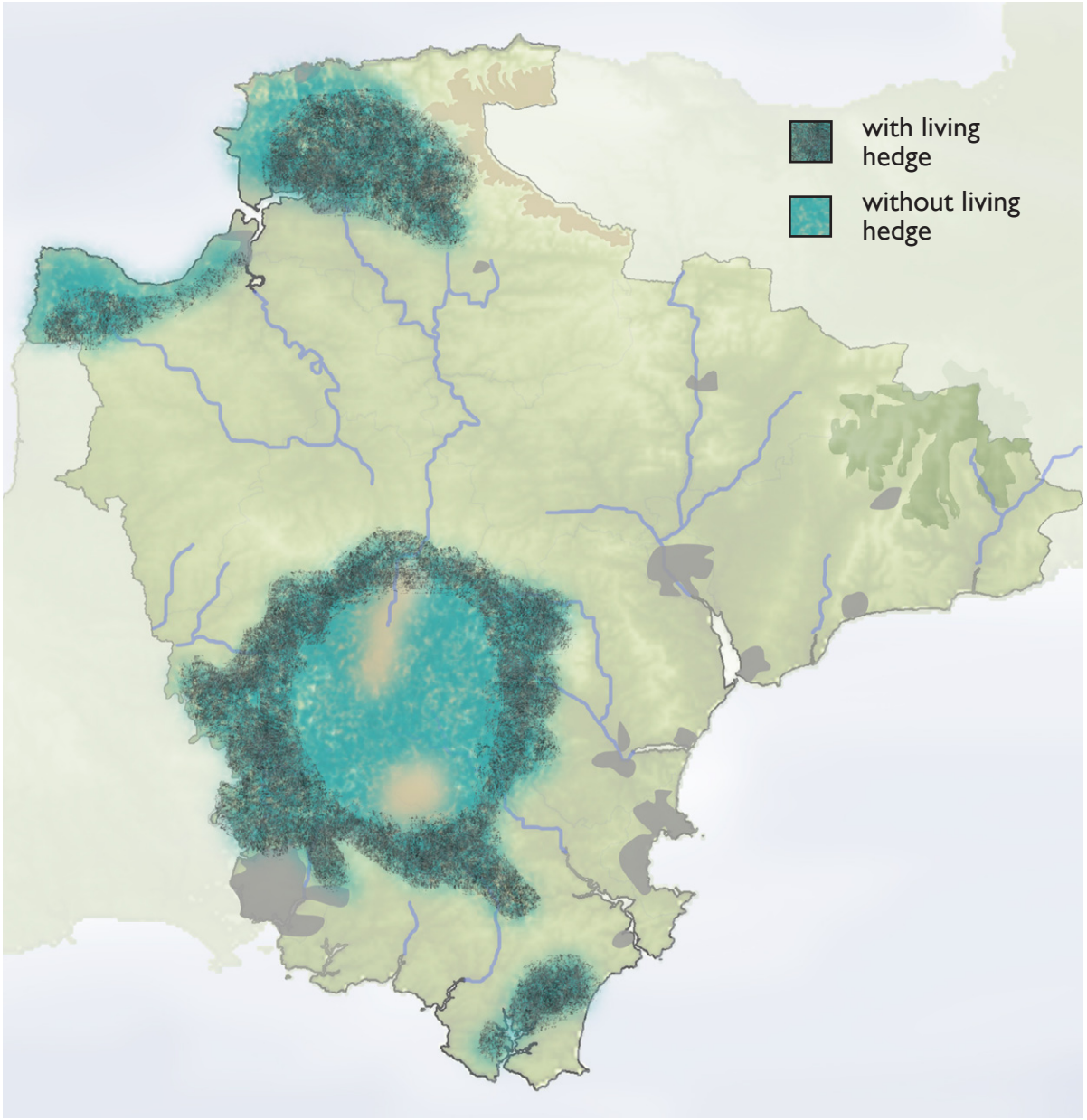
Windswept hedges with gorse

Stone-faced hedges

Hedges on limestone & chalk

Elm-dominated hedges



Hedges with stone-faced banks are characteristic of Dartmoor, south-west Devon and some coastal areas. In other areas, stonework is often present but hidden within the structure of the bank. The type of stone varies with the underlying geology, with slate in North Devon, granite on Dartmoor, shale in the South Hams and schists around Prawle. The stonework is often of fine quality, the stones being set either horizontally or vertically. Dartmoor's prehistoric 'reaves' are a distinctive example of these hedges, comprising low stone and earth covered banks and revealing the remains of ancient rectangular field systems across lower-lying moors. A variant of this hedge type are the dry-stone walls that are found locally and largely date from the late 18th century, built to enclose the newtakes of former moorland. The 'living hedge' growing on the bank varies from lines of trees to sparse and low shrubs on exposed sites. Luxuriant growths of mosses and ferns sometimes completely obscure the stone work.

*For more information click **here***

Hedges on limestone & chalk

Overview map

Beech hedges

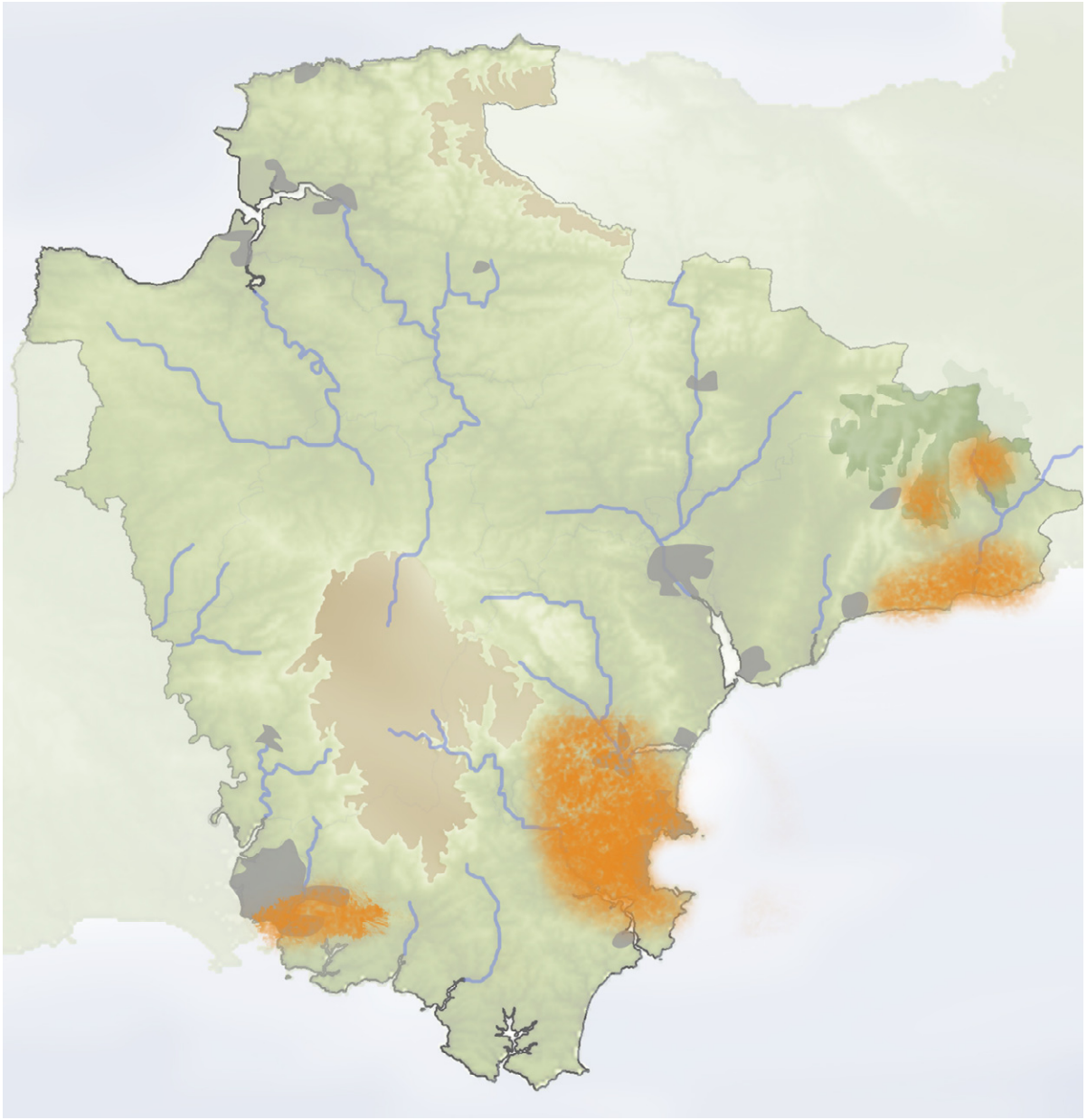
Clayland hedges with willow

Windswept hedges with gorse

Stone-faced hedges

Hedges on limestone & chalk

Elm-dominated hedges



The few parts of the county that overlie chalk and limestone rocks contain hedges with lime-loving plants rarely found in other areas. These include shrubs like dogwood, spindle and wayfaring tree. Traveller's joy, the creeper also known as old-man's beard, can sometimes smother these shrubs.
A wide variety of other trees and shrubs normally occurs in these hedges, elm and field maple being common. Notable flowers include the bastard balm, a beautiful plant of national conservation concern.

For more information click ***here***

Elm-dominated hedges

Overview map

Beech hedges

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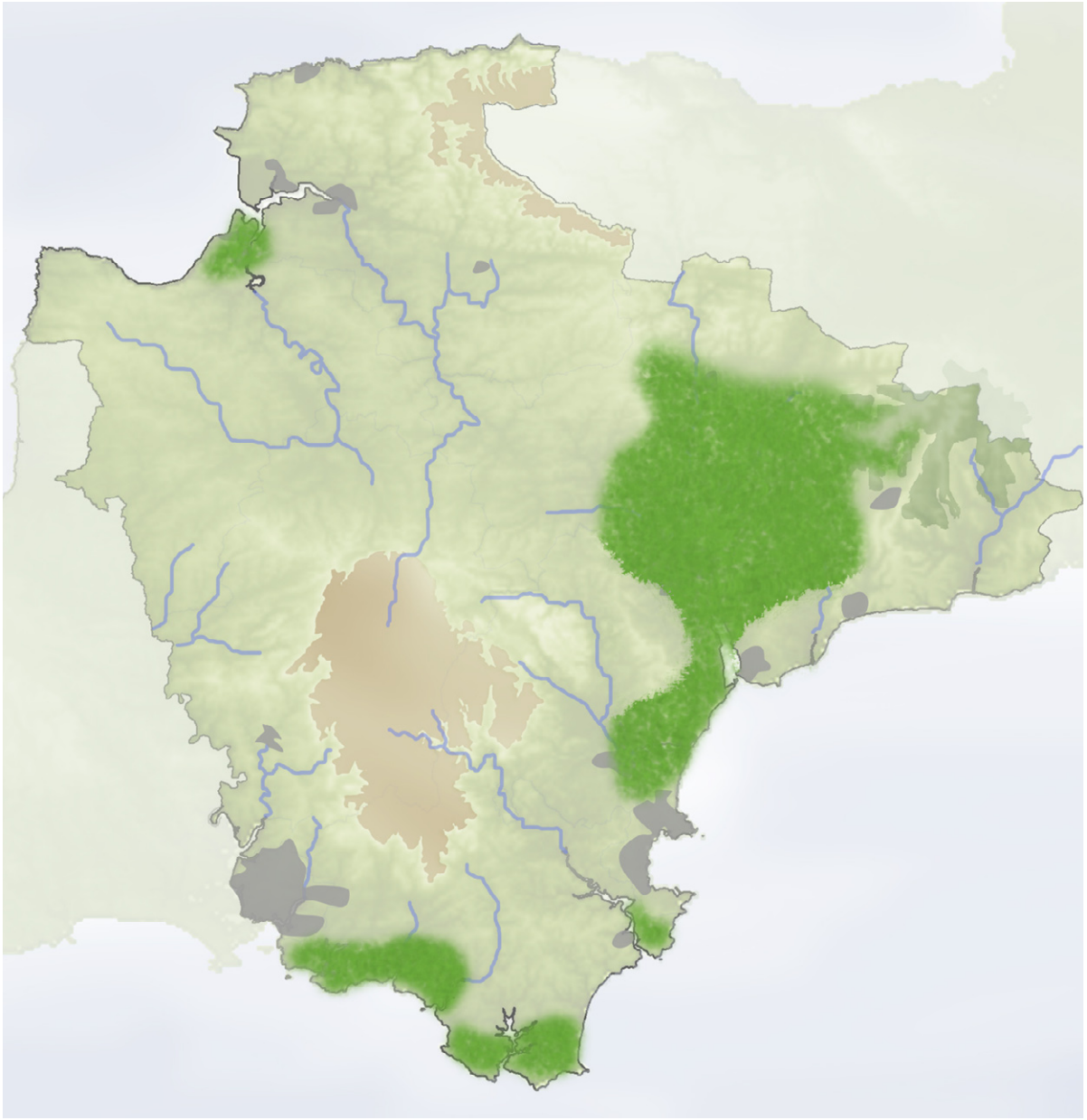
Stone-faced hedges

Hedges on limestone & chalk

Elm-dominated hedges



Hedges dominated by scrubby elms are distinctive of many of the more fertile parts of the country, especially the Redlands of the Exe Valley. Sadly, mature elm trees, once a majestic and characteristic feature of the landscape, died in the epidemic of Dutch elm disease that began in the 1960s. Fortunately, the trees continue to send up numerous suckers, but these rarely develop into mature trees now, and lines of dead and dying young elms trees are a frequent sight.

This hedge type usually occurs on turf-faced banks and often contains field maple. The caterpillars of the uncommon and elusive white-letter hairstreak butterfly feed on the elm leaves. Each hedge, sometimes whole hedge networks, may consist of a single elm clone many centuries old.

For more information click ***here***

Devon's Distinctive Hedges: BEECH HEDGES

Hedges consisting of beech and few other species growing on a bank are a particular feature of many of the ridges and low hills in Devon. Their vibrant colour, which changes over the seasons, is often highly visible, particular where the beech has been allowed to grow into lines of trees.

Distribution and contribution to landscape character

The origins of beech hedges as the planted boundaries to eighteenth and nineteenth century moorland enclosures (see below) means that they tend to be concentrated on the edge of the high plateaus of Dartmoor, Exmoor, the Blackdown Hills and the Culm measures. Their distribution is also related to the presence of large landed estates that enclosed large areas of heathland or moorland in this period, such as the Knight Estate on Exmoor.

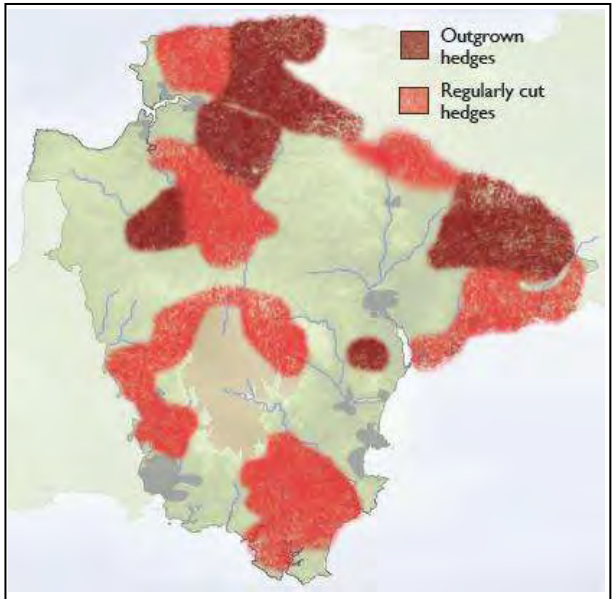


Figure 1: Distribution of beech hedges

Figure 2: Bright green beech hedge in late spring near Bradworthy © Tom Hynes

Beech hedges are often a defining element of landscape character where they occur, especially where they have been allowed to grow into lines of trees. In spring, the leaves flush a bright green (Figure 2), in summer they cast a heavy shade, creating dark avenues beside roads (Figure 3), in autumn the leaves turn a bright copper colour, and in winter, the smooth grey trunks and branches can be particularly sculptural. In some places they can be highly valued local landmarks, such as on the top of Peak Hill west of Sidmouth.

Figure 3: Avenue of beech trees, edge of Exmoor © LUC

Beech hedges on banks are a particular feature of the South West (also being found in adjacent areas of Somerset on Exmoor, the Quantocks and Blackdown Hills and in West Dorset), but are absent from other parts of England.

To go to the next page describing beech hedges, please click ***here***

Origins and historical significance

As noted above, these hedges were created by landed estates in the eighteen and nineteenth century as stockproof boundaries to 'new takes' of farmland, often from moorland and heathland. It is likely that the bank (which may or may not be stone-faced) was created at the same time as the beech was planted (usually without any other shrubby species).

It is not known why beech was chosen above other species. It is possible that it became fashionable as a prominent species chosen to advertise estates at the forefront of modern management. It is also possible that beech was used for the practical reason that plant nurseries were able to produce large quantities of young plants from locally available beech mast. Beech is also a good hedging plant, remaining bushy at the base for longer than most other shrubs or trees when cut regularly, and retaining many of its dead leaves in the winter so providing thick cover.

Figure 4: Moss and fern covered bank and beech trees, edge of Exmoor © LUC

Biodiversity

The heavy shade cast by beech trees or shrubs tends to reduce the diversity of other plant species in these hedges. However, mosses and ferns often grow on the banks and the older trunks and branches (Figure 4). They are a favoured habitat for breeding redstarts, rot holes and cavities support rich invertebrate communities, and the trunks of mature trees are often covered with rich growths of lichens. Beech mast provides a plentiful supply of food for birds and small mammals in the autumn.

Figure 5: Sculptural silver-coloured beech roots, Exmoor © Heather Harley

Management

In some parts of the county, such as the western edge of Exmoor and the Blackdown Hills, the majority of beech hedges have been allowed to grow into mature trees (although the evidence of earlier management such as laying is sometimes visible). In other areas, such as the edges of Dartmoor and South Devon, most of the hedges have been kept trimmed or have been regularly layed or coppiced.

To return to the menu of hedge types, please click ***here****.*

Devon's Distinctive Hedges: CLAYLAND HEDGES WITH WILLOW

The heavy clay soils and wet climate that lie across the large swathe of central, west and northern Devon between Dartmoor and Exmoor, typically support hedges on turf-faced banks with a rich diversity of shrubs with willow as a common component.

Distribution and contribution to landscape character

These hedges occur across the large swathe of central and west Devon known as the Culm, reflecting the area's distinctive wet clay soils.

A rich diversity of shrubs and trees, including willow, hawthorn, blackthorn and hazel, are characteristic of the area, thriving on the poorly draining soils and high rainfall. These hedges also normally have turf-faced banks.

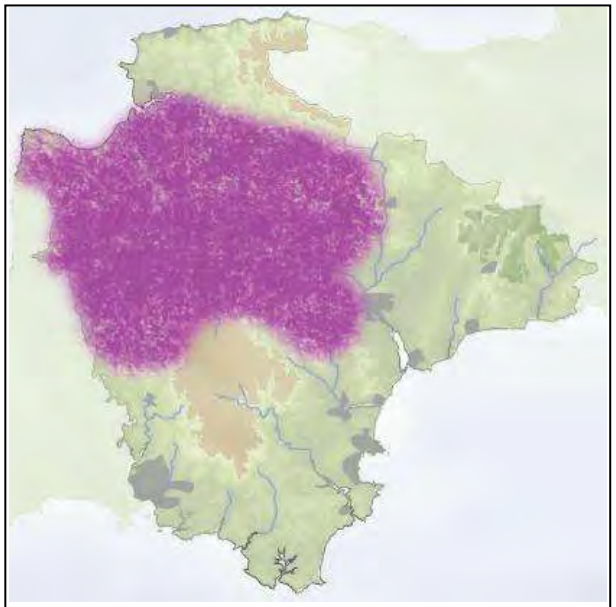


Figure 1: Distribution of clayland hedges with willow

Origins and historical significance

In the valleys, the hedges are typically of medieval origin and enclose small irregular fields, whereas on the ridge tops fields are generally large and regular, created during the 18th and 19th centuries.

In some areas, such as around Sheepwash, the early medieval practice of strip farming is still reflected in the pattern of narrow rectangular fields (Figure 2).

Figure 2. Strip fields (foreground) and barton fields (background) at Sheepwash © Rob Wolton

In some of the valleys and valley sides, the early medieval field patterns have been replaced by larger and more geometrically-shaped 'barton fields' (with the surviving earlier boundaries often evident as more winding boundaries). These changes took place during periods of agricultural prosperity between the late-fifteenth and mid eighteenth centuries. The barton hedges were usually created as banks on which mixed hedges were established or become colonised, although the mix of species may differentiate them from the earlier boundaries.

Figure 3. Spring hedge flowers at Iddisleigh

© Rob Wolton

To go to the next page describing clayland hedges with willow, please click ***here***

Biodiversity

Aside from willow, other common shrubs that occur within these hedges include blackthorn, hawthorn, rowan, hazel and holly, with oak and ash as the main hedgerow trees. The brown hairstreak butterfly, a rare butterfly whose caterpillars feed on blackthorn, also has a national stronghold here. Dormice are frequent in these hedges too. Characteristic birds include the willow tit, and the tree pipit which uses trees in the hedges as song posts.

Figure 4. Scurvy-grass on hedgebank near Hatherleigh © Rob Wolton

Figure 5. Devonian whitebeam berries © Rob Wolton

The bank sides alongside lanes can have stunning displays of wild flowers in the spring, with primrose, early purple orchid, bluebell, greater stitchwort and red campion being particularly distinctive (Figure 3). In the summer, the banks and margins are often covered with fine displays of hemlock water dropwort, meadowsweet and hogweed. Rosebay willowherb sometimes adds a bright splash of pink.

A particular feature of some areas around Holsworthy and Hatherleigh is large patches of scurvy grass in the early spring (Figure 4). The main hedgerow trees are oak, ash and grey willow, with aspen and Devonian Whitebeam being specialities of these hedges (Figure 5).

Management

Most of these hedges are routinely managed by cutting. Since willow is fast growing, the hedges need to be cut regularly (usually annually) to prevent them developing into lines of trees. The wet nature of the clay soils means that this cutting has to be carried out in the autumn because tractors often cannot get on the fields in the winter. Hedge laying is also practiced, with the shrubs allowed to grow uncut for several years before being 'pleached' by hand (partly cut at the base and woven in to the hedge) to form a thicker more stock-proof barrier.

Figure 6. Aspen in hedges near Hatherleigh providing autumn colour. © Rob Wolton

To return to the menu of hedge types, please click ***here***

Devon's Distinctive Hedges: WINDSWEPT HEDGES WITH GORSE

Hedges found on exposed coastal areas and high ground are often characteristically shaped by the prevailing wind and contain distinctive patches of gorse.

Distribution and contribution to landscape character

These hedges are located predominantly on exposed coasts, such as in the north around Hartland Point and Ilfracombe and in the south between Plymouth and Dartmouth, as well as on high ground, including Dartmoor. The prevailing south westerly winds create hostile conditions in which trees are bent to the wind and shrubs are tightly wind-pruned, often creating dramatic 'sculptures' that form distinctive features within the landscape (Figure 2).

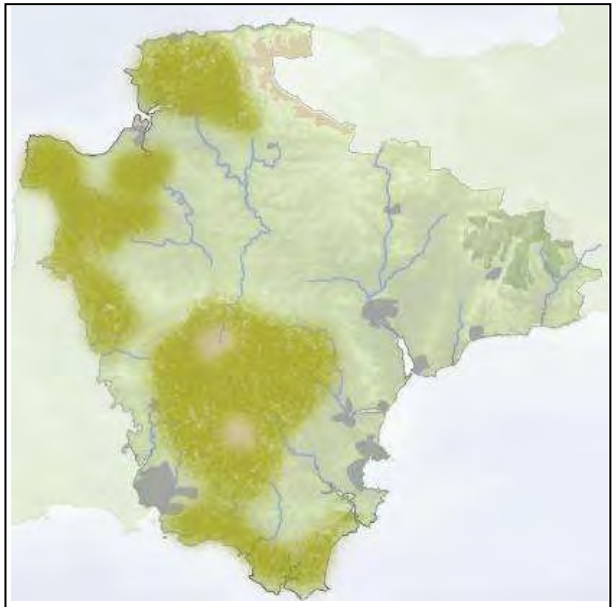


Figure 1: Distribution of windswept hedges with gorse

Figure 2: Windswept beech tree in hedge at Pancrasweek. © Rob Wolton

Gorse often forms bright yellow patches throughout these hedges, most notable in late winter and early spring, contributing to their distinctive character. Some hedges consist of banks with very little scrubby growth on top, maybe just a thin scattering of heather or gorse, but these are still called hedges (Figure 3). In Dartmoor, lines of gorse are seen across the high moor, but they are generally closely associated with stone walls, growing either in front of or behind the wall.

Figure 3: Gorse-sided hedge bear Bradworthy © Rob Wolton

Origins and historical significance

The origins of these hedges is not a defining feature of this hedge type. However, their location on the coastal margins and uplands of Devon mean that most are likely to be medieval or earlier in origin. In places, the agricultural improvements that took place between the fifteenth and eighteenth centuries, leading to the creation of larger and more rectilinear 'barton fields' and hedges, may be evident.

To go to the next page on windswept hedge with gorse, please click ***here***

Biodiversity

Hardy species such as gorse, hawthorn and blackthorn are the common shrubs here, growing on banks which may be stone-faced. Sycamore, along with beech and oak, are the main hedgerow trees. The clean Atlantic air blowing over these hedges allows lichens to grow profusely on tree trunks, gateposts and exposed stones. The green hairstreak butterfly whose caterpillars feed on gorse is a resident and, in spring and autumn, migrant warblers and other birds can often been found sheltering and feeding in these hedges.

Management

These hedges can be intensively flailed e.g. are often cut closely, as around around Hartland Point, and less intensive management would improve their nature conservation interest as well as their contribution to landscape character. But in the most exposed places the wind keeps them well pruned and short and thick.

Figure 4. Typical profile of a wind-shaped tree in winter © LUC

Figure 5. Gorse in flower on a roadside hedge, Inwardleigh © Rob Wolton

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Devon's Distinctive Hedges: STONE-FACED HEDGES

In areas of the County where the underlying geology provides suitable material, hedges typically have a visible stone facing to the bank. These hedges may or may not include a living hedge of shrubs and trees. Less commonly, dry stone walls are found in some parts of Dartmoor, while orthostatic hedges (consisting of large stones set on edge) are highly distinctive, but rare features in some areas. In addition, the use of stone within hedges is thought to be common throughout the county, frequently forming a hidden foundation and core to the bank.

Distribution and contribution to landscape character

Stone-faced hedges are highly characteristic of Dartmoor and the land to the west of Dartmoor. They are also found along the North Devon coast between Bude and Ilfracombe and on Lundy Island, and in South Devon inland of the coast between Bolt Head and Start Point and also east of Plymouth.

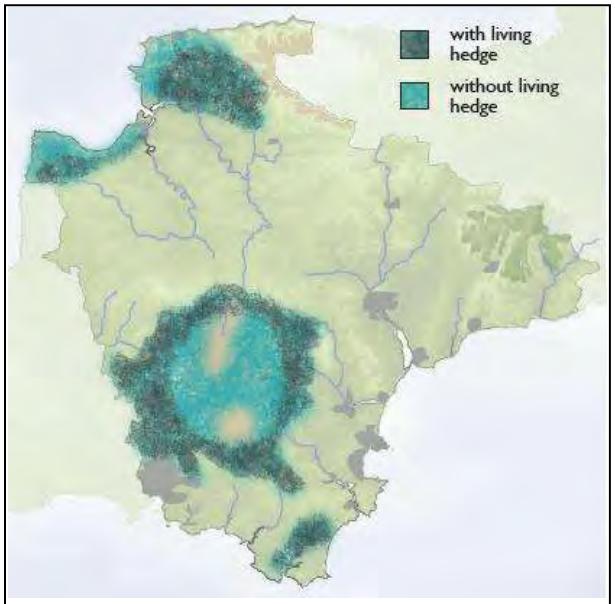

Figure 1: Distribution of stone-faced hedges

Figure 2. Dartmoor hedge incorporating massive boulders © Rob Wolton

Figure 3. Stone face hedge at Morte Point © Peter Chamberlain

The underlying geology determines how the stone is used. On Dartmoor, hedges often include horizontal courses of irregular shaped blocks of granite (sometimes including massive blocks as a prominent feature – Figure 2). Around Morte on the North Devon coast, the bedrock of slate provides an easily worked building material and stone work is often of fine quality, with the slates being set either horizontally or vertically (Figure 3). At Prawle on the South Devon coast, schist is used, again producing finely bedded stone-facing and walls (Figure 4). East of Plymouth around Plymstock and Yealmpton, limestone has been used to create walls around estate boundaries. Granite dry stone walls mark the field boundaries on the island of Lundy and around the 'newtake' fields on Dartmoor.

To go to the next page describing stone-faced hedges, please click ***here***

Origins and historical significance

Whilst many of Devon's hedges have a long history, stone-faced hedges are often especially ancient. Reaves, characteristic of Dartmoor, are some 3,500 years old and are essentially prehistoric low stone and earth banks without ditches which were laid out in a linear fashion. Other prehistoric boundaries include the Iron Age boundaries found at Decklers Cliff (Figure 5) and the orthostatic hedges (consisting of large slabs of stone set on edge) found in parts of South Devon (Figure 6).

Another distinctive type of stone-faced hedge with historical origins is the cornditch, which is a bank incorporating a vertical stone-faced side (also often with a broad ditch from where the earth came to build the bank). Cornditches occur as boundaries beside some moorland commons on Dartmoor and Exmoor. They were created to allow livestock that have broken into enclosed land from the common to return to it.

Dry stone walls, by contrast, date from the late 18th century and on Dartmoor were built to enclose the newtakes of what had been former moorland, often stretching for many kilometres in length.

Figure 4. Dry stone wall at Prawle Point

Biodiversity

The 'living hedge' typically growing on the bank varies from lines of trees to sparse and low shrubs on exposed sites. The most common species are hazel, hawthorn, blackthorn, holly, oak, ash, beech and sycamore. The species range decreases the higher and more exposed the hedge becomes, with the higher hedges comprised of hawthorn, blackthorn and sycamore. Luxuriant growths of mosses and ferns sometimes completely obscure the stone work, whilst the stone facing often supports rich lichen communities and provide safe nesting places for birds like wheatear and meadow pipit.

Figure 5. Iron age field patterns at Deckler's Cliff

Management

Stone-faced hedges and dry stone walls are made without using mortar, and building them is a highly skilled job. Today the skilled practitioners needed to rebuild and repair these boundaries are few and far-between. The Devon Rural Skills Trust was established in 1980 with a view to safeguarding the future of these traditional skills, enabling those who practiced them to be able to pass on their knowledge.
More information on the management of these hedges is available as part of the Devon Hedge Pack (www.devon.gov.uk/hedges) and from the Devon Rural Skills Trust (www.devonruralskillstrust.co.uk).

Figure 6. Orthostatic field boundary, South Devon

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Devon's Distinctive Hedges: HEDGES ON CHALK AND LIMESTONE

The outcrops of calcareous rocks that occur in parts of east and south Devon support hedges that have a rich flora and contain distinctive species

Distribution and contribution to landscape character

The geology of South and East Devon is varied and in a number of places calcareous rocks, that were formed in shallow seas in the Devonian, Jurassic and Cretaceous periods, come to the surface. Limestone occurs in a narrow band running east from Plymouth before forming a larger area around Torbay. Limestone is found again east of the Exe close to the coast in East Devon around Beer and this merges with the chalk at Branscombe.

These hedges are characterised by having a large diversity of woody species and wildflowers, including species which only occur on lime-rich soils, of which old man's beard, also known as traveller's joy, is perhaps the most noticeable. It is not uncommon for these hedges to contain ten different shrub species along a 30 metre stretch.

Origins and historical significance

While the origins of this hedge type are not a defining feature, it is known that species-rich hedges tend to be ancient. This is on the basis that woody plants naturally colonise hedges at a slow rate of around just one new species every one hundred years.

Biodiversity

Trees and shrubs which are rare or absent in the rest of Devon, such as wayfaring tree (Figure 2), spindle (Figure 3), dogwood and wild privet are common in these hedges, along with many of the other woody species found in the county such as hawthorn, blackthorn, hazel and oak. Ash and holly are common hedgerow trees, and whitebeam is also found in some places. Typical hedgerow flowers include yellow archangel, common knapweed, harebell and bastard balm, a nationally uncommon hedgerow flower that has its strong hold in the South West. Ransoms, or wild garlic, grows in profusion in some of the wider hedgerows and woods, giving off its distinctive garlic aroma in spring.

Management

There are no particularly distinctive forms of management of this type of hedge. Around pasture fields, farmers often allow the hedgerows to grow thick and tall to provide shelter for livestock, whereas in arable dominated areas the hedges tend to be more tightly cut, with narrower margins.

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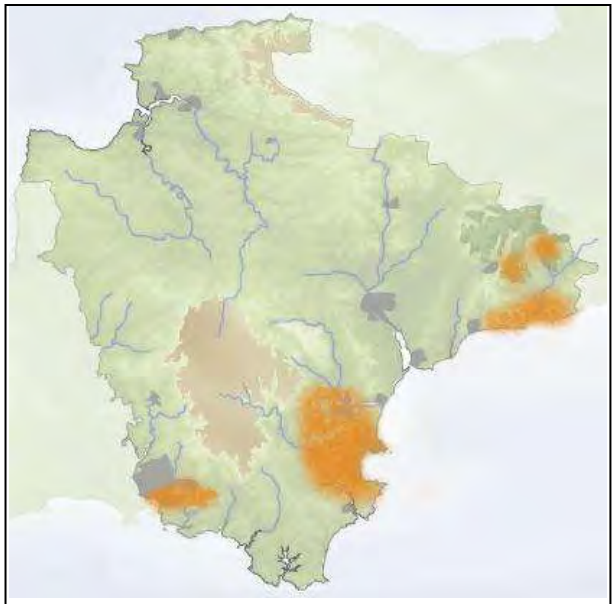

Figure 1: Distribution of hedges on chalk and limestone

Figure 2. Wayfaring tree growing as a shrub in a hedge on limestone.
© LUC

Figure 3.
The distinctive crimson colour of spindle berries in late summer.
© Rob Wolton

Devon's Distinctive Hedges: ELM-DOMINATED HEDGES

The rich well-drained soils of the Devon Redlands are well suited to elms, which, until the epidemic of Dutch elm disease in the 1970s and 1980s, formed majestic lines of trees in many hedges

Distribution and contribution to landscape character

Elms can be found throughout the county but are most common on the sandstone soils of the Exe valley and adjacent areas of mid and east Devon. This area is broadly contiguous with the Devon Redlands National Character Area, excluding the more acid soils of the pebble bed heaths east of the Exe Estuary and the Haldon Hills south of Exeter.

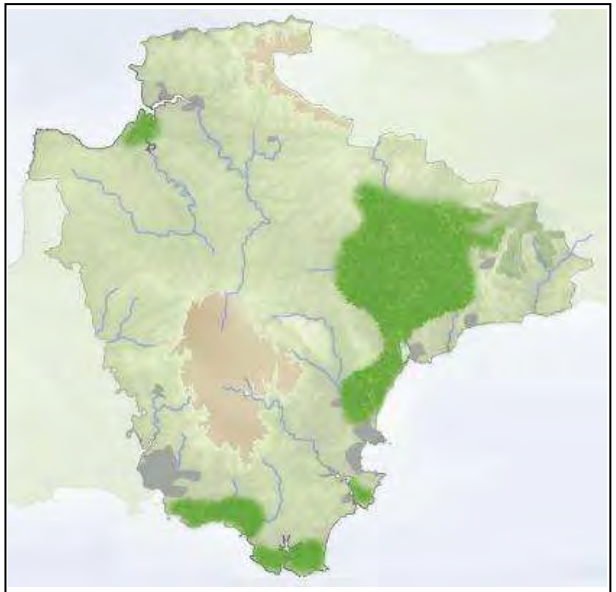

Figure 1: Distribution of elm-dominated hedges

Figure 2. Dead elm tree (ivy covered) in elm hedge, near Silverton

© LUC

Until the 1970s, rows of elm trees were a majestic sight in these parts of the county. The tree has a distinctive slender shape and fan-shaped crown and its wood was much prized for being resistant to rot (being used in pilings at ports and in coffins). However, the epidemic of Dutch elm disease (a fungus spread by beetles), which ravaged elms throughout the south and midlands of England in the 1970s and 1980s, killed virtually all the mature trees. Roots and young stems survived in most hedges and have regrown, only to be killed by the disease when they get to a certain height. The sight of rows of dead elm trunks, which can remain standing for many years if not cut down, is a common, if somewhat forlorn, sight in many hedges (Figure 2).

The taxonomy of elms is complicated. The most common type of elm in Devon, and the one that is most susceptible to Dutch elm disease, is the English elm (*Ulmus procera* - Figure 2). Despite its name it was probably originally introduced to the UK from southern Europe. The Cornish elm (a native sub-species of *U. minor*) occurs in hedges in the west of the county, but rarely at the density that English elms are found in the Exe Valley. Another native species, the wych elm (*U glabra*), occurs singly or in small groups and tends not to dominate hedgerows in the way that the English elm does (Figure 4).

Figure 3. English elm sucker with tree behind
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To go to the next page describing elm-dominated hedges, please click ***here***

Origins and historical significance

Many of the hedges in this part of Devon were laid out between 15th and 18th centuries, when prosperous farms were amalgamated and their fields rationalised, creating relatively straight boundaries around larger 'barton' fields, replacing an earlier medieval field pattern. Elm is often a common or dominant species in these hedges. Since the hedgerow elms found in Devon (other than wych elm) rarely set viable seed, instead spreading from suckers, it is likely that the elm was either deliberately planted in these hedges or has spread naturally from adjacent hedges or woodland.

Biodiversity

Elm hedges frequently contain a range of other woody species such as hawthorn, hazel, holly, elder, ash and oak, and their banks typically include flowers such as red campion, stitchwort, cow parsley and herb Robert. The white letter hairstreak butterfly lives on elm as its foodplant and occurs in South and East Devon, on the westerly edge of its range in England (Figure 5).

Management

Management of elm hedges can be problematic. If the trees are allowed to grow to more than about 10cm diameter, they are likely to be re-infected with Dutch elm disease, so land managers often cut these hedges regularly to prevent trees growing large and to encourage sucker growth. Where gaps have developed, then these are usually replanted with other species.

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Figure 4. Wych elm leaves and seeds
© Rob Wolton

Figure 5. White letter hairstreak on its food plant, the elm. © Butterfly conservation