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Breaking New Ground
HLT Landscape Partnership

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Brecks' special qualities

An analysis of identity and sense of place

1 Analysis of place

1.1 Scope and purpose

Rationale and objectives
Link to the Brecks landscape character assessment

1.2 Making use of this work

Robust evidence
Structure of the report

1 Analysis of place

1.1 Scope and purpose

This short study analyses and articulates what we really mean when we refer to 'The Brecks'. Where exactly is the Brecks, what is it like and why is it different to other landscapes in East Anglia and in the UK?

The identity of a place is complex and tied up with the way we measure and value landscapes and how we make decisions about landscape change. By observing, describing and analysing the special qualities of the Brecks, this study lays the foundation for relevant and effective policy, advocacy and planning. It provides the vocabulary that we need to help others understand and appreciate the Brecks and, through this support, it aims to reinforce local distinctiveness and to conserve and enhance the special character of the Brecks landscape.

This approach is vitally important in a landscape like the Brecks, which is not protected by national policy and so is particularly vulnerable to development pressures. This study does not seek the designation of the Brecks as part of the family of protected landscapes in England, but it does aim to recognise the Brecks as a landscape of relative importance and value, which merits special consideration within the national context. The Brecks' special qualities study:

- identifies and describes the landscape elements and patterns of features that make the Brecks different and distinctive;
- identifies the spatial extent of the core Brecks character in order to refine the evidence base and provide an additional level of detail which enables the application of relevant planning and nature conservation policies; and
- explains the extent to which different aspects of the Brecks heritage are significant in terms of their sensitivity to change and the degree to which they are valued.

The Brecks' special qualities study is an extension of the more detailed Brecks Landscape Character Assessment[1]. The study area for this earlier piece of work was the boundary of the Brecks national landscape character area (NCA 85). It describes the character of the component local landscape character areas which fall within this relatively broad-brush national characterisation and uses before-and-after case studies to depict the story of the Brecks landscape, from Neolithic times to the present day. The core Brecks landscape is a sub-set of NCA 85, which also includes parts of the fen, chalkland and clayland landscapes on the fringes of the Brecks. The Brecks special qualities study identifies and defines the boundary of this core Brecks landscape and articulates the character and qualities that make it distinctive.

[1] Brecks landscape character assessment, 2012, Sheils Flynn

Views are structured and framed by the Scots pine shelterbelts that divide and enclose arable fields near Elveden

The catalyst for this work is the Breaking New Ground Landscape Partnership scheme, funded by the Heritage Lottery Fund, which has supported a cluster of projects and activities that promote conservation of natural and built heritage, community participation, increased access to heritage and improved skills and understanding. The Brecks' special qualities study supports and extends the legacy of the Breaking New Ground project, building on the local consensus that it has established about the character of the Brecks landscape and making use of the knowledge and experience of all those who have participated. For more information please visit http://www.breakingnewground.org.uk/.

1.2 Making use of this work

It is important that the process of identifying the character and special qualities of the Brecks landscape is undertaken in a technically robust and accurate way, so that the assessment stands scrutiny when it is used as evidence to underpin policies and to inform decisions about landscape change.

The evaluation process, which is described in section 2 of this report, explains how the spatial extent of the core Brecks area has been identified and mapped, based on empirical data and detailed fieldwork. The core Brecks characteristics and special qualities have been identified in accordance with a nationally recognised format used by Natural England so that the Brecks is recognised as an important and distinctive landscape within the national context.

This work will support all those working in the environmental sector who are involved in making judgements about landscape change in the Brecks because it will provide a new layer of detailed evidence to describe the aspects of the Brecks landscape character that merit conservation. Of course the Brecks landscape will continue to change and evolve, but landscape change can be implemented in ways that reinforce the identified local landscape character and special qualities of the Brecks.

By providing a wealth of design reference information, the Brecks' special qualities study will help designers to develop a tailored vocabulary of forms, colours and materials that are appropriate for the design of buildings, infrastructure and landscapes in the Brecks. By articulating the Brecks brand, it will also help to benefit tourism and the local Brecks economy.

Following this introduction, the report is subdivided into the following three sections:

- **Section 2 Evaluation** – mapping the Brecks landscape and the evaluation framework which has been used to identify and describe the special qualities of the Brecks in accordance with the criteria established by Natural England.
- **Section 3 Brecks special qualities** - the set of identified distinctive features and characteristics which encompass the special qualities of the Brecks
- **Section 4 Next steps** – developed through workshops with local stakeholders, this section presents ideas for taking this work forward, as a legacy for the Breaking New Ground HLF scheme and as a means for communicating the Brecks identity and brand.

The annexes provide the technical assessments that underpin the study:

A1 Methodology
A2 Viewpoint analysis
A3 Evaluation criteria.

2 Evaluation

2.1 Mapping the core Brecks landscape

Spatial extent of the Brecks

2.2 Evaluation framework

Relevant criteria for identifying special qualities
Indicators to monitor landscape change

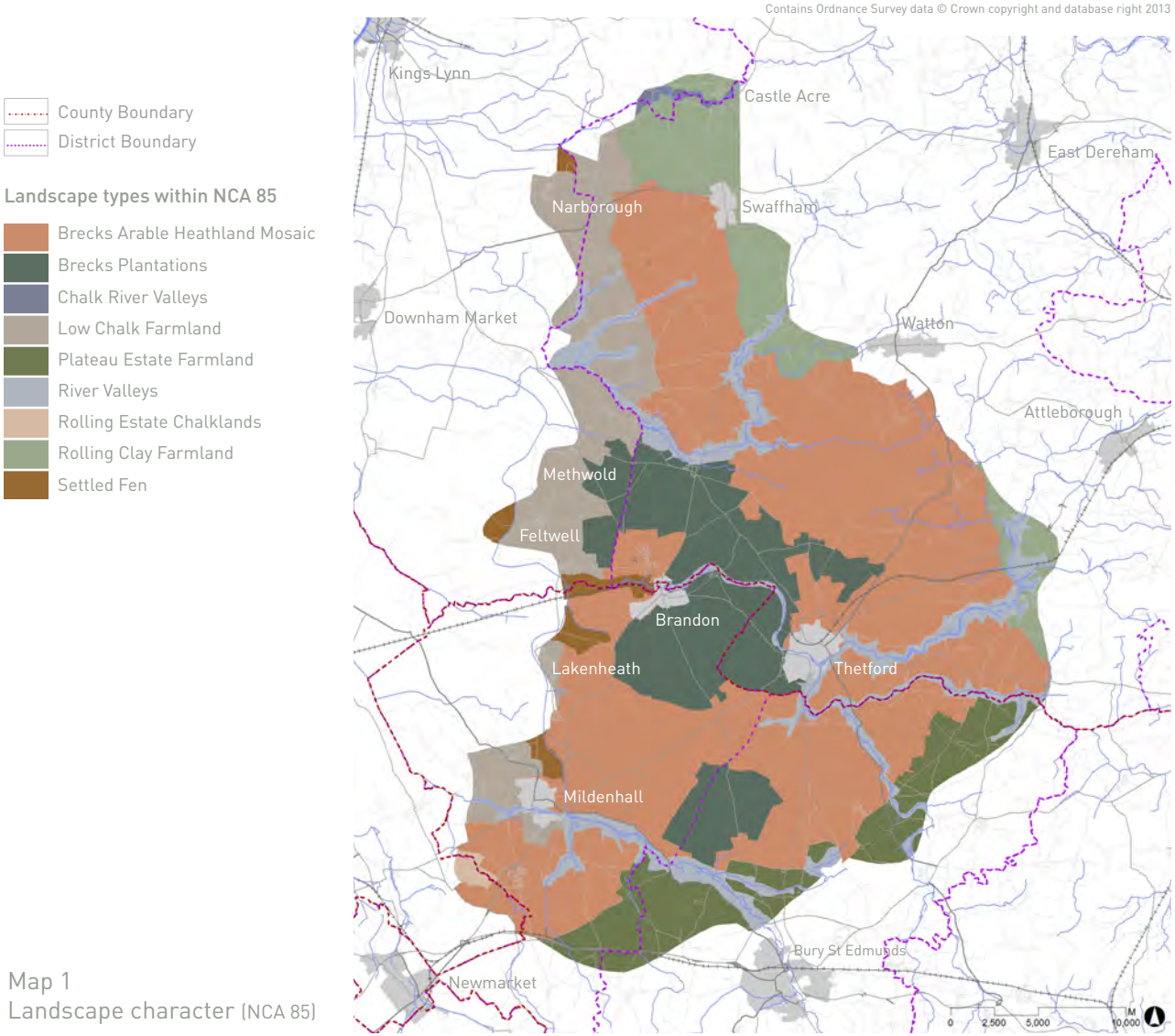
2 Evaluation

2.1 Mapping the core Brecks landscape

The starting point for mapping the boundary of the core Brecks landscape was the Brecks landscape character assessment. This detailed landscape classification used empirical mapped data-sets and fieldwork observation to classify the landscape into distinct landscape character types and map their extent. The result is shown on Map 1, which is an extract from the Brecks landscape character assessment showing variation in landscape character across NCA 85.

Each landscape character type shares broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use and settlement pattern. The key types of data and information used to define the spatial extent of the distinctive Brecks landscape are set out below. Each of these data types has been mapped using GIS (geographic Information systems) data, which is layered to test, define and map the boundaries of the Brecks.

Geology and soils - the Brecks has an underlying chalk bedrock which is part of the broad chalk ridge that extends northeast across England from the Chilterns to the Norfolk coast. The Brecks has been particularly marked by the effects of repeated glaciations during the Quaternary, which left only a thin mantle of sandy soil covering the chalk (compared to deeper, more clayey deposits elsewhere), and the freeze-thaw conditions that



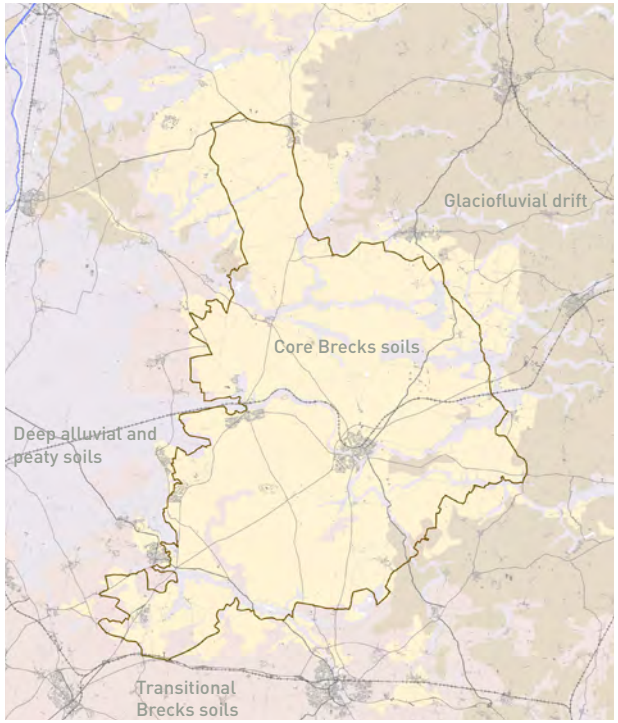
Map 1
Landscape character (NCA 85)

occurred in the final stages of the last Ice Age, which caused further disintegration of the chalk to leave a surface residue of insoluble sand. The Core Brecks Soils map shows the broad transitions in soil type across the sub-region.

Landform and drainage - the ice sheets left a relatively low, gently undulating chalk plateau, which rises to the north. The plateau is drained by four river systems – the Nar, Wissey, Thet/ Little Ouse (with the Black Bourn) and the Lark, which flow westwards into the Fen Basin from the higher land to the east. These rivers flow within exceptionally shallow valleys. To the east, south and north of the Brecks, where thick layers of chalky boulder clay predominate, the topography becomes more dynamic and rolling, with steeper river valleys and views in all directions.

Land-cover and land use - remnant areas of semi-natural vegetation are particularly useful in highlighting the extent of the core Brecks landscape. The unique biodiversity of the Brecks stems from the region's free-draining, nutrient-poor sandy soils and its micro-climate, which is relatively dry with extremes of temperature. The combination of drought, low rainfall, hot summers and cold winters has influenced the development of steppe-type vegetation, with a mosaic of lowland heath and grassland. The character of the Brecks landcover has also been shaped by an agricultural system that used the dry, infertile soils for grazing and rabbit warrening and the alluvial river valley

Chalk-with-flints
Thetford Warren



Core Brecks Soils

Brecks landscape boundary (see Map 2)

Core Brecks soils - shallow silty & loamy soils over chalk bedrock (343f, 521, 551g, 552b, 554b)

Glaciofluvial drift – deep well drained sandy & clayey soils (532a, 551f, 572n, 572p, 711f, 711r, 711s)

Transitional Brecks soils – slightly more fertile & deeper well drained sandy & loamy soils over chalk (342d, 343g, 346, 411d, 551e, 551g, 571k, 571o, 571x, 572q)

Deep alluvial and peaty soils, affected by groundwater (372, 555, 812b, 813h, 851a, 851b, 861b, 872a, 872b, 1022a, 1024a, 1024b)

Based on National Soil Map Units (England and Wales)

soils for more intensive cropping and fen products.

Patterns of field enclosure - the relatively infertile soils on the Brecks plateau have constrained agricultural production and the Brecks has always been a marginal landscape, where farmers have struggled to gain a livelihood. Fields are typically large and blocks of farmland are interspersed with areas of common and heathland, which was often a legacy from the medieval practice of rabbit warrening. The belts of Scots pine, which subdivide many fields in place of hedgerows, are a defining feature of the Brecks landscape. Other distinctive landcover characteristics, which also stem from the relative infertility of the Brecks soils, are the extensive conifer plantations that cover parts of the Brecks and the military complexes and training areas, which have been a significant influence since the early 20th century.

Settlement pattern - The lack of water on the sandy Brecks plateau and the relatively infertile soils discouraged the development of settlements, a pattern which persists today. Villages are concentrated on the sides of the valleys that run through the Brecks, with scattered small hamlets and farmsteads on the drier central plateaux.

'Time depth' - the Brecks has an exceptionally strong sense of history. The historic dimension of the Brecks landscape is expressed through the concentration of remnant historic features found in the area that help to create a strong local identity, contributing layers of meaning and a sense of time-depth in the landscape. These historic features include Neolithic tracks and flint mines (Grimes Graves); clusters of Bronze Age barrows; Romano-British and Roman settlements and roads; Norman motte and bailey castles; the warren banks that enclosed the extensive medieval rabbit warrens; deserted medieval villages and remnants of the open-field systems that surrounded them; the parklands of the 18th century landed estates; and fragments of World War 2 airfields and defence systems.

This detailed assessment identified the core Brecks landscape character types from the Brecks landscape character assessment as;

- the Brecks arable heathland mosaic;
- the Brecks plantations; and
- the river valleys.

The boundary of the core Brecks landscape covered by these three landscape character types is shown on Map 2. It includes all of the Brecks arable heathland mosaic and Brecks plantations landscape character types and the sections of the river valleys that flow across these two characteristic Brecks landscapes.

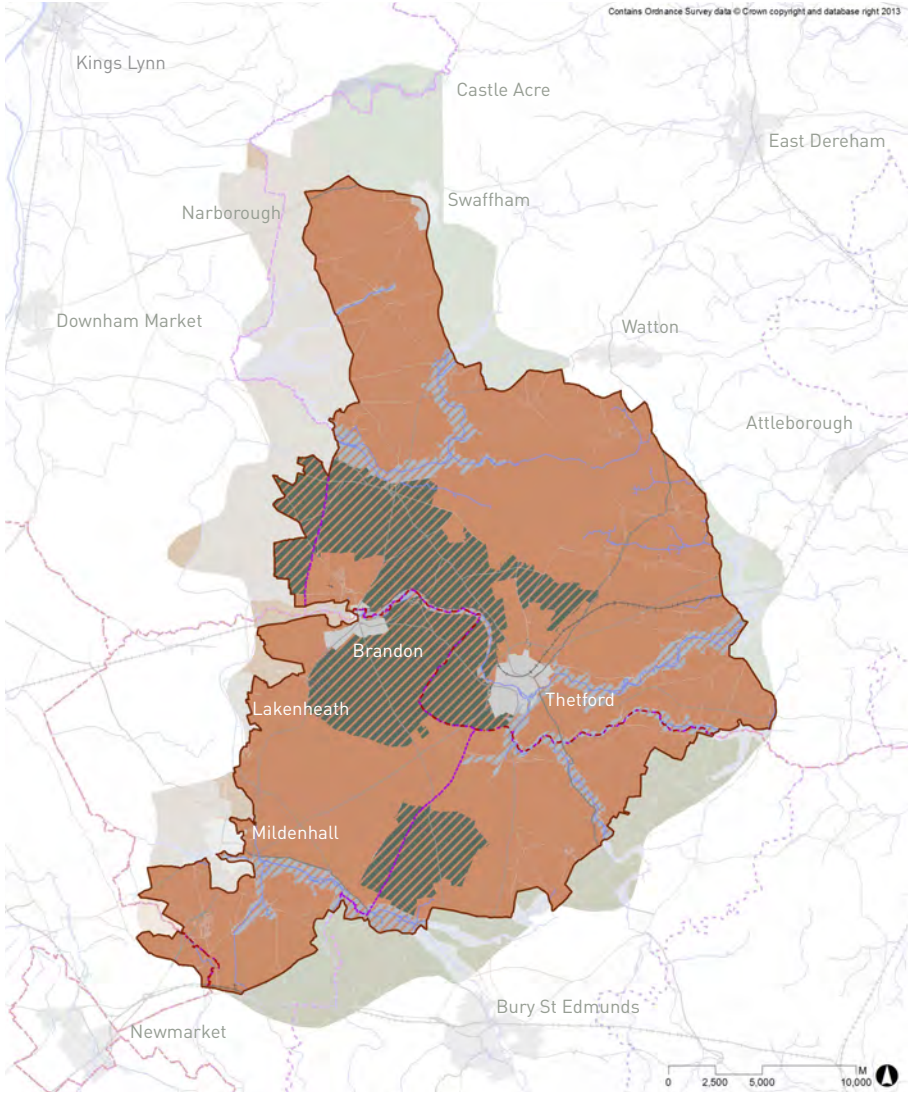
The boundary of the core Brecks landscape has been mapped at a scale of 1;25,000 and aligned so that the boundary follows features such as roads, field boundaries and woodland edges that are identifiable on the ground.

Core Brecks landscape types

- Brecks landscape boundary
- Brecks Arable Heathland Mosaic
- Brecks Plantations
- Brecks River valleys

Other landscape types within NCA 85

- Low Chalk Farmland
- Rolling Clay Farmland
- Plateau Estate Farmland
- Rolling Estate Chalklands
- Settled Fen
- River Valleys
- Chalk River Valleys



Map 2
Core Brecks landscape

Thompson Water

2.2 Evaluation framework

The methodology used for identifying the special qualities of the Brecks is described in Annex A1. It draws on the methodology developed by Scottish Natural Heritage for assessing and recording the special qualities of Scotland's National Scenic Areas[2]. The process has involved a detailed review of the Brecks landscape character assessment, the selection of viewpoints that represent the range of typical Brecks views and landscape types and, for each of these viewpoints, consideration of the following three aspects of the Brecks landscape:

- **objective analysis** - visible and physical characteristics in the usual form of landform, land cover/land use, settlement pattern, specific features, biodiversity. The condition of the landscape is also recorded, along with details such as the way building materials are used and the relationships between buildings, settlement and landscape features.
- **visual analysis** in the form of visual relationships and visual experience, bearing in mind that it is often the way in which characteristics combine or interact that make the landscape distinctive. Relevant issues are aspects of scale, diversity, openness, colour and texture, line, movement, weather and views
- **personal responses** - the experience of the landscape, picking up on meaningful and evocative aspects of its character.

The viewpoint analysis is presented in Annex A2.

Natural England has an established system and template for evaluating natural beauty. This is typically used for designating protected landscapes such as Areas of Outstanding Natural Beauty and National Parks, for which the primary purpose of designation is the scenic quality and natural beauty of their landscapes.

The Natural England template has been used because it is a recognised framework for identifying and expressing the special qualities of landscapes. The table is presented in Annex A3. It includes a list of contributing factors and sub-factors which can be judged by indicators - these are statements of the features, characteristics and qualities which tend to indicate whether a particular factor is present. The indicators used for the Brecks articulate cultural and functional aspects of landscape character, as well as the distinctive qualities and features of the Brecks.

[2] Identifying the special qualities of Scotland's National Scenic Areas, David Tyldesley and Associates, 2007, SNH Commissioned Report no 255

3 Brecks' special qualities

3.1 Oddly empty

The Brecks has few settlements and the majority of Brecks towns and villages are sited in the river valleys, leaving vast areas of landscape that seem 'empty.' The relatively small Brecks villages, hamlets and farmsteads are often strung out along roads or clustered at crossroads.

This typically dispersed settlement pattern stems from the unfavourable nature of the Brecks' microclimate and soils for agriculture. While the open grasslands and concentration of flints of the Brecks were valued by early (Neolithic, Bronze Age and Iron Age) settlers, the relatively dry, low fertility soils proved to be a constraint for the growing medieval population. In the 12th and 13th centuries, population increase led to pressures on the land and the cultivation of extensive land at the margins, which had never been utilised before. When demographic conditions changed again, with population decline in the 14th and 15th centuries, the land was abandoned and whole villages deserted. Hoskins noted *on and around the edges of Breckland there are no fewer than twenty-eight deserted villages*.

By the 18th century, large areas of barren, dry heath and common land had been amalgamated under the ownership of a few dominant landowners who developed their estates for game shooting. Some landowners embarked on prolonged phases of agricultural improvement which included extensive tree planting (including the iconic pine lines), new types of crops and techniques for fertilising ('marling') the fields. The geometric pattern of fields, bordered by straight roads and tracks, that is so typical of the Brecks dates from the map-based work of surveyors at this time.

This sense of a deserted landscape has persisted and seems all the more significant in today's crowded, busy existence. The Brecks has a tranquil, calmness about it - and a slow pace. It takes time to get around, not least because the pattern of roads is as dispersed as the settlements.

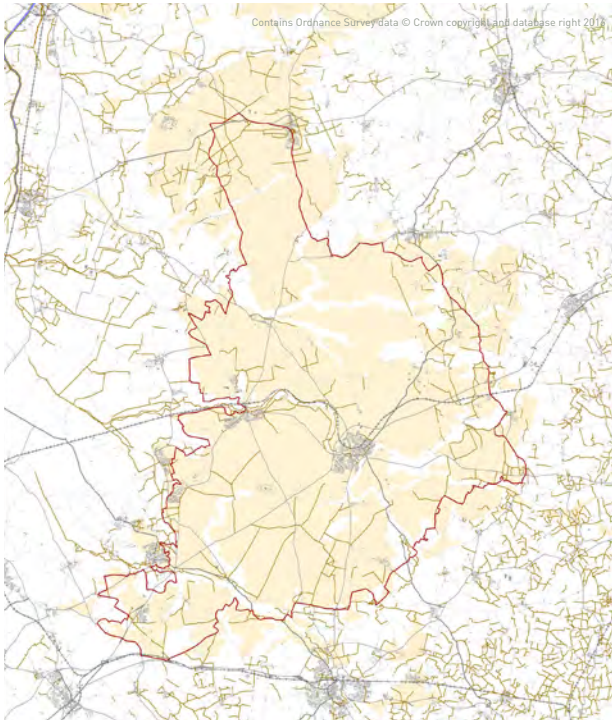
There is something odd too about the pattern of the landscape in the Brecks. The long straight roads, the angular junctions between roads, tracks and field boundaries and the odd juxtaposition of land uses is quite different from the regular patchwork of fields and hedgerows found on the claylands to the east and the regimented geometry of the fens to the west.

The unpredictable, rather disjointed character of the Brecks is part of the appeal of this very different and slightly peculiar place.

[3] Hoskins, WG, The making of the English landscape, 1955

all that remains ... deserted medieval settlements

Colveston Church, and Roudham



Brecks soils

Shallow silty & loamy soils over chalk bedrock
(343f, 521, 551g, 552b, 554b - national Soil map units, England & Wales

Roads, buildings and public rights of way
OS Opendata, 2016

3.2 Heathland mosaic

Throughout the Brecks, tracts of lowland heath are interspersed with blocks of farmland and conifer forest, breaking up the regular, geometric land ownership pattern and bringing a touch of wilderness. Some heaths, such as Cavenham Heath, Brettenham Heath and Stanford Warren are extensive open areas, dominated by a mosaic of heather and acid grassland, but there are also many smaller patches of heathland in fields, on road verges and on the fringes of woodlands.

There is a striking change in the type of vegetation along the roads and field boundaries at the outer margins of the core Brecks area, with a disorderly mix of pine, birch, holly and bracken lining many roads.

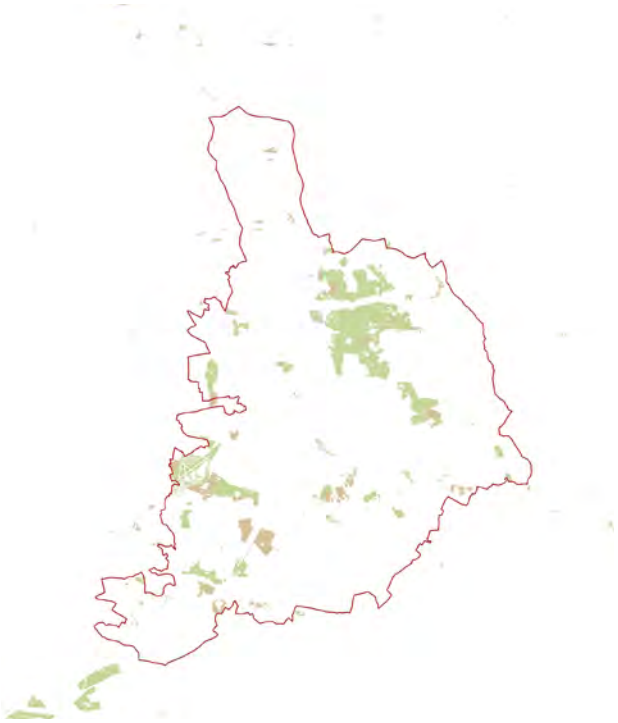
The Brecks' heathlands have developed on the relatively shallow sandy soils that have formed on the glacial sands and gravels that overlie the chalk bedrock of the Brecks plateau. Pollen analysis suggests that postglacial Breckland was covered by deciduous woodland, but the process of burning and cultivation by early farmers prevented woodland regeneration and caused extensive areas to become leached and barren. By Roman times, vast areas had become open heath.

The heathlands are concentrated on the parts of the upper chalk plateau with the thinnest, driest sandy soils. These heaths, and the surrounding lands that were not sufficiently fertile to support crops, were used in medieval times as rabbit warrens or for an extensive, rotational pattern of livestock grazing.

Parishes typically included a mix of different soil types, from the fertile soils of the river valleys to the marginal heaths. The term 'brecks' refers to the temporary outfields on less fertile heathlands, which were periodically grazed and occasionally ploughed before being left to revert to heath. Sheep were grazed on the heaths during the daytime and kept overnight in enclosures on arable land so that the cropped farmland benefitted from the sheeps' dung.

The occasional fluctuating meres, or rounded ponds that are found on parts of the Brecks' heaths (particularly to the north and east of Thetford) were a valuable source of water for livestock. They are thought to be relic ground ice depressions which date from periglacial times. Water levels in the meres typically vary seasonally, depending on levels of saturation in the underlying chalk bedrock.

The heathlands which were used as rabbit warrens in medieval times were enclosed by embankments, which were constructed to keep the rabbits away from adjacent crops and to define ownership. The larger warrens had defensible lodges to protect gamekeepers and hunting parties from armed poachers.



Brecks heathland mosaic

Lowland heath and lowland dry acid grassland
Natural England: Priority Habitats Inventory v 2

rough textured, dry, hummocky surface

unstructured, mosaic - looks natural, but is man-made

scattered trees and bushes
heather, lichen, grasses

Heather
Sheeps sorrel
Bur medick
Mossy stonecrop
Shepherd's cress
Tower mustard
Broad-leaved hellebore
Small copper butterfly
Common lizard
Mottled grasshopper
Sand digger wasp
Nightjar
Woodlark
Green tiger beetle

3.3 Pine lines

The straight belts of Scots pine, which mark field and road boundaries throughout the area, are a defining feature of the Brecks. Some stands are straight, but the gnarled, contorted trunks of many of the trees contribute to the wilderness qualities of the Brecks.

Recent research[4] has demonstrated that the pine rows were planted from the early 19th century as a hedging plant. The Brecks was under the ownership of relatively few large landowners at this time and it is possible that the fashion for planting Scots pine hedgerows took hold amongst estate owners who were engaged in implementing a range of agricultural improvements on their land.

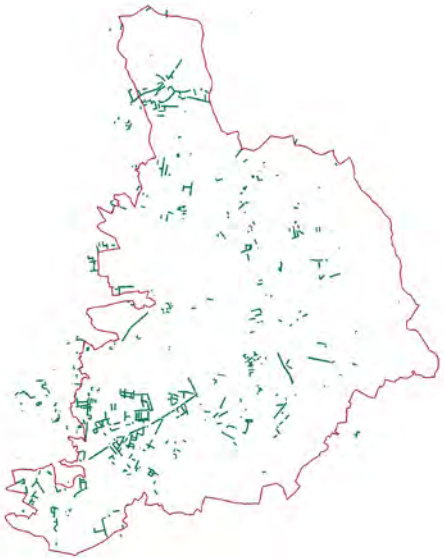
It is likely that some Scots pines were maintained as hedgerows by regular cutting, while others were planted as rows and belts of regularly spaced trees. Those which were originally hedgerows and which have since been left to grow out are particularly contorted.

Many of the pine lines are associated with a strip of tussocky ungrazed grass and form valuable ecological corridors of semi-natural habitat within the intensively farmed arable environment,

linking larger areas of woodland, heathland and unimproved grassland. In particular, the deeply fissured bark of the Scots pines and the high proportion of dead wood in the pine lines provides an ideal habitat for insects and lichen, including many rare species.

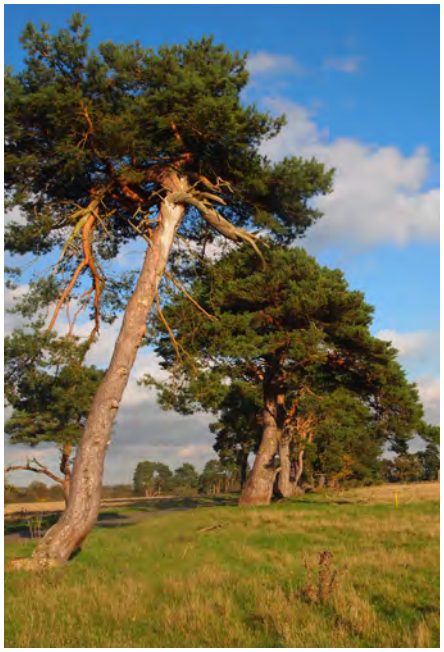
The Brecks' pine lines are over 200 years old and represent a concentration of veteran trees which is of exceptional historic, cultural and biodiversity interest. They are an iconic symbol for the Brecks.

[4] Williamson, Tom, The Breckland pine rows: history, ecology and landscape character, University of East Anglia, 2010



Brecks pine lines

Distribution of Brecks pine lines
Suffolk County Council - surveyed as part of University of East Anglia study, 2010



permeable boundaries
frame and define
spanning centuries
wind battered, gnarled

3.4 Secret river valleys

The Brecks rivers flow in narrow, shallow valleys carved in the chalk bedrock by glacial meltwater streams in the final stages of the Anglian Glaciation.

The small, intimate scale of the many Brecks river floodplain landscapes contrasts with the surrounding expansive arable-heathland-woodland mosaic. Most are pasture, although there are areas of wet meadow, fen, reedbed, alder/willow carr and wet woodland fringing the water channels. Each of the river valleys has it's own distinctive balance of land uses - the Thet and Little Ouse are relatively well wooded and secluded; the River Lark has a broader, more open floodplain with extensive pools and reedbeds near Lackford (as a result of gravel extraction) and heathlands near Icklingham; the Black Bourn and the Wissey have a small scale, domestic scale, with occasional views to parkland.

In this dry climate, access to water has always been pre-condition for settlement - most Brecks villages and all the towns are sited at river crossing points, often with buildings concentrated on the gravelly river terraces. Church towers and small stone or brick bridges are attractive landmarks in many river valleys, often at the centre of historic villages.

The floodplain landscapes are defined by curving historic field boundaries and often by narrow roads and tracks. Floodplain meadows are divided by wet ditches or dykes that in places are lined by trees or scrubby hedges at right angles to the river channel, forming a distorted 'ladder' pattern.

Away from the influence of the larger settlements, the narrow Brecks river valleys have an intimate, secretive character. The ribbons of trees and woodland along the floodplain margins often screen the rivers so the fleeting views to water at bridges and ford crossings come as a surprise.

Brecks river valleys

Main rivers, ponds, reedbeds and flood zone 2
Environment Agency

sinuous, irregular - contrasting

dynamic, changing, reflecting

people, animals, settlement - a focus

3.5 Plantations

The Forestry Commission plantations are on some of the driest, most marginal land in the Brecks. Such land would have been grazed or cropped on a temporary basis as part of the medieval infield-outfield system of land management; the least fertile – dry and acidic – soils were typically used as rabbit warrens, with rabbits bred for their meat and fur.

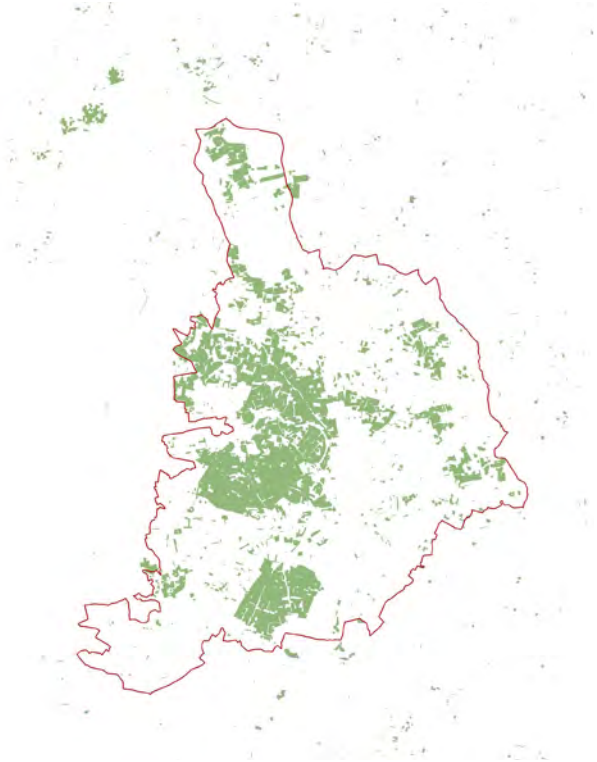
The remnant warren banks, which defined patterns of land ownership and helped to prevent rabbits from straying onto adjacent crops, are often still visible as low embankments, threading through the woodland, for instance at Downham High Warren and Thetford Warren.

The landscape was fundamentally changed in character in the 1920s when, following the 1919 Forestry Bill, extensive parts of the Brecks estates were purchased on the open market and planted with conifers. The land was in a degraded state at this time, following years of economic depression. Today Thetford Forest is the largest lowland forest in the UK and its acidic and calcareous soils support a mix of coniferous species (including Scots pine, Corsican pine and larch) and broadleaf trees.

Two main silvicultural systems are used to manage the forest: just over 13,000 hectares are managed under a rotational clear fell system which is a key requirement to deliver suitable habitat for woodlark and nightjar; around 4,000 hectares are managed under a continuous cover silvicultural system (this includes over 1,000 hectares of broadleaf species); the remaining 1,000 hectares are managed open space where a variety of habitat management regimes are used, including 300 hectares of heathland grazed by sheep and ponies.

This is an enclosed, highly structured landscape, dominated by large blocks of conifers and sliced by a geometry of long straight roads and rides, often fringed by narrow strips of broadleaved woodland. Within the plantations, there are many patches of heathland and farmland which provide opportunities for more open views and valuable habitat for species such as nightjar and woodlark.

Away from the principal settlements of Brandon and Thetford, there are only isolated, small settlements and the dense forest has an empty, tranquil character, although parts of the forest are managed for recreation, with a forest activity centre and a network of waymarked routes accessed from small car parks and picnic sites.



Brecks plantations

Coniferous forest
Natural England - Landcover, 2007

calculated regime
phased, structured

dominant
enclosure, surprise
tranquil

3.6 Hidden history

Recorded archaeological finds dating from the Palaeolithic to the Iron Age suggest the importance of the Brecks for early settlers, who may have been attracted by the more open (less densely wooded) land cover on the thin glacial soils and by the dense scatterings of flint found on the surface of the chalk in this area. The exceptionally high quality of the Brecks flint was a valuable resource from Mesolithic times.

By the Neolithic period, the Brecks was an important centre for settlement and industry, centred on the amazing flint mines at Grimes Graves, where shafts were dug 13m down into the chalk, with radiating galleries to exploit a seam of fine, dark tabular flint known as 'floorstone'. The flint was extracted using antler picks. Trackways like the Icknield Way, an ancient trackway which broadly followed the crest of the chalk ridge from southern England to Norfolk, are likely to have been used as national trading routes from Neolithic times, supporting the industry at Grimes Graves and connecting the Brecks to sites on the Wessex Downs (Stonehenge) and in Cornwall.

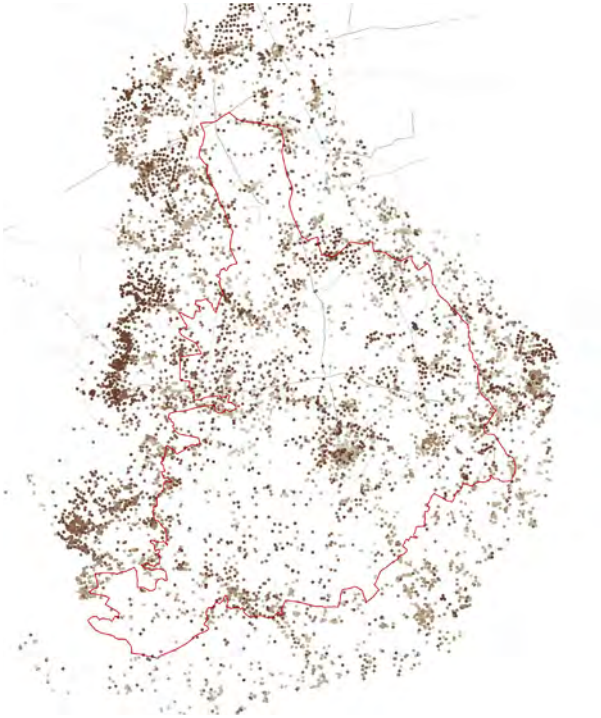
As an area with relatively poor soils and an exceptionally dry climate, the history of the Brecks is that of a marginal economy, where survival depended on innovative techniques for using the resources of heath, river and fen, often as an alternative to crops. Examples from the Middle Ages were the practice of commercial rabbit rearing on vast warrens and the outfield system of livestock management, which made use of the dry grasslands for extensive grazing and folded the sheep overnight on croplands to manage the fertility benefits of the sheep's dung.

The drive for innovation continued as land holdings were amalgamated and 'improved' by wealthy estate owners throughout the 19th century. Their activities led to a relatively large-scale landscape pattern, demarcated by long straight roads, tracks and pine rows.

These locally important and distinctive historic trends and patterns have contributed to the distinctive character and identity of the Brecks today. All landscapes are shaped by a specific mix of physical and human influences, but the marginality of the Brecks, and the predominance of large scale patterns of landownership has provided the context for an exceptionally high concentration of archaeological remains. When land has relatively low economy value, it makes sense to ignore odd landforms rather than destroy them. Large areas of heathland have been left as common land and managed (from the late 20th century) for nature conservation, the Ministry of Defence has taken over vast tracts of land north of Thetford and the Forestry Commission's conifer plantations have masked extensive areas. Thus the wealth of historic evidence embedded in the landscape has been preserved.

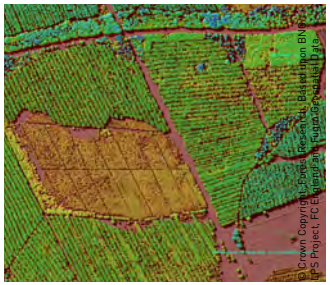
Some archaeological remains are prominent local landmarks, but many more are partially hidden and provide fascinating traces of past settlement, industry and agriculture, which inspire a sense of discovery. This is a landscape where the past and present seem closely intertwined.

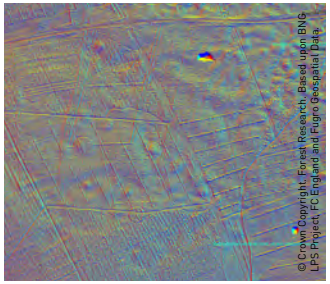
The Brecks has become a treasure trove for historians and archaeologists, with opportunities to uncover evidence that will generate new ways of understanding the early historic record. Recent remote sensing surveys have revealed, for the first time, the extent of the archaeology hidden beneath the Brecks' forests and there is real excitement about the discoveries yet to come.



Brecks hidden history

Historic Environment Record data
Norfolk County Council; Suffolk County Council (polygons re-digitised as points)





Lidar imagery reveals a wealth of archaeology (not yet recorded) hidden beneath the plantations


Thetford Warren - boundary of medieval rabbit warren


Civil War earthworks, River Lark floodplain, Icklingham
© Keith Evans

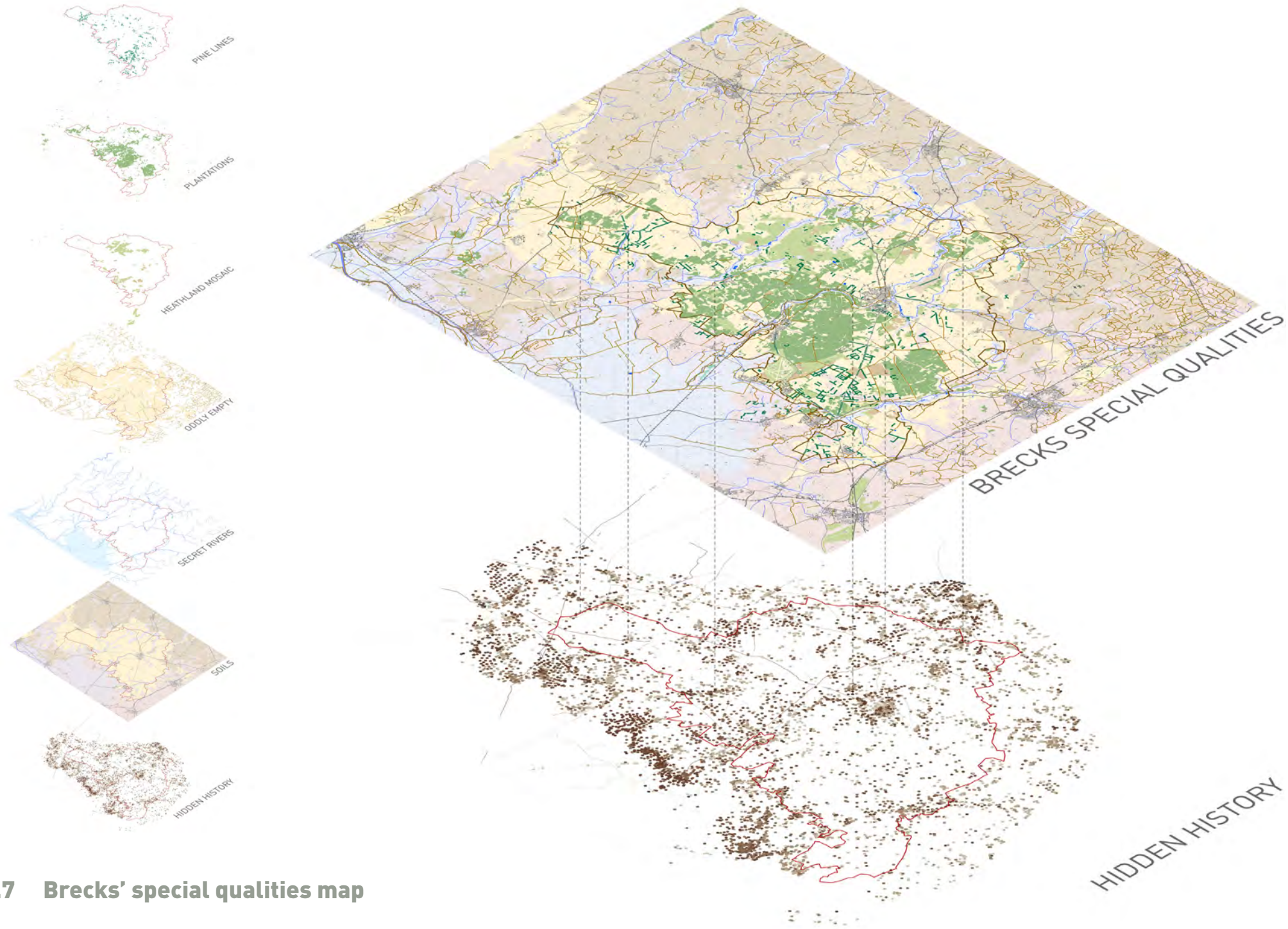

Moat at Weeting Castle
© Ashley Dace

time-depth landscapes

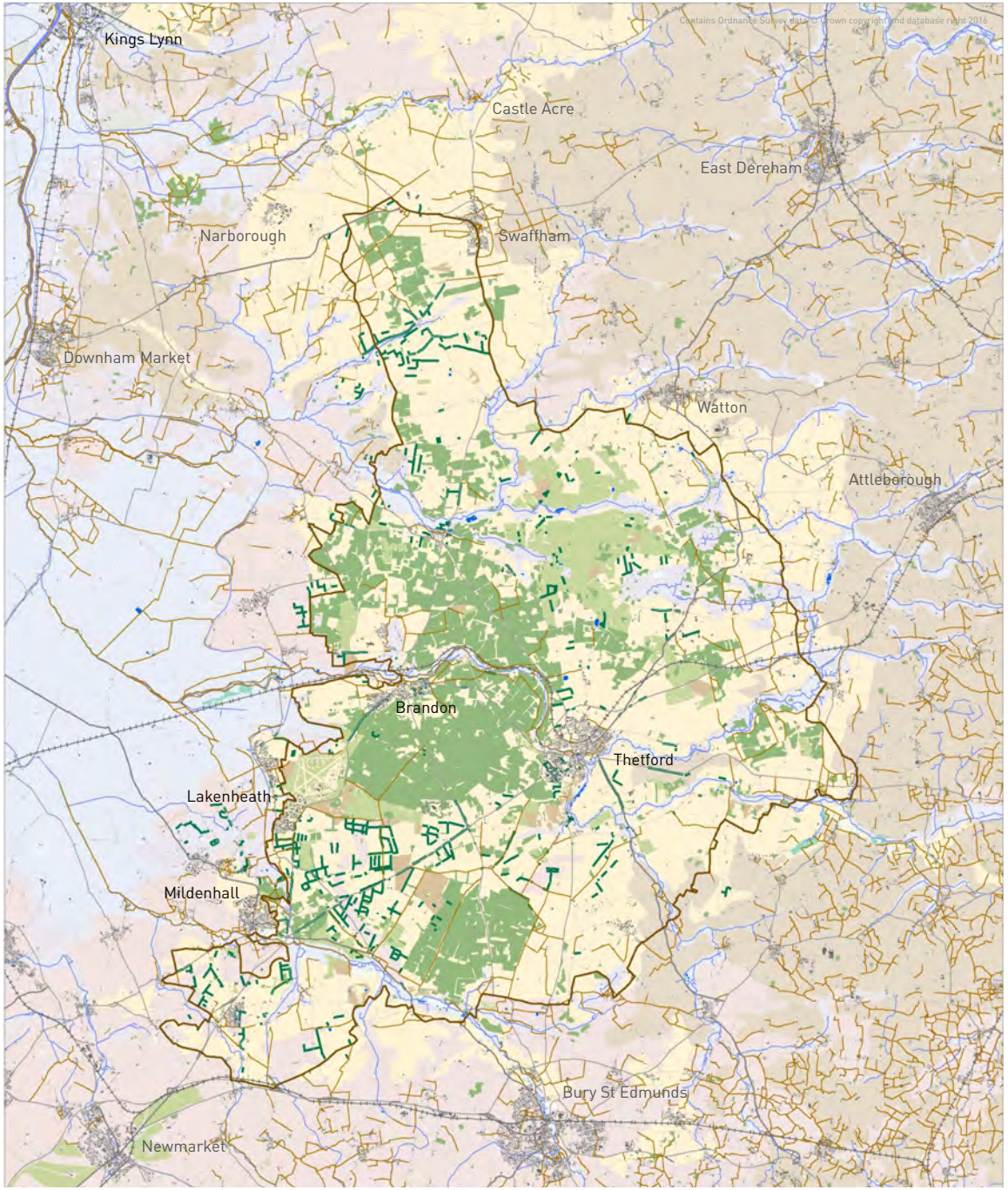

... no idea what this might be

bumps and hollows
dykes and banks
leftover mysteries


Neolithic flint mines Grimes Graves



3.7 Brecks' special qualities map



Brecks landscape boundary

Core Brecks Soils

- Core Brecks soils - infertile and free-draining, over chalk bedrock
- Glaciofluvial drift
- Transitional Brecks soils
- Deep alluvial and peaty soils

Secret Rivers

- Principal rivers - narrow, shallow valleys within the Brecks

Oddly empty

- Roads and buildings - sparsely settled - towns and villages by rivers
- Public rights of way - open, dispersed network of straight tracks

Heathland mosaic

- Lowland heathland - iconic, rare habitat, valued for biodiversity
- Dry acid and calcareous grassland - connects heathland; high biodiversity

Plantations

- Forestry Commission plantations - date from post war period

Pine lines

- Historic stands of Scots pine marking field and road boundaries

Map 3
Brecks' special qualities

*Extract from **H is for Hawk**, which captures the special qualities of the Brecks*

Here I was, standing in Evelyn's 'Travelling Sands.' Most of the dunes are hidden by pines - the forest was planted here in the 1920s to give us timber for future wars - and the highwaymen long gone. But it still feels dangerous, half-buried, damaged. I love it because of all the places I know in England, it feels to me the wildest. It's not an untouched wilderness like a mountaintop, but a ramshackle wildness in which people and the land have conspired to strangeness. It's rich with the sense of an alternative countryside history; not just the grand, leisured dreams of landed estates, but a history of industry, forestry, disaster, commerce and work. I couldn't think of a more perfect place to find goshawks. They fit this strange Breckland landscape to perfection, because their history is just as human.

H is for Hawk by Helen Macdonald, Published by Jonathan Cape, 2014

4 Next steps

4 Next steps

4.1 A sustainable legacy

The Breaking New Ground Landscape Partnership scheme, supported by the Heritage Lottery Fund, has kick-started a raft of conservation, access and community engagement projects in the Brecks and has encouraged a wide range of organisations to work in partnership to bring their plans to fruition.

The Breaking New Ground action plan[2] sets out plans for sustaining the legacy of the 37+ Breaking New Ground projects. The Brecks Special Qualities study will contribute to this process: by describing the distinctive character of the Brecks, It will help to maintain the high profile that has been established for the Brecks by the Breaking New Ground project and provides the evidence to support policies and working practices to conserve its cultural and physical landscape identity.

The core Brecks area is administered by six local authorities - two counties and four districts. Under such circumstances, delivery of landscape scale conservation projects requires coordinated and consistent strategic action, with the inclusion of relevant tailored, Brecks-centric policies within local and regional strategies and the Local Plans prepared by each of the district councils.

This process is already underway because the Brecks Landscape Character Assessment has been adopted by Breckland District Council as a supplementary planning document and it formed part of the evidence base for the Forest Heath & St Edmundsbury Joint Development Management Policies.

The Brecks Special Qualities study lays the foundation for further recognition of the Brecks by:

- drawing a boundary for the core Brecks landscape, and defining its spatial area; and
- articulating the core, undiluted characteristics and special qualities of the Brecks.

4.2 Communication and branding

The graphic identity guidelines (logo and colours) developed for the 1998 Brecks Countryside Project have been used and promoted throughout Breaking New Ground to raise public awareness of the Brecks as a destination with a consistent, clear local identity.

The Brecks Special Qualities can be used to reinforce and articulate the Brecks' brand so that the potential benefits of distinctive landscape character can be embedded in future policy and land management initiatives - and used to generate local economic gain.

4.3 Implications for policy and action

By identifying a boundary for the core Brecks landscape, the Brecks Special Qualities report facilitates the application of policies, initiatives and actions which reinforce the distinctive character and qualities of the Brecks.

The table overleaf signposts relevant guidance and sources of information for conserving each of the six Brecks' special qualities. The sources used are:

- Brecks Landscape Character Assessment, 2012
- Breaking New Ground Landscape Conservation Action Plan, 2013
- The Brecks Biodiversity Audit, 2009.

The guidance does not specifically include reference to the many biodiversity, heritage and landscape habitats and features in the Brecks which have statutory protection.

[2] Breaking New Ground Landscape Conservation Action Plan, The Brecks Partnership, 2013

Oddly empty	
Headlines: • Retain the characteristic dispersed pattern of settlement • Avoid linear roadside development • Retain tight, angular rural road junctions • Recognise and promote the value of extensive tranquil, undisturbed areas of countryside	Relevant extracts from the Brecks Landscape Character Assessment - Brecks Arable Heathland Mosaic: Landscape Strategy **Conversion and expansion of farmsteads and small group of estate buildings, for agricultural, residential and/or commercial uses** – The Brecks Arable Heathland Mosaic does not have a history of clustered settlement but groups of farm buildings are often a focus in views, seen against a backdrop of tree belts and plantations. Guidance for integrating new farm development includes: • Avoid or minimise the visual impact of new development in views across or adjacent to natural heathland, where such changes could detract from the natural, wild character of the heathland landscape which is increasingly scarce. • Conserve the scale and proportion of the farmstead within the context of the surrounding large scale landscape. Farm buildings are typically seen in the middle distance across open fields and framed by woodlands and tree belts. Expansion of farmsteads in small-scale landscapes or in locations where they are alongside roads would be more difficult to accommodate without changing local landscape character. **Erosion of the small-scale character and quality of the straight, narrow roads** that is characteristic of the Brecks Arable Heathland Mosaic and which are often subject to fast cars and verge erosion due to visitor pressures. Guidance for road and roadside management includes: • Give priority to the conservation of Roadside Nature Reserves, which have been designated to improve and enhance a highly visible and characteristic component of the Brecks landscape and biodiversity. • Enhance the principal road corridors that provide gateway views to the Brecks, with a coordinated strategy of tree planting, hedgerow/pine line management and signage that is designed to take account of key views • Conserve the characteristic straight alignment and sequence of open and enclosed views associated with roads across the Brecks Arable Heathland Mosaic, wherever possible conserving and creating new heathland habitats in prominent roadside locations. • Avoid traffic calming measures and signage in rural locations that could have an urbanising effect
Heathland mosaic	
Headlines: • Retain, conserve and enhance valuable lowland heathland habitats • Extend and connect core heathland habitats wherever possible • Conserve and manage rare fluctuating meres and pingos	Relevant extracts from the Brecks Biodiversity Audit (BBA) **The conservation of priority species on dry terrestrial habitats requires physical disturbance** and/or heavy and intense grazing; this should be implemented across large parts of most heathland sites in the Brecks: • Heterogeneity, with areas of lighter grazing, structurally diverse swards, and the juxtaposition of ungrazed elements (including ploughed or cultivated ungrazed margins within or alongside heath sites) all provide or additional species assemblages. • Management should not be approached with the hope of keeping things from changing, rather management should be dynamic, episodic and disruptive as gradual recovery from grazing or disturbance provides conditions and structures not found on homogenously managed sites. For instance, retention of mature heather should not be an objective of management for priority species. • Important assemblages that require physically disturbed ungrazed vegetation, including bare ground and ruderal plant communities, are best supported on arable field margins, through cultivated margin prescriptions, in the forest landscape, along lightly grazed margins of large grazed heathlands, or in brown-field sites. • Large lightly grazed heathlands provide opportunities for recreation of Brecks arable and ruderal habitats through mechanical disturbance and cultivation.

	Scrub and woodland should be largely removed from fen and wetland sites. A range of grazed and tall vegetation structures should be created. On large wetland complexes this may be achieved by flexible extensive grazing, while on smaller or wooded sites mechanical management may be required. Relevant extracts from the Brecks Landscape Character Assessment - Brecks Arable Heathland Mosaic: Landscape Strategy **Changes in heathland management prescriptions and agricultural subsidies,** which have the potential to change the balance, proportion and quality of the open agricultural and heathland components of the Brecks Arable Heathland Mosaic. Guidance for land management practices that will conserve and enhance distinctive landscape character includes: • Identify opportunities to extend and connect areas of lowland heath and dry acid and calcareous grassland habitat, particularly on the fringes of the Breckland SPA and SAC. • Buffer existing heathland by restoring or creating habitats adjacent to existing sites or by encouraging low input agricultural systems on land adjacent to heathland. • Areas of existing heathland should be managed in accordance with the detailed prescriptions contained within ecological guidance such as the Breckland Biodiversity Audit[18]. For the majority of heathland areas, such guidance is likely to include heavy and intense grazing and the application of physical disturbance (rotovation and turf stripping). Management should generally be dynamic, episodic and disruptive as gradual recovery from grazing or disturbance provides conditions and structures not found on homogenously managed sites. • Manage arable field margins and buffer existing trackways and track verges in accordance with cultivated agri-environmental prescriptions which are likely to involve no fertiliser or herbicides. Encourage a strategic approach to the continuous management of field boundaries across areas under different landownership. Conserve and enhance the character, quality and connectivity of woodlands, shelterbelts and field hedgerows, maintaining the existing proportion of open fields to heath to woodland or, if possible increasing the proportion of heathland within the overall mosaic. • Enhance the diversity of woodland and arable field habitats by woodland management to improve the age structure and species composition of woodlands and plantations • Plant deciduous native trees on the fringes of woodlands and plantations to enhance their ecological value and visual character. • Conserve and manage the margins of groundwater fed meres, pingos and headwater fens, maintaining a broad buffer to adjacent farmland, removing all adjacent scrub and woodland and introducing grazing (and possibly mechanical clearance) in accordance with the advice contained within detailed management prescriptions. Relevant Breaking New Ground Projects: **A1 Ground disturbance** - Opportunity mapping and re-creation of areas of traditional 'Brecks' by various methods of Ground Disturbance on selected areas, leading to a better understanding of management requirements for Brecks species diversity. **A2 Conserving the Brecks Wildlife Sites** - surveys and management statements for 30 County Wildlife Sites and identification of new sites, especially those which connect the ecological network. Advice and support to landowners for practical land management **A3 Pingo project** - surveys and assessments of pingo sites, creation of management plans and advice for landowners. Practical restoration management work on 3 priority sites with c.24 pingos including Thompson Common **C15 Brecks warrens and lodges** - research to determine the extent and condition of surviving internal archaeological features for a selection of warren sites **C16 Sheep in the Brecks** - research to record the historic presence and role of sheep in the landscape of the Brecks, documenting and investigating the various aspects of this heritage and also promoting the use of sheep as a habitat management tool.

Pine lines	
Headlines: • Conserve all the remaining historic Brecks pine lines • Initiate sustainable management of the pine lines, with a programme of replanting* * informed by the findings of the Breaking New Ground Project (A4)	Relevant extracts from the Brecks Landscape Character Assessment - Brecks Arable Heathland Mosaic: Landscape Strategy **The decline of the distinctive pine lines as a result of age and mechanical removal**. It is thought that the majority of pine lines were planted between 1815 and 1820, so these features are now c.190 years of age. The average lifespan of a Scots pine tree is expected to be 150-300 years which means that the Brecks trees may well survive for many years to come, but an active programme of management and replanting would conserve these distinctive landscape features. New pine lines should be planted in areas where they were known to have been planted in the 1920s and should be subject to appropriate management to encourage the distinctive, contorted form that is typical of the Brecks. There is a need to research techniques for the effective management of pine lines. Relevant Breaking New Ground Projects: A4 Pine lines and pine connections - Pine lines contribute significantly to the landscape character of the Brecks and to the biodiversity, fulfilling an important habitat connectivity role. This project will research historic management techniques and identify the most appropriate methods for creating, restoring and maintaining pine lines. It will engage with the public and landowners to promote Pine lines, their management and creation. Practical restoration work will conserve 8km of Brecks Pine lines. Suitable locations for new pine lines will be identified using the data assembled under the University of East Anglia's 'Brecks Pine Lines Report 2010, and information from advisory visits to farms and estates and 2km of new pines planted
Secret river valleys	
Headlines: • Conserve and enhance the small-scale, intimate character and pattern of the river valleys • Conserve curving historic field boundaries and ribbons of trees that define floodplain margins • Conserve historic bridges, ford and group of buildings at historic river crossings • Manage water levels and water quality	Relevant extracts from the Brecks Landscape Character Assessment - River valleys: Landscape Strategy **New built development within riverside settlements and alongside roads adjacent to valley floodplains.** Settlement in the Brecks has historically been concentrated along the river valleys and the narrow, small-scale valley landscapes form part of the landscape setting of historic village centres. Views from and along the valley floor are vulnerable to any large scale development within the riverside villages and, in particular, along the valley-side roads. Guidance for integrating new built development includes: • Conserve the small-scale character of the valley settlements, with a sequence of framed views to and from the valley floor; avoid over-scaled buildings which project above the skyline. • Conserve the character of river valley views to landmark buildings and bridges, plus the occasional longer framed views that connect the river valley landscapes to the surrounding farmlands, heathlands and commons in the surrounding Brecks Heathland Mosaic. • New built development should be related to existing clusters of buildings. Avoid linear development along valley side roads which intrudes upon their rural character and disrupts the characteristic gateway approach to individual villages along the valley routes. • The majority of valley side built development will be visible from the valley floor and should be designed to the highest standards, using local materials that fit sympathetically with the local vernacular. In most river valley landscapes this means bricks, with some clunch, flint and render. • Maintain the rural road network, resisting highway upgrading works that could have an urbanising influence and giving priority to the conservation of historic river crossing points • New planting associated with valley side development can help to conserve the enclosed, secluded character of villages by providing a backdrop to views from the valley floor. Planting should be of native species and should be designed to extend the visual influence of existing tree groups and belts of woodland, creating curving 'layers' of native vegetation that give visual emphasis to the sinuous form of the river valley.

Land use changes, which disrupt the characteristic diverse, small-scale patterns of fields and habitats on the valley floor. The loss of traditional grazed floodplain pastures and the creation of small horse paddocks and associated structures can significantly degrade the quality and condition of the river valley landscapes. Pastures that are inaccessible or of marginal economic value may be left unused and become colonised by wet woodland and scrub. Guidance for managing land use change includes:

- Support the continuation of traditional economic activities, including grazing with cattle and sheep. The continuation of traditional agricultural practices is integral to the character and condition of the river valley landscapes and grazing is often critical to the successful management of important wildlife sites in the landscape.
- Maintain a high proportion of grassland. The conversion of grassland to arable production as a result of drainage and 'shaving off' areas of grassland on the drier, outer fringes of valley pastures reduces the scale and integrity of the river valley landscapes. Arable reversion, through agri-environment schemes, or with expansion of livestock enterprises, can help to maintain the character of this landscape and also deliver ecological benefits.
- Manage the proportion of wet woodland and scrub and encourage appropriate planting and management of woodlands. The river valley landscapes contain a mix of wet and plantation woodland and it is important to conserve a balance that is appropriate and in keeping with the distinctive local character and level of enclosure of each river valley landscape. While wet woodland is an important part of the habitat mix, excessive creation of plantation woodland should be avoided.
- Mitigate the impact of horse grazing. The proliferation of post and rail fencing and the subdivision of land into small paddocks using temporary tape can be particularly intrusive. If necessary, brown or green tape should be conditioned and planting required to soften the impact of the fencing and structures associated with horsiculture. Where possible, field layouts should be designed to reflect the historic pattern of boundaries and field shelters and material storage areas should also be located to minimise their visual impact.

Over abstraction of water from the Brecks' rivers and chalk aquifer has increased, leading to insufficient levels for agriculture and the conservation of the valuable wetland habitats within the fluctuating meres and river valleys. This has led to drying out of upper and middle sections and riparian zones, but also to accumulation of silt and changes in the aquatic vegetation structure. In addition, high nutrient levels are a problem in many of the rivers and can lead to prolific algal growth and associated dissolved oxygen problems, particularly during period of low flow. Such water stress problems are exacerbated by the erratic and extreme climatic events associated with climate change. Guidance for managing water levels and water quality includes:

- Recognise the role of river valleys for the storage of floodwater and aquifer recharge and encourage the use of floodplains for these purposes so that the floodplain grasslands contribute directly to aquifer recharge into the chalk in areas where overlying glacial deposits are permeable.
- Work in partnership with farmers to encourage the uptake of agri-environment options that harvest and conserve water, protect watercourses and prevent water quality deterioration by reducing diffuse pollution, ensuring compliance with regulations on nitrate vulnerable zones to manage fertiliser inputs.
- Manage agricultural practices that could result in damage to water quality, including manure and slurry applications, particularly soil erosion and sedimentation in flood conditions due to intensive pig rearing.
- Increase grassland strips along field drains and water courses in areas of arable land to capture sediment and nutrients
- Create buffer areas between points of potential nutrient input and sensitive riparian habitats.

Repair fragmented spring-fed wetlands in the valleys of the Lark, Wissey, Little Ouse and Thet rivers – the river valleys are amongst the most vulnerable and pressurized habitats in the Brecks. Guidance for wetland habitat conservation includes:

	• Avoid physical modification of river channels – dredging river beds and confining water to specific channels for flood defence, drainage, navigation and other purposes leads to increased pressure on this fragile resource • Encourage opportunities for the creation of new areas of priority reedbed, fen and alder carr woodland habitat in areas of relatively low biodiversity interest. **Erosion of the intimate, tranquil character of the river valleys as a result of increased visitor and recreational pressure.** The River Valleys offer superb opportunities for recreation. They are the focus for settlement and the natural starting point for walks and cycle routes. They provide good access to nature, along with opportunities for environmental education and understanding heritage. However, there is a risk that the narrow roads and small village landscape of the river valleys could be overwhelmed by visitor pressures, with subsequent loss of their characteristic intimacy and tranquillity. Guidance for improvements to access and green infrastructure includes: • Encourage multi-functional green infrastructure, with connections between the River Valleys and surrounding landscapes so that the small scale landscape of the river valleys is conserved. Access routes between the River Valleys and surrounding Heathland Farmland Mosaic will encourage understanding of the functional inter-relationships between the landscapes of the heaths, farmland and river valleys. • Manage visitor pressures at popular and sensitive sites by investing in high quality infrastructure and interpretation, which meets the different needs and levels of use of a range of visitors. Carefully designed car parks and cycle routes are particularly important. • Manage levels of potential disturbance by diverting cycle and vehicular routes away from sensitive riverside habitats. • Provide high quality interpretation, with car parks and cycle hire at larger riverside centres, such as Thetford and Brandon and at visitor centres. Invest in and encourage the use of multi-user routes that take people into the river valleys and surrounding landscapes without their cars. Relevant extracts from the Brecks Biodiversity Audit **Scrub and woodland should be largely removed from fen and wetland sites.** A range of grazed and tall vegetation structures should be created. On large wetland complexes this may be achieved by flexible extensive grazing, while on smaller or wooded sites mechanical management may be required.
Plantations	
Headlines: • Integrate new built and infrastructure development by the use of appropriate native species, materials and forms. Conserve locally distinctive features (eg. pine lines, warren lodges) together with their landscape settings • Connect and manage strategic ecological corridors between core heathland habitats	Relevant extracts from the Brecks Landscape Character Assessment - Brecks plantations: Landscape Strategy **Conversion of farmsteads and small group of estate buildings and associated new development, for recreational, residential and/or commercial uses** – Most pressure for residential and mixed use development is on the fringes of existing larger settlements, but the forest is a focus for recreational and leisure development and some estate or farm buildings may have good potential for expansion and /or conversion to other uses, provided patterns of existing trees and woodlands are conserved and extended to provide a partial visual screen and integrate the new development. Guidance for integrating new recreational/leisure development includes: • Integrate new development or additions (together with associated infrastructure in the form of lighting, signage and fencing) with large scale tree planting which relates to and is integrated with existing trees and forestry. Take the opportunity to soften the visual edges of existing plantations, with extensive broadleaf planting. • Avoid or minimise the visual impact of new development in views across or adjacent to natural heathland, where such changes could detract from the natural, wild character of the heathland landscape which is increasingly scarce.

- Avoid new development, including car parks and lighting along forest roads and adjacent to rides, where it could be intrusive in the framed forest vistas. Use of such sites should be unnecessary, given the extensive choice of alternative, well wooded sites where there is a robust visual screen.
- Conserve wooded skylines and ensure that all views to new development are seen against a backdrop of woodland.
- Building materials should be appropriate for the style of existing buildings present. Brick is often used. Staining used for exterior boarding should be capable of weathering in the traditional way, as a permanent dark or black colouring is not locally appropriate.
- Design car parks and caravan sites so that vehicles are partially screened with local tree and scrub heathland species such as pine, oak, birch, gorse and bracken, balancing requirements for screening with the need to minimise opportunities for antisocial behaviour. There is likely to be scope to accommodate these sites provided they are well integrated within the wider 'edge-of-forest' context. Hard surfaces should be of sandy aggregate that blends within the rural context.

New infrastructure development – including signage, lighting and improvements to roads. The vast majority of people experience the landscape of the Brecks Plantations from forest roads and rides so the channelled views and framed vistas along these routes are highly sensitive to change. The use of the forest landscapes for recreation and leisure developments has created a plethora of signs, which is often visually intrusive. Guidance to improve the integration of road and utility infrastructure developments includes:

- Conserve the predominantly remote and tranquil character of the forests by new planting of broadleaf tree and shrub species, along with gorse and holly, which will help to soften, integrate and potentially screen new development
- Integrate new infrastructure development within the existing rectilinear landscape pattern, which has straight boundaries and angular junctions. Blocks of woodland should extend right up to the edge of roads in places, creating 'pinch-points and adding variety to local views.
- Avoid traffic calming measures and signage in rural locations that could have an urbanising effect.
- Design small scale infrastructure such as signage, lighting and interpretation boards with simple forms and appropriate local materials so that it is well integrated within the surrounding landscape. Control the use of visually intrusive and unnecessary signage.
- Enhance the principal road corridors that provide gateway views to the Brecks, with a coordinated strategy of tree planting, hedgerow/ pine line management and signage that is designed to take account of key views
- Wherever possible, conserve and create new heathland habitats in prominent roadside locations

Fragmentation of ecological networks within the wider plantation landscape. In the forest landscape, fire-routes and ride (track-way) verges already provide a widely dispersed network. However this network is spatially interrupted and incomplete due to shading of track elements when adjacent tree crops pass thicket stage . Guidance for land management practices that will increase the biodiversity resilience of the plantations includes:

- Consider strategic management that buffers and links multiple sites of biodiversity value into large contiguous networks. Connections between existing open and heathland areas are particularly valuable, providing enhanced dispersal into clear-felled and restocked areas
- Connectivity among dispersed sites could be achieved by providing juxtaposition of grass strips, disturbed ground, and cultivated field margins along existing track-ways
- Create wide, permanently unshaded 'superhighways' for plant and invertebrate dispersal, flanked by disturbed strips of ground (e.g. with ploughing or turf stripping treatments to create bare disturbed sand and chalk) and by nectar rich ungrazed flower rich verges.
- Connectivity elements may be provided by revitalising stock droving activity to provide cross links with these 'super-highways'.
- Give priority to strategic links across the forest landscape between key heathland SSSIs, such as linking Weeting Heath to Cranwich and Grimes Graves or Lakenheath Warren to Thetford Golf Course and Marshes via High Lodge.

Hidden history	
Headlines: • Conserve the setting and integrity of historic features so that they are visible and easily interpreted as part of the distinctive local character of the Brecks	Relevant extracts from the Brecks Landscape Character Assessment - Brecks plantations: Landscape Strategy **Erosion of the setting of distinctive historic and archaeological features**, some of which are relatively invisible in the landscape due to tree and scrub cover. Priority should be given to the conservation of distinctive archaeological evidence, including Bronze Age barrows, defensive embankments and trackways, medieval deserted villages and warren banks, remnant historic features associated with the 18th and 19th century Breckland estates, the pits associated with historic flint mines and 20th century military structures and sites. Relevant Breaking New Ground Projects (selection only): **C5 Brecks heritage trail** - create a series of 10 heritage trails (each based on a specific heritage theme) across the Norfolk and Suffolk Brecks for walkers, cyclists and horse riders. Collectively the trails will feature over 40 sites identified for their historical and natural heritage interest. **C6 Revealing the landscape** - Demonstrate the use of LIDAR for assessing heritage by revealing hitherto unrecorded features in the landscape. This new resource for the Brecks will enhance knowledge and appreciation of archaeological features at a landscape scale, and aid with their future conservation management. **C8 Brecks from above** - Promote greater understanding of and engagement with the Brecks' landscape through Aerial Photography and the important role it plays in reading the historic landscape. **C15 Brecks warrens and lodges** - research to determine the extent and condition of surviving internal archaeological features for a selection of warren sites **C17 Brecks military history** - The project will identify and record the military history of the Brecks and its key sites from 1900 to 1949. **C19 Landscape revolution** - For each parish within the BNG area the project will bring together volunteers from the local community who will carry out a detailed survey of cartographic and other documentary sources to establish past land use, vegetation and landownership. The resulting GIS dataset and on-line resource will enable continued community led research into local landscape history **D1 Discovering the archaeological landscape of the Brecks: training programme** - aims to increase community engagement and train volunteers in archaeological techniques to support community-based archaeological projects.

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