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1: INTRODUCTION

Historic Landscape Characterisation (HLC) mapping provides detailed spatial information about types of land use in today’s landscape, with reference, where possible, to their historical roots. This is done through the building of a digital map that draws on data in modern and historic maps, aerial photographs and other historic environment information. The flexibility of the digital map enables it to be used in a variety of forms, colours and scales. This enables patterns to be observed and analysed, leading to an enhanced understanding of the origins and development of the landscape.

HLC mapping was developed under the aegis of English Heritage in the 1990s and 2000s. Work was on a county basis and at different times, with the result that there are significant differences in the technologies and methodologies between HLC datasets. This means there are significant differences in the way neighbouring counties have been characterised.

Up until now Brecks has been split between the Norfolk and Suffolk HLC datasets, which have important differences in their methodologies and the level of historical interpretation. The Suffolk approach has been deemed to be more useful to The Brecks Fen Edge and Rivers Landscape Partnership Scheme and therefore the purpose of the current project is to provide unified HLC mapping for the Brecks National Character Area (NCA) as a whole. In effect, this has meant remapping the Norfolk section of the Brecks NCA area to accord with the existing Suffolk HLC mapping. The original Suffolk HLC had 11,666 polygons and the current draft of the extended mapping has 12,539 polygons.

2: METHODOLOGY

The Suffolk HLC map was initially created by Matthew Ford in 1998-99, funded by English Heritage and the Archaeological Service of Suffolk County Council. The map was subsequently edited by Edward Martin (also of the Archaeological Service) to produce Version 1 in 2001, Version 1a in 2002, Version 2 in 2005, and Version 3 in 2008. The primary sources for the compilation for the Suffolk HLC map were digital sets of Ordnance Survey maps, dating from the first edition of the 1880s to the present day, together with a county-wide aerial photographic cover and a geo-referenced version of Joseph Hodkinson’s Map of Suffolk published in 1783. These were used to identify and define a set of historic landscape character types, each based on a current land use and an assessment of its historical origin, thus giving the type, where possible, a ‘time depth’.

For the new mapping of the Norfolk Brecks area, the modern Ordnance Survey 1:10,000 scale maps formed the basis of work, with earlier Ordnance Survey maps and aerial photographic cover available for reference on a separate computer. A geo-referenced version of William Faden’s Map of Norfolk of 1797 was also available for reference.

Polygons were drawn around elements of the landscape, which were then each given an imbedded table defining its historic landscape character type.

The embedded table for each mapped polygon has these five components:
1. A brief description of the broad category of that particular map polygon, for example, ‘Pre-18th-century enclosure’.
2. The number for that broad category, which is 1
3. The specific sub-category of that polygon, for example, ‘Random fields’
4. The allotted number for that sub-category, which is 1
5. The specific combination number for that broad type and sub-type, which 1.1

This version of HLC operates at two different levels:

Firstly, a set of 14 broad types which give a basic characterisation, as below:
1. Pre-18th-century enclosure
2. 18th-century and later enclosure
3. Post-1950 agricultural landscape
4. Common pasture
5. Meadow or managed wetland
6. Horticulture
7. Woodland.
8. Unimproved land
9. Post-medieval park and leisure
10. Built up area
11. Industrial
12. Post-medieval military
13. Ancient monument
14. Communications
Due to their broad nature these types generally carry a high confidence rating.

Secondly, a nested set of 77 sub-types that give a closer definition of the broad types, e.g., the broad type ‘1. Pre-18th-century enclosure” has these sub-types:
1.1 Random fields
1.2 Rectilinear fields
1.3 Long co-axial fields
1.4 Irregular co-axial fields
1.5 Former medieval deer park
1.6 Former marsh or fenland
1.7 Former coastal marsh
Because of the higher level of interpretation needed to assign these sub-types, they generally carry a lower confidence rating. The map can be used at either the broad types or the sub-types level.

This list contains some types and sub-types that are not present in the Brecks

**Type 1.0. PRE-18TH-CENTURY ENCLOSURE.**

This category refers to land that was enclosed into fields for agriculture before 1700. In much of the clayland parts of East Anglia the landscape is one of ‘ancient enclosure’. Until the 20th century this type of landscape was characterised by predominantly small fields with a network of winding roads and trackways. This landscape type covers a number of sub-types, but very few of them are present in the Brecks, emphasizing the landscape differences between the Brecks and the clayland. The sub-types are detailed below, with those absent from the Brecks indicated in blue:

- **Sub-type 1.1. Pre-18th-century enclosure – random fields.** Landscapes made up of fields that have an irregular pattern (i.e. without any dominant axis). Many were in existence by the medieval period, but could be earlier. Boundaries are usually take the form of species-rich hedges (normally coppiced not laid) with associated ditches and banks. Areas with this field pattern are probably some of our earliest farming landscapes.
• **Sub-type 1.2. Pre-18th-century enclosure – rectilinear fields.** This is not a dominant type in Suffolk. Landscapes of this type are made up of fields that tend to be small and rectilinear in shape, forming patterns that resemble the brickwork in a wall. They tend to exist in isolated pockets within more extensive areas of other types of early enclosure, and probably indicate relatively late episodes of field creation or re-organisation, although still pre-18th century, within earlier surroundings.

• **Sub-type 1.3. Pre-18th-century enclosure – long co-axial fields.** Landscapes made up of fields where a high proportion of the boundaries share a dominant axis. This takes the form of long, slightly sinuous lines that run roughly parallel to each other for considerable distances. These lines usually run at right angles to a significant watercourse. Co-axial systems are not all of the same date – some in valley-side positions may represent very early farming boundaries, but others on the clay plateaux are likely to be medieval in date.

• **Sub-type 1.4. Pre-18th-century enclosure – irregular co-axial fields.** Landscapes where many of the boundaries share a common axis. They share many of the characteristics of long co-axial fields (sub-type 1.3) but lack their overall regularity and their boundaries are often only approximately parallel. The systems vary in size, merge in and out of one another, and generally fail to follow one particular aspect or angle. In some cases these systems represent the early, piecemeal, enclosure of common fields.

• **Sub-type 1.5. Pre-18th-century enclosure – former medieval deer park.** Deer parks were important symbols of lordship in the medieval period and normally consisted of areas of woodland, wood pasture and open grassland (launds), bounded by banks and ditches with hedging and/or wooden fences to form a ‘park pale’. Park pales frequently have curved outlines as this was the most economic way of enclosing large areas. Deer parks were frequently situated on upland clay areas unsuited to agriculture and can therefore be at some distance from the lordship centre that they served. The parks functioned as deer farms, supplying venison for the lord’s table, with a variable amount of actual hunting. Parks could also include rabbit warrens and fishponds, also supplying food for the lord. Lodges within the parks supplied accommodation for a parker and/or a visiting lord. Some parks were in existence by 1086, but the majority appear to have been active in the period 1200-1400. Most were ‘disparked’ by the 16th century and turned over to agriculture, but the legacy in the landscape can survive, in terms of names, field patterns and boundary features.

• **Sub-type 1.6. Pre-18th-century enclosure – former marsh or fenland.** Areas of inland marsh or fen that was enclosed before 1700. Enclosures frequently have curvilinear boundaries and drainage ditches, often reflecting pre-existing channels and streams.

• **Sub-type 1.7. Pre-18th-century enclosure – former coastal marsh.** Areas of coastal marsh that was enclosed before 1700. Enclosures frequently have curvilinear boundaries and drainage ditches, often reflecting pre-existing channels and creeks.

• **Sub-type 1.8. Pre-18th-century enclosure – former fenland, planned allotments.** Areas of fenland that were allotted to ‘adventurers’ (i.e. investors) in the 17th-century fen drainage enterprises. These are characterised by their
straight-edged, geometric shapes associated with straight drains and roads. They may also have a farmstead set within a block of fields.

**Type 2.0. 18TH-CENTURY AND LATER ENCLOSURE.**

Advances in farming techniques, allied to significant social changes concerning the holding of land resulted in the ‘agricultural revolution’ of the 18th century. Prominent amongst the changes was the ending of the system of common-field farming whereby farmers cultivated separately-owned strips in large ‘open’ fields. Common or open fields were a strong characteristic of the Brecks, differentiating it from the enclosed landscape of the claylands. This difference was noted by early mapmakers – John Ogilby’s road maps of 1675 have the words ‘Corn laines or open arable’ beside the roads running through the Brecks (lain being an early word for a tract of arable land); and William Faden’s 1797 map of Norfolk repeats the words ‘Common Field’ over much of the Brecks. Some common fields were enclosed by means of parliamentary acts, while others were enclosed by agreement. Within the Brecks, parliamentary enclosure started with lands in Hilborough (N) in 1768, followed by Cavenham (S) in 1772. The great majority of the enclosure acts fall between 1790 and 1840. This type of ‘planned’ enclosure resulted in a landscape with regularly-shaped units with straight boundaries. Boundaries are usually composed of single-species hedges (often hawthorn) or tree lines. In the Brecks, the ‘pine lines’ are a distinctive feature – many of these started as trimmed hedge lines that have now grown on to become contorted trees. The use of conifers, particularly Scots pine, to give shelter and to reduce the effect of sand-blows in the open Brecks landscape, is documented as early as 1668 when Thomas Wright employed 'Furre-hedges' to tame the notorious sand flood that engulfed his lands at Santon Downham.

Agricultural advancements in draining, fertilising and irrigation also resulted in the conversion of areas of common pasture, heath, fen and marsh to arable. This landscape type contains the following sub-types (those not found in the Brecks are indicated in blue):

- **Sub-type 2.1. 18th-century and later enclosure – former common arable or heathland.** Fields formed from land that was previously farmed as individually-owned strips in large common or ‘open’ fields. Field shapes are frequently rectangular with straight boundaries, as a result of having been laid out to measured plans by surveyors. The Brecks takes its name from the temporary intakes from the heaths that were cultivated for a short time and then abandoned to slowly recover their fertility. As a result of this practice, the dividing line between heathland and common fields can be difficult to distinguish, hence the inclusion of heathland in the title of this sub-type. This is a major landscape type in the Brecks.

- **Sub-type 2.2. 18th-century and later enclosure – former common pasture, built margin.** Pastures of this type were usually called greens, but can also be termed tyes (in south Suffolk only) or commons. They are normally situated on poorly-drained clay plateaux and are medieval in origin. The greens were usually surrounded by substantial ditches, often water-filled and hedged on the outer margin, which frequently survive as substantial landscape features. Enclosure was often achieved though parliamentary acts and frequently involved the insertion of distinctive straight roads through the centres of the former greens. New straight boundaries were laid off at right-angles to these roads and many of the smaller land parcels were utilised as house plots. This leads to a distinctive landscape where the older houses are set back from the
road on the old margin, reached by a series of individual driveways, and newer
house flanking the inserted road. Deserted house sites, often showing now
only as scatters of pottery, also occur on the margins.
• Sub-type 2.3. 18th-century and later enclosure – former common pasture,
open margin. Fields formed from the enclosure and sub-division of areas of
common pasture that were not a focus for settlement and therefore, now and
historically, had few or no houses on their margins. Common pastures of this
type were frequently either heaths on impoverished dry sandy soils or wet
riverine grasslands.
• Sub-type 2.4. 18th-century and later enclosure – former post-medieval
park. Parkland designed to appear semi-natural with clumps of trees within
extensive grassland and frequently fringed by belts of trees to give privacy and
to exclude unwanted views. Usually designed as the setting for a great house
and laid out to give vistas from that house. Lakes and decorative buildings or
structures can form part of the layouts. Entrances are often guarded by lodges.
Most examples are 18th or 19th century in date, though earlier examples do
occur. Traces of earlier landscapes, like trees that were formerly part of field
hedges sometimes can be detected.
• Sub-type 2.5. 18th-century and later enclosure – former marsh or fenland.
Land reclaimed, through drainage and embankment, from inland marsh or fen
and converted into farmland, usually pasture, but also arable when conditions
are suitable. The field pattern usually appears planned, with straight ditches or
drains. The land may previously have been held in common and may have
been subject to earlier reclamation attempts.
• Sub-type 2.6. 18th-century and later enclosure – former coastal marsh.
Land reclaimed, through drainage and embankment, from coastal marsh and
converted into farmland, usually pasture, but also arable when conditions are
suitable. The drainage pattern usually appears planned, with straight ditches or
drains. Substantial sea banks normally protect the reclaimed land. Sluices and
pumping mills frequently occur. The land may previously have been held in
common and may have been subject to earlier reclamation attempts.
• Sub-type 2.7. 18th-century and later enclosure – woodland clearance.
Fields created as a result of woodland clearance. The former wood boundary
often survives as a curving field boundary, but internal subdivisions usually
have straight boundaries.
• Sub-type 2.8. 18th-century and later enclosure – former warren. Former
rabbit warrens enclosed and converted into farmland. Warrens, often sited on
heathland, are documented from the 12th century onwards, but few, if any,
survived in active management beyond the early part of the 20th century.
Warrens were frequently enclosed within earthen banks, which may survive as
field boundaries, as at Santon Downham. Disused warreners’ lodges may also
occur (e.g. at Mildenhall and Thetford). Large warrens were a distinctive part
of the landscape in the Brecks.
• Sub-type 2.9. 18th-century and later enclosure – former heath. The
enclosure and conversion to arable or pasture of land that was formerly of
Sub-type 8.1 (Unimproved land – heath or rough pasture): Areas of natural or
semi-natural vegetation (particularly grass and heather) on dry, acidic soils.
Historically too dry and impoverished for arable cultivation, they were
managed mainly as areas of sheep pasture (often called ‘sheep walks’). Some
areas of heathland experienced intermittent arable cultivation (the archetypical
‘brecks’). Where there has been minimal cultivation there are often earthworks of archaeological interest, such as prehistoric burial mounds.

- **Sub-type 2.11. 18th-century and later enclosure – former mere.** Former mere or natural lake that has been drained and converted into arable land. Parts of the former mere outline may survive in the land boundaries, but boundaries within the former mere will tend to take the form of straight drains.

**Type 3.0. POST-1950 AGRICULTURAL LANDSCAPE.**

Areas that have had their character altered as a result of agricultural changes in the post-war period. Historic field patterns have disappeared or been weakened through the removal and remodelling of hedges and other field boundaries. Other important changes are in land use, as in the conversion of meadows into arable land. Overall, these changes have produced 20th-century landscapes, but aspects of their previous character can be determined by reference to earlier mapping, such as the 1st-edition Ordnance Survey (see maps provided) or tithe maps. The following subdivisions are based on their earlier character, some traces of which frequently remain (those not found in the Brecks are indicated in blue):

- **Sub-type 3.1. Post-1950 agricultural landscape – boundary loss from random fields.** 20th-century boundary loss from fields formerly of Sub-type 1.1 (random fields): Landscapes made up of fields that have an irregular pattern (i.e. without any dominant axis). Many were in existence by the medieval period, but could be earlier. Boundaries usually take the form of species-rich hedges (normally coppiced not laid) with associated ditches and banks. Areas with this field pattern are probably some of our earliest farming landscapes.

- **Sub-type 3.2. Post-1950 agricultural landscape – boundary loss from rectilinear fields.** 20th-century boundary loss from fields formerly of Sub-type 1.2 (Pre-18th-century enclosure – rectilinear fields): This is not a dominant type in Suffolk. Landscapes of this type are made up of fields that tend to be small and rectilinear in shape, forming patterns that resemble the brickwork in a wall. They tend to exist in isolated pockets within more extensive areas of other types of early enclosure, and probably indicate relatively late episodes of field creation or re-organisation, although still pre-18th century, within earlier surroundings.

- **Sub-type 3.3. Post-1950 agricultural landscape – boundary loss from long co-axial fields.** 20th-century boundary loss from fields formerly of Sub-type 1.3 (Pre-18th-century enclosure – long co-axial fields): Landscapes made up of fields where a high proportion of the boundaries share a dominant axis. This takes the form of long, slightly sinuous lines that run roughly parallel to each other for considerable distances. These lines usually run at right angles to a significant watercourse. Co-axial systems are not all of the same date – some in valley-side positions may represent very early farming boundaries, but others on the clay plateaux are likely to be medieval in date.

- **Sub-type 3.4. Post-1950 agricultural landscape – boundary loss from irregular co-axial fields.** 20th-century boundary loss from fields formerly of Sub-type 1.4 (Pre-18th-century enclosure – irregular co-axial fields): Landscapes where many of the boundaries share a common axis. They share many of the characteristics of long co-axial fields (sub-type 1.3) but lack their overall regularity and their boundaries are often only approximately parallel. The systems vary in size, merge in and out of one another, and generally fail
to follow one particular aspect or angle. In some cases these systems represent the early, piecemeal, enclosure of common fields.

- **Sub-type 3.5. Post-1950 agricultural landscape – boundary loss from post-1700 fields.** 20th-century boundary loss from fields that were enclosed after 1700. This sub-type includes both fields created through the enclosure of common fields and fields created through the enclosure of other types of land. Boundaries, where they survive, are usually straight and are composed of single-species hedges.

- **Sub-type 3.6. Post-1950 agricultural landscape – woodland clearance.** Agricultural land created through woodland clearance in the post-war period. The former wood boundary may survive as a curving field boundary, but internal subdivisions usually have straight boundaries.

- **Sub-type 3.7. Post-1950 agricultural landscape – arable on former meadow.** 20th-century conversion to arable of land that was formerly of Sub-type 5.1 (Meadow or managed wetland – meadow): Seasonally wet grassland that is mown for hay and/or grazed by animals. Normally found alongside rivers and streams and characteristically takes the form of long and narrow land parcels that run parallel to the watercourses. Often hedged on the dry-land side, but with ditched internal sub-divisions that often have a drainage function.

- **Sub-type 3.8. Post-1950 agricultural landscape– arable on former heath.** 20th-century conversion to arable of land that was formerly of Sub-type 8.1 (Unimproved land – heath or rough pasture): Areas of natural or semi-natural vegetation (particularly grass and heather) on dry, acidic soils. Historically too dry and impoverished for arable cultivation, they were managed mainly as areas of sheep pasture (often called ‘sheep walks’). Some areas of heathland had experienced intermittent arable cultivation (the ‘brecks’). Where there has been minimal cultivation there are often earthworks of archaeological interest, such as prehistoric burial mounds.

- **Sub-type 3.9. Post-1950 agricultural landscape – boundary loss, enclosed medieval deer park.** 20th-century boundary loss from an area of land that was formerly of Sub-type 1.5 (Pre-18th-century enclosure – former medieval deer park): Deer parks were important symbols of lordship in the medieval period and normally consisted of areas of woodland, wood pasture and open grassland (launds), bounded by banks and ditches with hedging and/or wooden fences to form a ‘park pale’. Park pales frequently have curved outlines as this was the most economic way of enclosing large areas. Deer parks were frequently situated on upland clay areas unsuited to agriculture and can therefore be at some distance from the lordship centre that they served. The parks functioned as deer farms, supplying venison for the lord’s table, with a variable amount of actual hunting. Parks could also include rabbit warrens and fishponds, also supplying food for the lord. Lodges within the parks supplied accommodation for a parker and/or a visiting lord. Some parks were in existence by 1086, but the majority appear to have been active in the period 1200-1400. Most were ‘disparked’ by the 16th Century and turned over to agriculture, but the legacy in the landscape can survive, in terms of names, field patterns and boundary features

**Type 4.0. COMMON PASTURE.**
Areas of pasture that were/are grazed communally. The number and types of animals that were allowed on the pastures was regulated by the manorial courts and the common-right holders. These common rights can be termed gates, goings, shares or stints. Other common rights can include rights to take fuel (often gorse or ‘furze’) and clay, sand or other ‘stone’. This landscape type contains the following sub-types:

- **Sub-type 4.1. Common pasture – built margin.** Common pastures on the claylands were usually enclosed by a substantial ditch, often water-filled, and can be hedged on the outer margin. Their shapes can be very varied, but they frequently have funnel-shaped extensions where roads enter them, presumably to help with the herding of animals. Usually called greens, they can also be termed tyes (in south Suffolk only) or commons. Small greens are often triangular and arranged around the junction of three roads. Large greens (over 20ha) are a particular feature of the clay plateaux of north Suffolk. Farmsteads and cottages fringe the margins of the greens and these usually have or had common rights attached to them. Deserted house sites, often showing now only as scatters of pottery, also occur on the margins. Windmills frequently occur within or on the margin of greens. Greens seem to have been established from the 12th century onwards and usually occur on poorly-drained clay plateaux.

- **Sub-type 4.2. Common pasture – open margin.** Areas of common pasture that were not a focus for settlement, and therefore, now and historically, had few or no houses on their margins. Common pastures of this type are frequently either heaths on impoverished sandy soils or wet riverine grasslands. There is therefore an overlap with types 5 (meadow or managed wetland) and 8 (unimproved land).

**Type 5.0. MEADOW OR MANAGED WETLAND.**

Wet grassland or land with other non-woody wetland vegetation that is enclosed and managed. This landscape type contains the following sub-types:

- **Sub-type 5.1. Meadow or managed wetland – meadow.** Seasonally wet grassland that is mown for hay and/or grazed by animals. Normally found alongside rivers and streams and characteristically takes the form of long and narrow land parcels that run parallel to the watercourses. Often hedged on the dry-land side, but with ditched internal sub-divisions that often have a drainage function.

- **Sub-type 5.2. Meadow or Managed wetland – meadow with modern boundary loss.** Boundary loss from seasonally wet grassland that is mown for hay and/or grazed by animals. Meadows are normally found alongside rivers and streams and characteristically take the form of long and narrow land parcels that run parallel to the watercourses. The lost boundaries can be either the hedges on the dry-land side or the ditched internal sub-divisions that often had a drainage function.

- **Sub-type 5.3. Meadow or managed wetland – managed wetland.** Wetland with a non-woody vegetation that is enclosed and managed. This sub-type includes grazed marshland and managed reed beds.

- **Sub-type 5.4. Meadow or managed wetland – former mere.** Former mere or natural lake that has been drained and converted into pasture or other form of managed wetland. Parts of the former mere outline may survive in the land boundaries, but boundaries within the former mere will tend to take the form of straight drains.
Type 6.0. HORTICULTURE.
- **Sub-type 6.1. Horticulture – orchard.** Land planted with fruit trees, often arranged in straight rows.
- **Sub-type 6.2. Horticulture – nurseries with glass houses.** Land used for commercial plant growing, involving the use of glass-houses.
- **Sub-type 6.3 Horticulture – allotments.** An area divided into small plots which are annually leased by individuals to grow flowers and vegetables. 19th-century and later in date.
- **Sub-type 6.4. Horticulture – market gardens.** Land used for the commercial growing of vegetables in small-scale operations.
- **Sub-type 6.5. Horticulture – plotlands.** Small plots of agricultural land sold to people, mainly from the poorer districts of London, in the first half of the 20th century and used as smallholdings and/or homesteads that were often small bungalows or shacks, often without services and served by poorly-maintained roads. The practice was ended by the 1947 Town and Country Planning Act. Particularly to be found in Essex (Basildon, Jaywick Sands etc). Included are the lands of the Newbourne Land Settlement Scheme for unemployed miners in Suffolk (1935-782).

Type 7.0. WOODLAND.
Woodland has been part of the Suffolk landscape since prehistoric times. In the historical period, woodland was a fundamental rural resource, providing wood for fuel and timber for construction purposes, as well as a place for hunting, rough pasture and swine forage. The type includes both ancient woodland and modern plantations and is subdivided into these sub-types:
- **Sub-type 7.1. Woodland – ancient woodland.** Areas of deciduous woodland of ‘ancient’ character. This includes all the woodland defined as ‘ancient’ in the Nature Conservation Council survey of 1992. In their view, ancient woodland sites are those that have had a continuous woodland cover since at least 1600 to the present day and to have only been cleared for ‘underwood’ (coppice poles and/or firewood) and/or timber production. A wood present in 1600 was likely to have been in existence for centuries. This date was adopted as a threshold for two important reasons: firstly, it roughly marked the time when plantation forestry was widely adopted and, secondly, the period when detailed maps first start to appear. Ancient woods were frequently enclosed within wood banks and may contain internal sub-divisions.
- **Sub-type 7.2. Woodland – former medieval deer park.** Deer parks were important symbols of lordship in the medieval period and normally consisted of areas of woodland, interspersed with more open areas of wood pasture and grassland glades (launds), bounded by banks and ditches with hedging and/or wooden fences to form a ‘park pale’. Park pales frequently have curved outlines as this was the most economic way of enclosing large areas. Deer parks were frequently situated on upland clay areas unsuited to agriculture and can therefore be at some distance from the lordship centre that they served. The parks functioned as deer farms, supplying venison for the lord’s table, with a variable amount of actual hunting. Parks could also include rabbit warrens and fishponds, also supplying food for the lord. Lodges within the parks supplied accommodation for a parker and/or a visiting lord. Some parks were in existence by 1086, but the majority appear to have been active in the
period 1200-1400. Many had fallen into disuse by the 16th century, but some continued in existence as woodland.

- **Sub-type 7.3. Woodland – modern plantation on former arable.** Plantations, often coniferous, on land that can be shown, on map evidence, to have been farmland in the 19th or 20th century. The plantations usually form rectangular blocks or other regular linear or geometric shapes.

- **Sub-type 7.4. Woodland – modern plantation on former common arable or heath.** Plantations, often coniferous, on land that was formerly common arable land or intermittently cultivated heathland. The plantations were often introduced when the land was enclosed in the 18th and 19th centuries and usually take the form of rectangular blocks, roadside belts or other regular linear or geometric shapes. This sub-type also includes much of the substantial coniferous forests that were planted by the Forestry Commission from the 1920s onwards in the Brecks (Thetford Forest) and the Sandlings (Rendlesham and Dunwich Forests).

- **Sub-type 7.5. Woodland – modern plantation on former common pasture.** Plantations established on former commons or greens after their enclosure, usually in the 18th or 19th centuries. The plantations usually form rectangular blocks or other regular linear or geometric shapes. Woodland – modern plantation on former informal park (Sub-type 7.6). Plantations established on former informal parkland after its conversion to farmland, usually in the 20th century. The plantations are usually rectangular in plan.

- **Sub-type 7.6. Woodland – modern plantation on former informal park.** Plantations established on former areas of informal parkland after the park was converted to other uses. Frequently these plantations are of mid-20th century date, coniferous, and form rectangular blocks or other regular linear or geometric shapes.

- **Sub-type 7.7. Woodland – modern plantation on former warren.** Plantations established on former rabbit warrens after their enclosure, often in 20th century. The plantations usually form rectangular blocks or other regular linear or geometric shapes. This sub-type includes substantial areas of the coniferous forest that was planted by the Forestry Commission from the 1920s onwards in the Brecks (Thetford Forest). Warrens are documented from the 12th century onwards, but few, if any, survived in active management beyond the early part of the 20th century. Warrens were frequently enclosed within earthen banks, which often survive within, or surround the plantations. Disused warreners’ lodges can also occur (as at Mildenhall and Thetford).

- **Sub-type 7.8. Woodland – wet woodland or alder carr.** This sub-type includes both ancient wet woodland characterised by a predominance of alder (and sometimes specifically named as ‘alder carr’) and more recent natural regeneration in poorly maintained or grazed meadows.

- **Sub-type 7.9. Woodland – modern plantation on former meadow.** 20th-century plantations on former meadows.

- **Sub-type 7.11. Woodland – modern plantation on former heath.** Plantations on former heathland. The plantations usually form rectangular blocks or other regular linear or geometric shapes. This sub-type includes areas of coniferous forest that was planted by the Forestry Commission from the 1920s onwards in the Brecks (Thetford Forest) and the Sandlings (Rendlesham and Dunwich Forests).
• **Sub-type 7.12. Woodland – wooded common.** Areas of common land that have traditionally been managed as woodland, or natural regeneration on insufficiently grazed common pastures.

• **Sub-type 7.13. Woodland – park wood.** Areas of woodland planted as part of post-medieval landscape parks. Includes both internal groves and tree belts that act as the park boundaries.

• **Sub-type 7.14. Woodland – modern plantation on former fenland.** Largely 20th-century plantations on drained former fenland.

**Type 8. UNIMPROVED LAND.**

Areas of natural or semi-natural vegetation that have not undergone agricultural improvement. These are frequently areas of great significance for wildlife and may be designated as nature reserves. This landscape type contains the following sub-types:

• **Sub-type 8.1. Unimproved land – heath or rough pasture.** Areas of natural or semi-natural vegetation (particularly grass and heather) on dry, acidic soils. Historically too dry and impoverished for arable cultivation, they were managed mainly as areas of sheep pasture (often called ‘sheep walks’). Under the foldcourse system, sheep were put to graze on the heaths during the day and folded (enclosed within temporary hurdle fences) overnight on the arable land to enrich it with their dung. Some areas of heathland have experienced intermittent arable cultivation (‘brecks’). Where there has been minimal cultivation there are often earthworks of archaeological interest, such as prehistoric burial mounds. Lack of grazing in the 20th century has resulted in the growth of trees, scrub and bracken on many heaths.

• **Sub-type 8.2. Unimproved land – heath, former warren.** Areas of natural or semi-natural vegetation (particularly grass and heather) on dry, acidic soils that were used as rabbit warrens. Warrens are documented from the 12th century onwards, but few, if any, survived in active management beyond the early part of the 20th century. Warrens were frequently enclosed within earthen banks and may contain mounds for the rabbits to burrow into. Internal lodges for the warreneers also occur (as at Mildenhall and Thetford). Some of the largest warrens occurred in the Brecks (e.g. Lakenheath Warren was 2300 acres (931 ha).

• **Sub-type 8.3. Unimproved land – freshwater fen or marsh.** An inland marsh occupying low-lying poorly-drained wet land. Fens were formerly a particular feature of the extreme north-west of the county where they covered many thousand acres, forming the south-eastern edge of the extensive fenland basin that stretched westward into Cambridgeshire and northwards into Norfolk. Major drainage and reclamation works started in the 17th century and little undrained land remained by the mid 19th century. Fens or marshes also occur in river valleys. Historically, the seasonally drier areas were managed for summer grazing and the wetter areas were cropped for reeds and used for wildfowling, eel fisheries and peat digging. Surviving fens/marshes are now frequently nature reserves and are only cropped to preserve their ecological integrity.

• **Sub-type 8.4. Unimproved land – coastal marsh.** Low-lying areas adjacent to the sea or estuarine inlets, subject to regular or occasional salt-water inundations. Coastal marshes were historically an important part of coastal economies, providing reeds, eels and seasonal rough pasture. Many have been
drained and enclosed during the last three hundred years. Those that remain are frequently nature reserves now.

- **Sub-type 8.5. Unimproved land – intertidal land.** Low lying coastal areas subject to regular tidal inundations. Economically this landscape type has been utilised as a base for fish traps which capitalise on the tidal flow, a process which is likely to have been occurring since at least the Anglo-Saxon period, and possibly much earlier. This landscape type is physically unstable, and usually too costly and impractical to reclaim for agriculture. Reclamation for high capital industrial projects, such as quayside development around Felixstowe, can sometimes occur.

- **Sub-type 8.6. Unimproved land – shingle spit.** Linear accumulations of shingle on the coast, as at Orford Ness where there is an eleven-mile long spit, the largest formation of its kind on the east coast.

- **Sub-type 8.7. Unimproved land – mere.** A natural lake, often resulting from depressions in the post-glacial landscape. Meres are likely to contain sediments with a high palaeo-environmental value. The Brecks, especially the Norfolk part, is notable for its fluctuating groundwater-fed meres (e.g. Ringmere and Fowlmere) and its shallow pingo ponds (relict periglacial features).

- **Sub-type 8.8. Unimproved land – broad.** A large body of water resulting from the flooding of extensive medieval peat diggings or turbaries. The peat or ‘turf’ was extracted and dried for fuel. Broads are best-known from those in Norfolk (giving rise to the area name of ‘Broadland’ or ‘The Broads’) but also extend along the Waveney and its tributaries into Suffolk. They have been classified as ‘by-passed broads’ where they are on the sides of major river valleys (e.g. Barnby Broad in the Waveney valley) and ‘side-valley broads’ where they occupy tributary valleys (e.g. Outon Broad). Some were later used for other purposes, eg as duck decoys, as at Fritton Decoy.

**Type 9. POST-MEDIEVAL PARK AND LEISURE.**

Open areas, frequently grassed, and sometimes with terrain landscaping. Where trees, patches of woodland, water features or built structures occur they frequently have designed positions or shapes that are intended to contribute to the aesthetic character of the landscape.

- **Sub-type 9.1. Post-medieval park and leisure – formal park or garden.** A park or garden with a formal or geometric arrangement. These are usually late-17th- or early 18th-century in date and normally associated with a great house and having an axial relationship to it.

- **Sub-type 9.2. Post-medieval park and leisure – informal park.** Parkland designed to appear semi-natural with clumps of trees within extensive grassland and frequently fringed by belts of trees to give privacy and to exclude unwanted views. Usually designed as the setting for a great house and laid out to give vistas from that house. Lakes and decorative buildings or structures can form part of the layouts. Entrances are often guarded by lodges. Most examples are 18th or 19th century in date, though earlier examples do occur. Traces of earlier landscapes, like trees that were formerly part of hedge lines can sometimes be detected.

- **Sub-type 9.3. Post-medieval park and leisure – modern leisure.** The growth of leisure as an ‘industry’ during the 20th century has led to the creation of many ‘leisure landscapes’ within previously rural or marginal areas. This sub-
Type 10.0. BUILT UP AREA.

- **Sub-type 10.1. Built up area – unspecified.** A built up area of unspecified type or size. [This type is also being used temporarily for all the former undifferentiated 10.0 land types].
- **Sub-type 10.2. Built up area – town.** Large settlement with urban functions. Historically, this sub-type includes the places that had functioning markets.
- **Sub-type 10.3. Built up area – village.** Substantial groups of houses associated with a parish church.
- **Sub-type 10.4. Built up area – hamlet.** Small groups of houses.
- **Sub-type 10.5. Built up area – green edge or infill.** Houses on the edge of greens or inserted into former greens after their enclosure. Greens seem to have been established from the 12th century onwards and usually occur on poorly-drained clay plateaux.
- **Sub-type 10.6. Built up area – house or farmstead.** An individual house or a farmstead with its associated agricultural buildings.
- **Sub-type 10.7. Built up area – isolated church.** Medieval churches which stand by themselves. These can be indicative of failed medieval settlements. The Norfolk part of the Brecks is particularly noted for its number of ruined churches.

Type 11.0. INDUSTRIAL.

Land used for an industrial purpose.

- **Sub-type 11.1. Industrial – current industrial landscape.** Areas in active use for an industrial purpose.
- **Sub-type 11.2. Industrial – disused industrial landscape.** Areas in former use for an industrial purpose.
- **Sub-type 11.3. Industrial – current mineral extraction.** Areas in active use for mineral extraction. Minerals extracted are, in this region, usually, sand, gravel, clay and chalk.
- **Sub-type 11.4. Industrial – disused mineral extraction.** Areas in former use for mineral extraction. Minerals extracted were, in this region, usually, sand, gravel, clay and chalk. Deposits of brickearth – fine silts from long-infilled meres and lakes – were exploited for brick and tile-making in the 18th and 19th centuries at Culford, Didlington, Elveden, Lynford, Mildenhall, Thetford and Weeting. In the 19th and early 20th centuries the Brecks, principally the area around Brandon, became nationally significant for its gunflint industry – the material being mined from a myriad of small pits cut into the chalk, as at Lingheath in Brandon.
- **Sub-type 11.5. Industrial – water reservoir.** Area used for the storage of water, either for human use or for farmland irrigation. In a naturally dry landscape like the Brecks, reservoirs became very important for the expansion of agriculture in the 20th century.

Type 12.0. POST-MEDIEVAL MILITARY.

Land used for substantial military establishments.

- **Sub-type 12.1. Post-medieval military – current military.** Land used for military establishments. Particularly prominent in this region are the large type includes extensive modern landscape features such as golf courses, playing fields and camp/caravan sites.
20th-century air bases at Lakenheath and Mildenhall and the large (c.12,000 ha) Stanford Training Area (STANTA) north of Thetford in Norfolk.

• **Sub-type 12.2. Post-medieval military – disused military.** Land formerly used for military establishments.

*Type 13.0. ANCIENT MONUMENT.*
Land managed as an ancient monument.

• **Sub-type 13.1. Ancient monument.** Land managed as an ancient monument, eg. Grimes Graves.

*Type 14.0. COMMUNICATIONS.*
Land used for major communication routes.

• **Sub-type 14.1. Communications – major road.** Substantial trunk roads that are major landscape features.
• **Sub-type 14.2. Communications – railway.** Railway lines in current use.
The landscape of the Brecks offers many contrasts. Firstly, there is a marked contrast with the adjoining claylands of Norfolk and Suffolk to the south and east, where instead of the sinuous field boundaries and small and irregular fields of the ‘ancient countryside’ of the claylands (largely HLC landscape type 1), the Brecks have a preponderance of straight-edged large fields with geometric shapes that result from 18th-century and later enclosure (largely landscape type 2). The roads also have a planned appearance with straight lines and many cruciform junctions. The roads are often lined by tree belts rather than hedges and the trees are conifers, not the deciduous oaks, ashes etc of the clayland hedges. Conifers also dominate in the extensive forests that were planted in the 20th century on the fields of the late-enclosure landscape, utilising their angular forms for their boundaries (principally
These coniferous forests now form an almost continuous block in the central heartland of the Brecks.

Secondly, there is a contrast with the fenlands to west. Here the contrasts are a change to black peaty soils instead of light sandy ones, and a change from pine lines to straight drainage channels, giving a more open and flatter landscape. There is also an inversion from water conservation in a dry landscape to water removal in a wet landscape.

But the contrasts are not only with these external landscapes, there are also significant internal contrasts in the Brecks. The most striking is the difference between the large and dry interfluvial areas on the one hand and the narrow river corridors and the fen inlets on the other. In mapping terms, the former has large geometric polygons of late-enclosure farmland or coniferous plantations that form large blocks; the latter have small sinuous polygons of frequently changing character. The Little Ouse has one of the tightest corridors with very narrow landscape-type polygons that contrast strongly with the large polygons of the flanking landscape types. Meadow (landscape type 5.1) originally alternated with areas of wet woodland or alder carr (landscape type 7.8) in the more poorly drained areas. However comparison with the Ordnance Survey maps of the 1880s shows that valley woodland has increased probably resulting from lack of management and a deterioration of drainage. Aerial photography also suggests that much of what was meadow is now less managed and is more in the nature of rough pasture.

The fen tongues on the west side reach surprisingly far into the heartland of the Brecks, bringing with them very different landscape types. There is a gradual transition from true fenland (landscape type 8.3) to wet riverine grassland (landscape types 4.2, 5.1, 5.3) and it is often not clear, in mapping terms, which would be correct as a landscape type. Reference to Faden’s map of 1797 and the Ordnance Survey maps of the 1880s can give conflicting answers. This transition question would benefit from ground surveys and a more detailed analysis of soil types.

The dry heaths (landscape type 8.1) that were one of the main characteristics of the interfluvial areas of the Brecks have severely declined in area since the end of the 19th century and mainly have been converted either into farmland (landscape type 2.9) or covered with coniferous plantations (landscape type 7.11).

The settlement pattern is predominantly one of nucleated settlements of medieval origin, but with a tendency in more recent times for these to straggle out along the access roads. The long-standing water resources of the river and fen corridors have meant that they have been a focus for human settlement, with most of the major villages and towns in the Brecks being sited in these corridors. The substantial reorganisation of the landscape in the 18th and 19th centuries also resulted in the creation of isolated farmsteads to serve the newly-created land units. Some isolated farmsteads originated as lodges on the huge rabbit warrens that once dominated the driest areas. These warrens did not survive long into the 20th century and their open heath landscapes have been divided into fields or covered by coniferous plantations (landscape types 2.8 and 7.7). Isolated churches (landscape type 10.7) are also a notable feature, particularly in the Norfolk part of the Brecks. These point to changes in the settlement pattern over time, with settlements in marginal positions contracting...
or entirely failing. Some, as at Buckenham Tofts, are in or near parkland suggesting that parkland creation was a factor in changes to the settlement pattern.

The Brecks has numerous extant or relic landscape parks (landscape types 2.4, 7.6 and 9.2), mostly dating from the 18th and 19th centuries, and mostly sited in the river corridors. The world wars of the 20th century eroded the economic viability of many of the houses within these parks, leading to their demolition and the subsequent conversion of several of these parks to military use. The military presence (landscape type 12) is now a strong factor in the Brecks, with the large airfields of RAF Mildenhall and Lakenheath, the Stanford Training Area (STANTA), together with smaller units such as RAF Feltwell, and Barnham, Bodney and East Wretham Camps. Disused airfields, such as that Methwold have been utilised for industry. Industrial areas (landscape type 11) are frequent around the main settlements, but often can also be found in surprisingly isolated countryside locations. Due to the dryness of much of the Brecks, water reservoirs (landscape type 11.5) are frequently encountered.

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20 April 2019