

# Devon Historic Landscape Characterisation

**Phase 1 Report, January 2005**

*Report prepared for*

**Devon County Council Historic Environment Service & English Heritage**

by Dr. S.C.Turner



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# 1. Introduction

**H**istoric Landscape Characterisation (HLC) is a method for understanding and mapping the nature of the landscape with reference to its historical development (McNab & Lambrick 1999: 54). HLC maps differ from traditional methods for describing the historic resource such as Historic Environment Records (HERs) in several important ways, though like them HLCs are used for landscape management and research.

In the early 1990s there was a growing realisation that despite some success in the conservation and management of individual historic sites and monuments, the broader historic landscape was not receiving adequate protection and management (Fairclough *et al.* 2002: 69-70). English Heritage had advised on the new Planning Policy Guidance Notes relating to the historic environment, and it had become increasingly clear in relation to these (especially DoE 1994, PPG15: *Planning and the Historic Environment*) that there was not a suitable framework in existence for understanding and evaluating the wider historic landscape. English Heritage therefore commissioned a project to evaluate and compare different methods for understanding and valuing the historic landscape, including so-called 'top-down' techniques, where experts delimited areas of landscape with historical and archaeological characteristics they considered of particular significance, and 'bottom-up' methods, which included those that sought to present interpretations of the historic character of the whole landscape (Fairclough *et al.* 1999; for a 'top-down' approach see e.g. Darvill *et al.* 1993; for 'bottom-up' Herring 1998: 7-8).

The Cornwall Archaeological Unit and partners, with sponsorship from English Heritage, had undertaken the first larger-scale HLC work on Bodmin Moor in late 1993. This project was extended to cover the whole of the county of Cornwall in 1994 (Countryside Commission 1994; Cornwall County Council 1994; Cornwall County Council 1996). English Heritage has since been instrumental in developing and applying the method across much of the rest of England (Fairclough *et al.* 1999; Fairclough *et al.* 2002). In addition to Cornwall and the Scillies, an HLC project for Somerset and Exmoor National Park was completed in 2001 (Aldred 2001), and another project is nearing completion in Dorset.

## 1.2 Historic Landscape Characterisation: Methodology

The HLC technique draws on methods which have long been in use in other disciplines, for example in geology to show soil-type or in ecology to map habitats. In the same sense that all parts of the landscape are forms of ‘habitat’, Historic Landscape Characterisation recognises that all parts of the landscape have historical significance which is the result of human activity and use over the millennia. Herring has explained the basis of the Cornish method as follows:

*‘Closer examination [of the landscape] reveals that particular groupings and patterns of components which recur throughout the county can be seen to have been determined by similar histories. Cornwall’s historic landscape can, therefore, be characterised, mapped and described, using a finite number of categories or types of “historic landscape character”.’*

(Herring 1998: 11)

Essentially this means that the present-day landscape is examined using modern Ordnance Survey maps and characterised according to its physical appearance into landscape ‘types’. These ‘types’ are classified in advance of the characterisation mapping and define the broad characteristics which areas of land with similar past uses exhibit. In the Cornwall assessment, seventeen ‘types’ of landscape were identified:

- |                                   |                            |
|-----------------------------------|----------------------------|
| 1. Rough ground                   | 10. Industrial (disused)   |
| 2. Prehistoric enclosures         | 11. Industrial (active)    |
| 3. Medieval enclosures            | 12. Communications         |
| 4. Post-medieval enclosures       | 13. Recreation             |
| 5. Modern enclosures              | 14. Military               |
| 6. Ancient woodland               | 15. Ornamental             |
| 7. Plantations and scrub woodland | 16. Water (reservoirs etc) |
| 8. Settlement (historic)          | 17. Water (natural bodies) |
| 9. Settlement (modern)            |                            |

(Herring 1999: 21)

Historic landscape character ‘types’ are mapped either by hand (as in the Cornwall example) or using a GIS (now the standard practice; see e.g. Wills 1999). In different areas of the country, different ‘types’ may be appropriate because of differing landscape histories, or because the landscape characterisation has been designed to reflect more or less detailed differences at larger or smaller scales than in the initial Cornish work. The method can therefore be very flexible. For example, in the Peak District and Hampshire characterisations, several different ‘types’ were used which related specifically to the landscape histories of the areas under consideration. In Hampshire 85 different ‘types’ were used across fourteen broad categories, and in Cornwall characterisations of localised areas have been undertaken at 1:10,000 and 1:2,500 scale using project-specific ‘types’ (Barnatt 1999; Lambrick 1999; Herring 1998: 20-1).

In the Cornish HLC, mapping was carried out to some extent according to the archaeological principles of stratigraphy. The most recent elements in the landscape were mapped first (e.g. reservoirs, golf courses, airfields), leaving the more ancient elements (anciently enclosed land, rough pasture) to last. However, as with all archaeological work, historic landscape characterisation has its problems. For example, the categorization of landscapes into different 'types' relies on a researcher's ability consistently to identify areas in the 'correct' categories. Also a single dominant character 'type' needs to be defined despite an area potentially having features from several periods of land-use types contributing to overall character. This consideration also leads to problems associated with 'time-depth'; a 'recent' landscape (e.g. one created by nineteenth-century enclosure) may conceal strong elements of another kind of landscape (e.g. prehistoric enclosures; although see the review of Wright 1997 in Herring 1998: 106-9). Various techniques have been used to overcome these problems, but GIS in tandem with explanatory text now appears to provide the best solution (Herring 1999: 22). Using a GIS gives considerable flexibility and allows each of the character areas or 'polygons' (i.e. coherent blocks sharing the same historical development) to be given more than one descriptive characteristic (Wills 1999: 38-9). In current landscape characterisations, including the Devon HLC, the database linked to the GIS allows a range of attributes to be linked to individual 'polygons' so that a detailed picture can be built up of the historical development of the landscape.

The representation of the historic landscape provided by HLC has several advantages over other techniques (Turner 2003). The coverage of HERs, for example, tends not to be even but to vary between and within counties. Any plotting of HER entries on maps to try and present a picture of the historic landscape therefore presents an imbalanced picture – often showing medieval field boundaries that have been destroyed, for example, but ignoring those that are still *in situ* (Johnson 1999: 121). The representation of an HER or NMR entry as a point on a map (so-called 'point' data) also detracts from the value of the feature being referred to as part of a historic landscape (Herring 1998: 9, fig.10). Historic Landscape Characterisation is a significant improvement because it allows the historic landscape to be given archaeological significance on a wide scale. HLC maps help to allow a '...break-out from the site-based myopia' of the past (Herring & Johnson 1997: 54). Today, the widespread application of GIS to HERs is also allowing real spatial extents to be mapped.



# 2. Devon Historic Landscape Characterisation methodology

The following sections describe the methodology developed for the Devon HLC project. They explain the way decisions were taken on what character type any given area should be assigned to and what combination of attributes should be recorded for each area or 'polygon' ('polygon' is the term that was current amongst archaeologists undertaking HLC projects in the late 1990s and early 2000s; GIS practitioners may prefer 'geometry').

The digitising for the project was carried out using ESRI ArcView 3.2, and the attribute data was initially recorded in a purpose-built Microsoft Access 98 database ('hlc db.mdb'). The mapping took place between July 2001 and December 2004 (The dates each polygon was created are recorded in the project database).

## Data Sources

The main data sources for the project were provided through Devon County Council's corporate GIS. Three principal sources were used:

*Ordnance Survey Landline mapping*

*Ordnance Survey 1st edition 25 inch mapping (late C19th)*

*Getmapping vertical colour air photography (taken 1999-2000)*

Unless otherwise indicated, all interpretations of Historic Landscape Character recorded in the project database are based on these sources.

Other data was provided by DCC as part of its corporate GIS data and by other bodies under separate agreements. Where datasets other than the three noted above have been used to provide or clarify the interpretation of a polygon's landscape history, this is recorded in the project database. The principal supplementary datasets included:

- Archaeological field survey data of transects of Dartmoor National Park (at 1:10,000) – RCHME/English Heritage
- Archaeological air photographic sketch transcription of Dartmoor National Park (at 1:10,560) – RCHME (1985)
- Indicative fluvial and coastal floodplain datasets – Environment Agency / Devon County Council Corporate GIS
- Ancient woodland digital map – English Nature / Devon County Council Corporate GIS

## 2.1 Defining Polygons

Three main characteristics were used to decide what area to include in each polygon:

- a. The whole area must have the same *Pattern* (see below), i.e. 'regular', 'irregular', or none. In practice, 'none' was not entered as a value in the project database and in these instances the field was left blank).
- b. The whole area must have the same *Dominant Boundary Morphology* (see below), i.e. 'sinuous', 'straight', 'erratic' or none.
- c. The whole area must have the same *historic character type* (see below) in the present and as far as known must have shared the same *historic character type(s)* throughout its history (i.e. the whole polygon will share the same sequence of types).

The only exception to these rules is that polygons do not cross parish boundaries (i.e. modern parish boundaries as defined by OS Landline map data).

### Polygon Area

In theory, only polygons greater than 1ha. in area have been digitised. (In practice many polygons slightly smaller than this have been included, since it is not easy to estimate the exact area of a potential polygon before it is digitised). Areas of *historic character type* smaller than 1ha. are have been incorporated in a surrounding/adjacent polygon, on the grounds that they are too small to contribute decisively to historic landscape character.

There was some experimentation at the beginning of the project with the use of smaller minimum polygon sizes in the area of the Tamar Valley AONB, but it was decided that deliberately using sizes below 1ha was too time consuming.

The area of each polygon has been calculated in the GIS using the calculation 'shape.returnarea' in ArcView 3.2

## 2.2 Recording Polygon Data

Each polygon has a number of attributes which are recorded in the project database (fields **a. – n.**, below. They are here given the names they appear with in the *Descriptn* form of the project database [hlc db.mdb – see 2.2.4, below for an introduction to its structure]). These include information about the polygon's location (2.2.1, below), 'interpreted' information about present and historical landscape character (2.2.3, below) and more 'objective' morphological observations of polygon features (2.2.2, below).

### 2.2.1 Location

#### a. Polygon ID No.

Unique identifier. Provides link between ArcView shapefile and attribute data in MS Access database.

#### b. Parish

Modern parish as defined by OS Landline mapping.

### 2.2.2 Morphological Observations

#### c. Pattern

The organisational pattern within each polygon:

*Regular*

*Irregular*

*None*

Pattern refers to the boundaries and divisions within each polygon (see Aldred 2001: 9). It is useful for landscape history since organisational pattern can refer to processes of change such as planning (or a lack of it).

(Note that following historic character types were generally assigned no pattern: *settlement, industrial complex, industrial (mining), military complex, public civil complex, airfield, mud, sand, mud and sand, marsh, water, outcrop/scree/cliffs*).

#### d. Dominant Boundary Morphology

Describes the morphology of the majority of boundaries within the polygon (and refers only to internal boundaries):

- Sinuous:* Includes all sinuous boundaries, i.e. those that are not straight or erratic.  
*Straight:* Perfectly straight boundaries, the result of post-medieval and modern surveying techniques.  
*Erratic:* Wildly erratic boundaries, found (rarely) in prehistoric field systems (e.g. Combeshead Tor, Dartmoor: SX 585 688).  
*None:* Shows there are no internal boundaries in the polygon. (In practice this value was not used and the field in the database has been left blank)  
 (see Aldred 2001: 8)

#### e. % Dominant

Approximation of proportion of boundaries within the polygon in the 'dominant' category.

#### f. Secondary Boundary Morphology

Describes the morphology of the minority of boundaries within the polygon as one of:

- Sinuous*  
*Straight*  
*Erratic*  
*(none)*

#### g. Number of Fields in Polygon

A count of the number of subdivisions in the polygon shown on the modern OS (Landline) map (e.g. number of fields in a polygon of *historic character type* 'enclosures').

#### h. Number of C19 Fields

A count of the number of subdivisions in the polygon shown on the OS 1st ed 25in map. Note that these will not necessarily represent areas divided by the same boundaries as the fields counted under (g.); in some cases the area within polygons has been completely or partially re-organised with new polygons. Thus a count of '5' under 'No. of fields' and '5' under 'No. of C19 fields' does not necessarily refer to the same 5 fields; they could have been re-organised.

Where the polygon is not bounded or formed a part of a larger whole under either heading, no entry has been made in the field concerned.

#### i. Boundary Characteristics

This field refers to characteristics of the boundaries encompassed by a polygon. Not all boundaries must exhibit the characteristic for it to be recorded in the database. There are two classes of information, referring to (a) internal and (b) external boundaries.

**Internal Boundary Characteristics:**

<i>Dog leg:</i>	indicates presence of dog-legs. In practice, this term was commonly used in the project database.
<i>S curve:</i>	indicates presence of boundaries showing ‘reversed s’/‘reversed j’ curves. Commonly used.
<i>Following watercourse:</i>	indicates that one or more boundaries follows a watercourse. Useful for interpreting e.g. presence of one sinuous boundary within polygon with otherwise straight-sided boundaries of post-medieval date. Commonly used.
<i>Agglomeration:</i>	Only used to identify agglomerated prehistoric field systems. In practice this term was rarely used.
<i>Coaxiality:</i>	Identifies polygons consisting of blocks of coaxial fields of either prehistoric or medieval date. In practice this term was rarely used.

**External Boundary (Boundary of Polygon) Characteristics:**

<i>Wavy edge:</i>	Indicates an external boundary forming an irregular sinuous line. In practice this term was rarely used.
<i>Settlement edge:</i>	Indicates that one or more external boundaries of the polygon is delimited by a modern settlement. In practice this term was rarely used.
<i>Roadside/canalside:</i>	Indicates that an internal or external boundary follows a road, canal, <b>or a railway</b> . Commonly used.

## 2.2.3 Interpretations of Landscape Character

### Present and Previous Historic Characters

The categories of ‘historic character’ are those used in the project’s database (see section 3 (below) for brief definitions of the principal *historic character types*).

The information in the ‘period’ field shows that the polygon in question was exhibiting the characteristics of that ‘historic character’ type in that period. The ‘period’ indicated is therefore normally the period when the character type indicated originated (although not necessarily, particularly in the case of the earliest *character type* recorded).

A different Historic Character (in a higher stratigraphic position) is assigned for each major change in the landscape history of the polygon (that is, each time the ‘Historic Character’ (based on the list of *historic character types*) changed in the past).

Also note that the ‘Confidence’ indicator refers to the ‘Period’ field (see below) and NOT to the ‘historic character’ type (i.e. it represents the level of confidence that in the period indicated the polygon exhibited the characteristics of the ‘historic character’ type shown).

**Example 1:**

(Historic Character Stratigraphic Position 1)

*Historic Character:* **[Strip Fields]** *Period:* **[Medieval]** *Confidence:* **[Probable]**

In the above example, there is a strong likelihood ('probable') that in the medieval period (i.e. AD c.600-1600: 'medieval') the polygon contained strip fields. Since this data appears in Stratigraphic Position 1, it can be assumed that Strip Fields exist in the present, since Stratigraphic Position 1 always describes the current historic landscape character type. There is therefore also a strong likelihood (the same chance or greater as for the medieval period) that strip fields existed in this polygon during the post-medieval period.

The Devon HLC project aims to record basic information about the landscape history of each polygon where this is possible based on the modern and historic OS maps (and exceptionally on other special sources, e.g. RCHME survey of Dartmoor). This information is recorded in the *Previous Historic Character* sections of the database.

**Example 2:**

(Current Historic Character Stratigraphic Position 1)

*Historic Character:* **[Recreation]** *Period:* **[Modern]** *Confidence:* **[Certain]**

(Previous Historic Character Stratigraphic Position 2)

*Historic Character:* **[Strips (enclosed)]** *Period:* **[Medieval]** *Confidence:* **[Probable]**

(Previous Historic Character Stratigraphic Position 3)

*Historic Character:* **[Strip fields]** *Period:* **[Medieval]** *Confidence:* **[Probable]**

In this example, it is very likely ('probable') that in the medieval period the polygon contained enclosed strips (data in Stratigraphic Position 2).

The land-use stratigraphically above, *Stratigraphic Position 1*, shows that the use of the land for *recreation* is certain for the *modern period*.

This database entry implies that the post-medieval landscape character was the same as that in the medieval period. Any substantial change in landscape character would be indicated by a new record referring to the post-medieval period. So if the polygon had been turned into (e.g.) a racecourse in the C19th (and was still one in the present), Stratigraphic Position 1 would read as follows:

*Historic Character:* **[Recreation]** *Period:* **[Post-medieval]** *Confidence:* **[Certain]**

So if no new 'Landscape Character/Stratigraphic Position' entry is made, then the character type of later periods must be assumed to be the same as that of the previous period for which an entry was made. (Note that in the case of Example 2 no interpretation has been offered about the prehistoric landscape. This is normally the case, and commonly no interpretation has been offered for the medieval period either).

## j. Period

The 'periods' for this project are defined as indicated below:

<i>Modern</i>	AD c.1900 – present
<i>Post-medieval</i>	AD c.1600 – AD c.1900
<i>Medieval</i>	AD c.600 – AD c.1600
<i>Prehistoric</i>	neolithic – AD c.600

The imprecise nature of the data and the speed of interpretation required means these periods are to be regarded as a rough guide only. It should be noted that these periods were selected to address the tasks of the project and do not always coincide with those used in the Devon HER.

## k. Confidence

As noted above, 'confidence' relates directly to 'period'.

*Certain*  
*Probable*  
*Possible*

Quantifying these terms is very hard. In general 'certain' means there is no doubt that during at least part of the period indicated, the polygon had the given landscape character. However, 'certain' has only rarely been used in the project database, except for the modern period. 'Probable' indicates a strong degree of likelihood – perhaps over 80% chance. 'Possible' indicates a reasonable degree of likelihood – perhaps over 50% chance. Interpretations which are thought less likely than 'possible' have not been made.

### Miscellaneous Information

## l. Active

*Present Historic Character* only.

Y/N answer for use only with the following historic character types:

*Industrial (Mining); Industrial complex; Quarry; Military complex; Airfield.*

## m. Relict?

Y/N. Previous Historic Character only.

Indicates data based on archaeological surveys (e.g. RCHME survey of Dartmoor).

## n. Special Source

*Previous historic character* only.

Records where information is based on sources other than modern OS maps, these sources are recorded here.

## 2.2.4 The Project Database

The project database ('hlc db.mdb') consists of 7 principal tables. These are:

- (a) **Descrptn** – fields discussed above under 2.2.1 and 2.2.2 (except *(i.) Boundary characteristics*), plus *(l.) Active* from 2.2.3
- (b) **Chrctrs** – for data discussed above under (i.) Boundary characteristics
- (c) **Histcharacter** – fields discussed above under 2.2.3 (except *l. Active*); = Current Historic Character Stratigraphic Position 1 (see 2.2.3, above)
- (d) **History1** – fields discussed above under 2.2.3 (except *l. Active*); = Previous Historic Character Stratigraphic Position 2
- (e) **History2** – fields discussed above under 2.2.3 (except *l. Active*); = Previous Historic Character Stratigraphic Position 3
- (f) **History3** – fields discussed above under 2.2.3 (except *l. Active*); = Previous Historic Character Stratigraphic Position 4

(A table called History4 was also created but was not used in practice. A table called Intrpret was also created initially and remains in the database, but was not used).

Data is entered into all these tables through the 'Descrptn' form (see screenshot below, Fig. 1). All the other tables in the database have been used to provide drop-down lists of terms (as discussed above) to speed up data-entry.

Fig. 1: Database screenshot: the 'Descrptn' form, used for all data entry.

# 3. Devon HLC principal character types

The list of HLC 'types' was prepared with reference to previous projects such as the Somerset and Cornwall HLCs in order to facilitate comparison between the counties (Aldred 2001; Herring 1998). The differences with earlier projects reflect a desire to minimise the number of types used whilst still maintaining meaningful categories. The types described below are the ones mapped during the digitisation of the Devon HLC.

Unless otherwise stated all types are mapped and interpreted from the modern (Landline, as available 2001) and historic (1st ed 25 inch, c.1890) OS mapping.

## 3.1 Industrial Types

### Industrial (Mining)

Indicates sites connected with mining and ancillary activities and infrastructure (including areas of earthworks created by tin streaming). Includes unbounded areas of dense mining-related activity (e.g. lode-back pits).

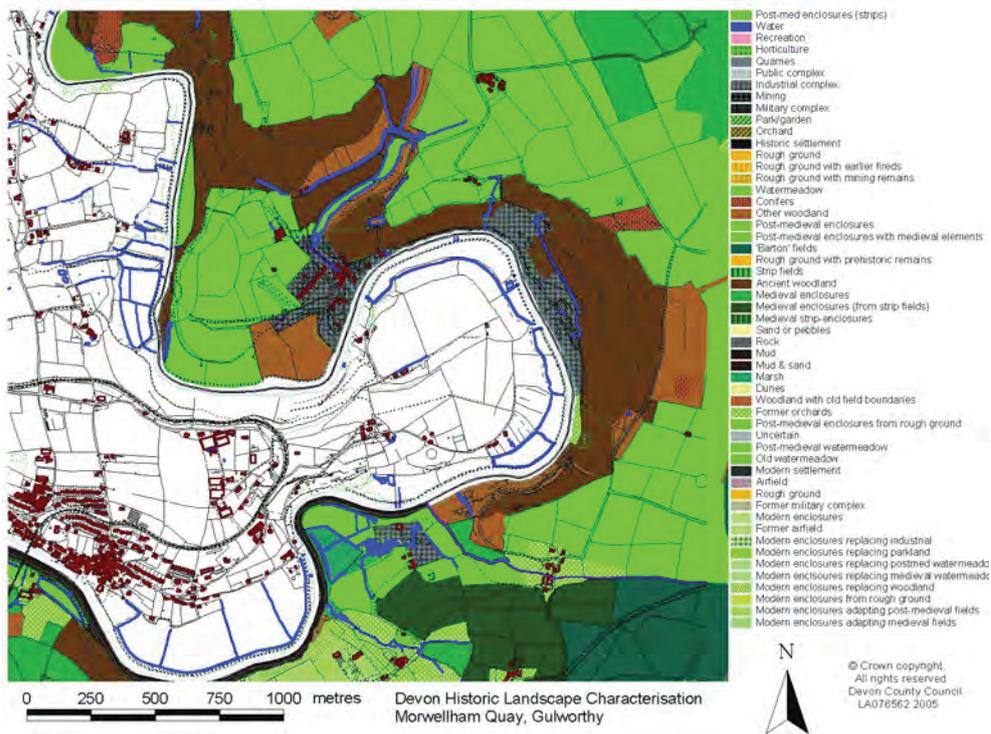


Fig 2. Industrial (mining) HLC type (Morwellham Quay, Gulworthy)



Fig 3. Air photograph of relict Industrial (mining) HLC type (Whiteworks Mine, Hexworthy, Dartmoor. Photo: Frances Griffith, Devon County Council, 21st January 1988).

## Industrial complex

Indicates industrial/commercial complexes other than those related to mining, including e.g. *factories, mills, warehouses, retail centres, rail terminals and yards.*

## Quarry

Quarries and associated complexes; includes clay, gravel and sand pits.

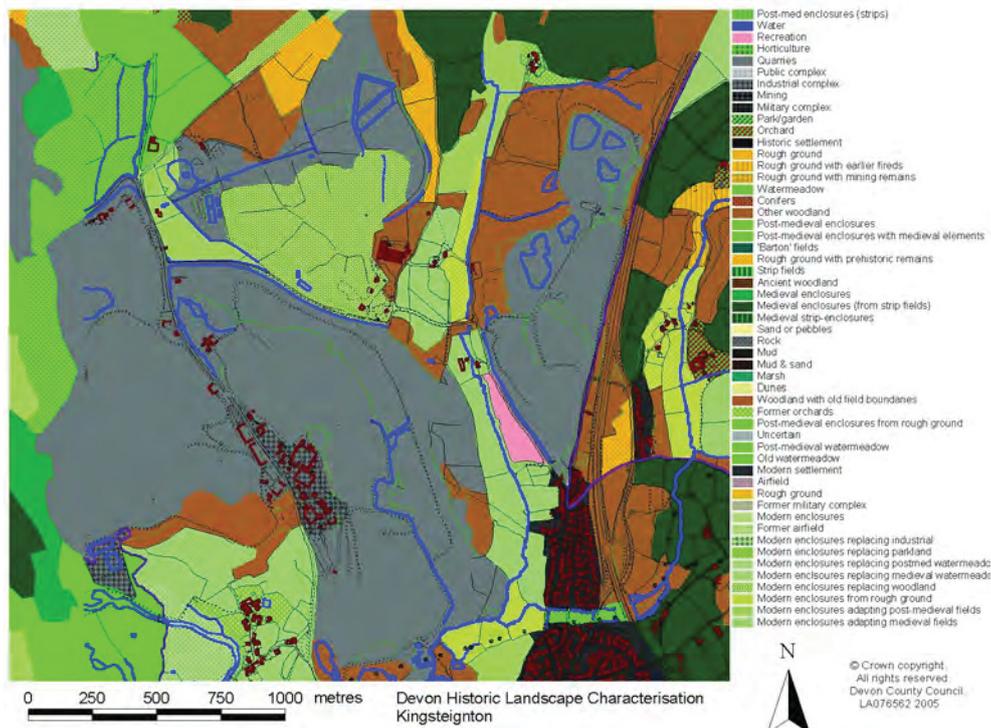


Fig 4. Quarries HLC type (Kingsteignton)

## 3.2 Military Sites and Airfields

### Military complex

Shows all sites with military function (apart from airfields) including docks, army camps, prisoner-of-war camps, etc. (see fig 5, below)

### Airfield

Both civil and military airfields. (see fig 6, below)

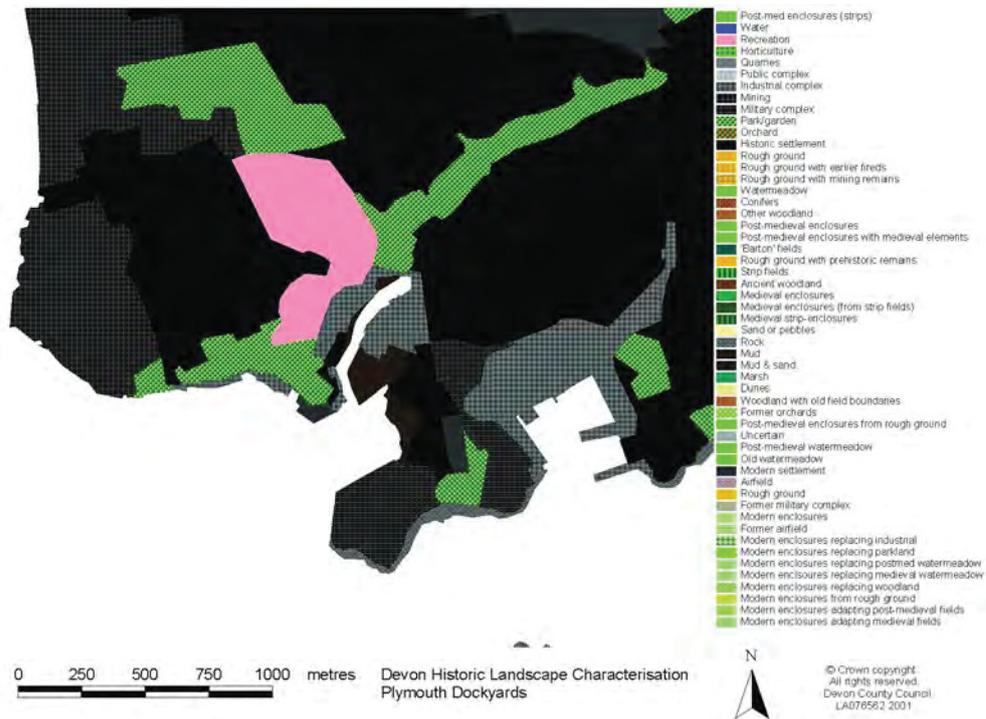


Fig 5. Military complex HLC type (dockyards in Plymouth)

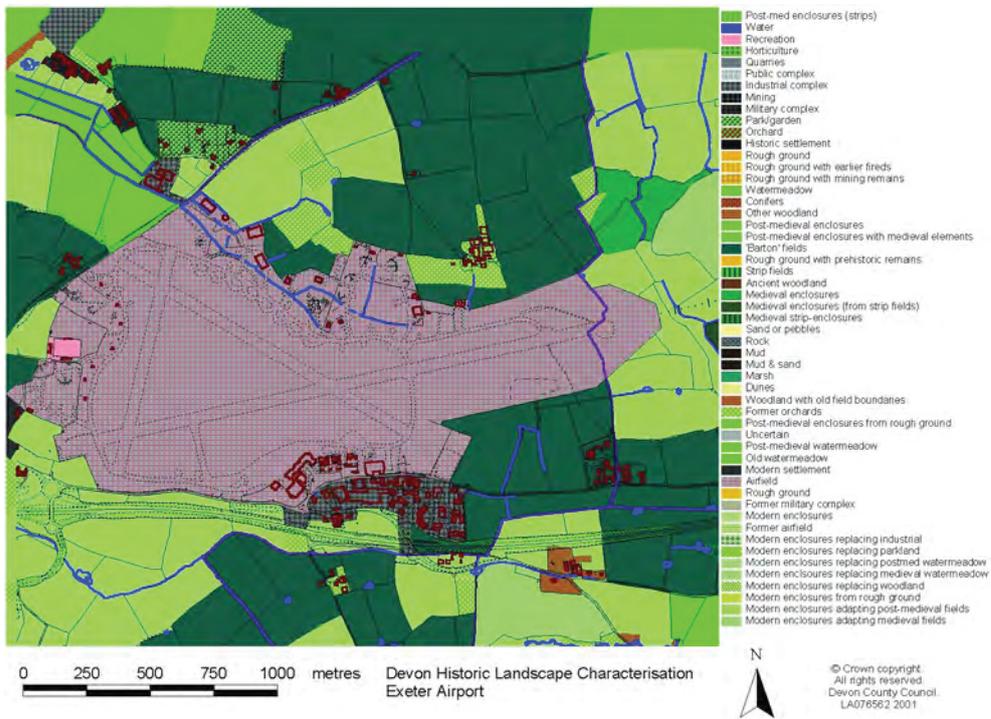


Fig 6. Airfield HLC type (Exeter Airport)

### 3.3 Settlements and related types

#### Park/garden

Includes all types of parks and landscape gardens, both those in private ownership and public/civic parks and gardens. Additional data sources include EH Register of Parks and Gardens and OS 1st edition 25 inch map.

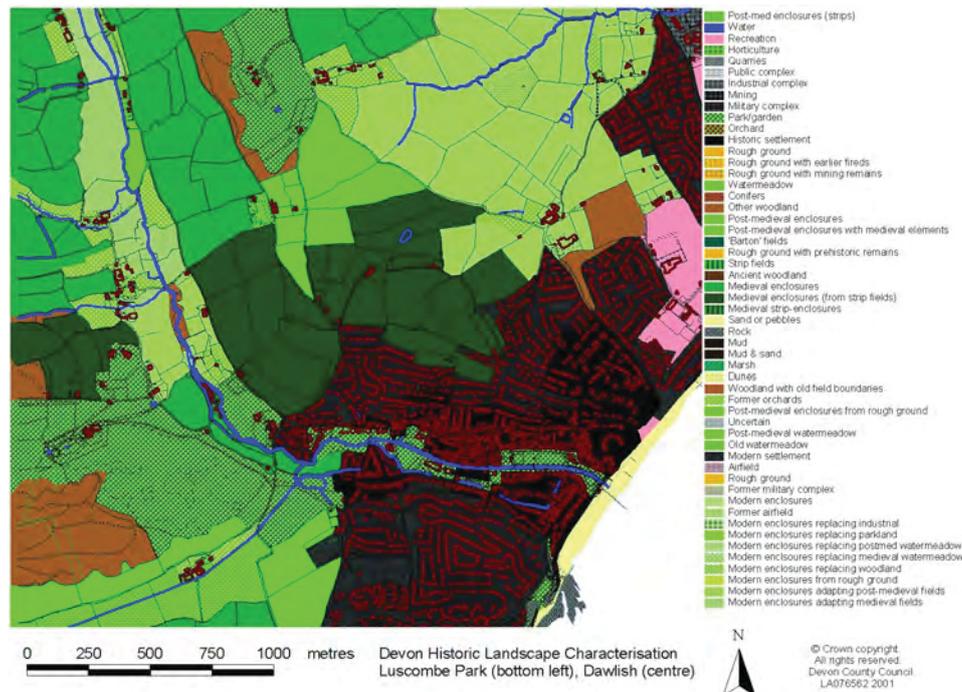


Fig 7. Park / garden HLC type (Luscombe Park (bottom left), near Dawlish)



Fig 8. Park / garden HLC type (Knightshayes house and park, Tiverton, Mid Devon. Photo: Bill Horner, Devon County Council, 7th June 1994)

### Public civil complex

Hospitals, government offices, schools, colleges, cemeteries etc.

### Recreation

Includes sports fields, golf courses, campsites, zoos, theme parks, etc.

### Settlement

Areas of dense settlement.

## 3.4 Rough ground and woodland

### Rough ground

Normally unenclosed and unimproved ground in rural areas (e.g. rough pasture, moorland and heathland), including that which was once enclosed and improved but has since reverted to rough grazing (see Herring 1998: 25-6).

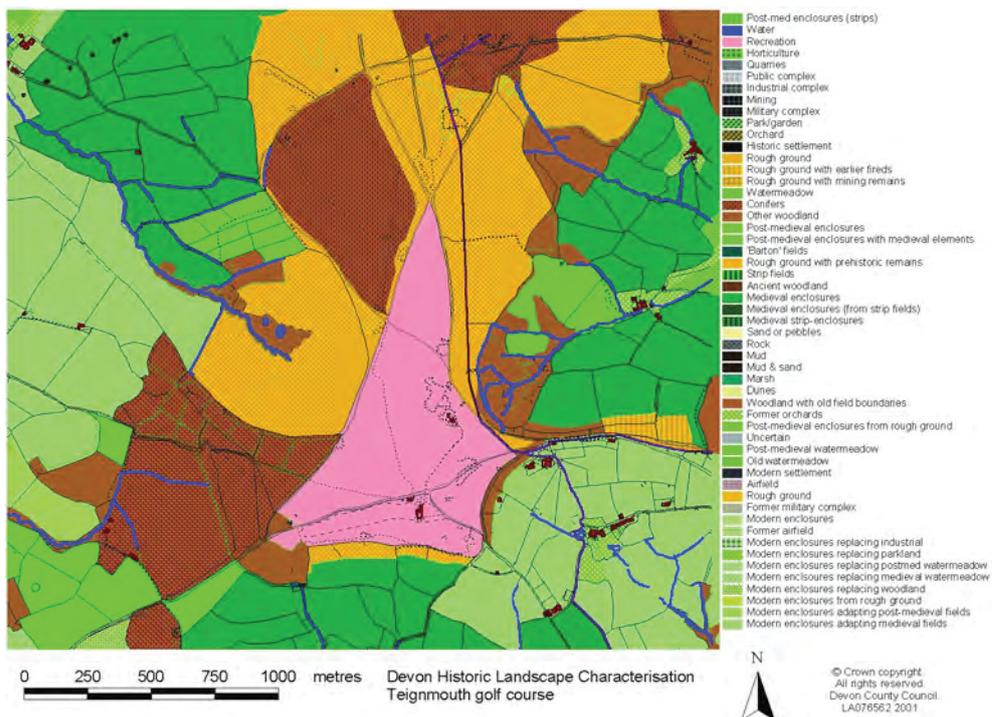


Fig 9. Recreation, rough ground, and conifer plantation HLC types (Little Haldon)

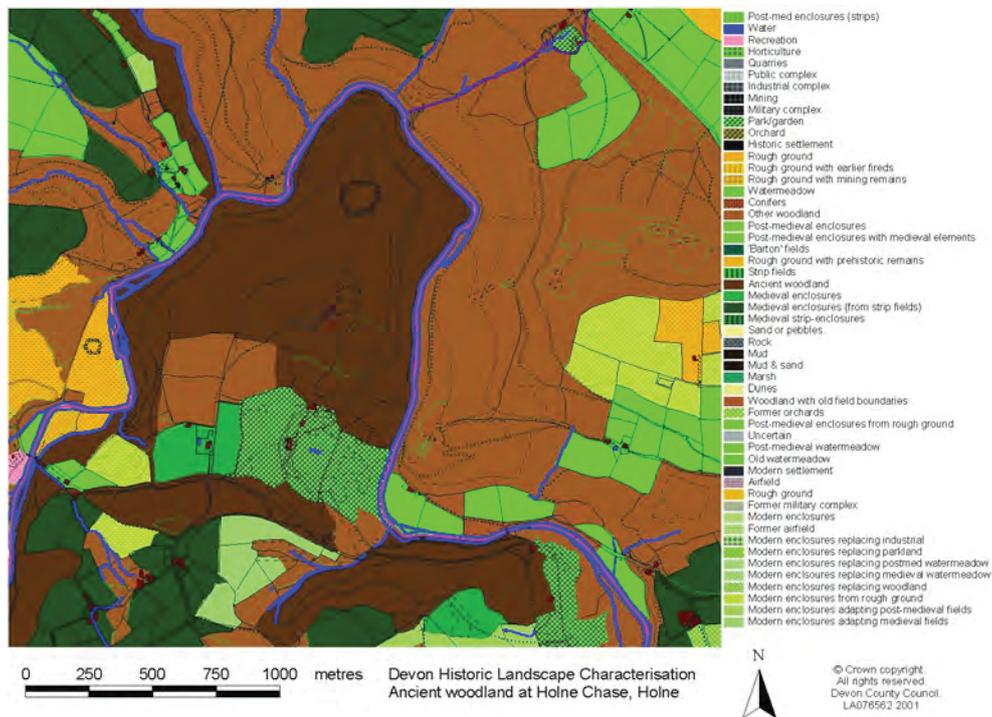


**Fig 10. Rough ground HLC type**  
(looking north towards Wistman’s Wood, Dartmoor. Photo: Sam Turner)

### Ancient woodland

Broadleaved woodland only

(additional source: English Nature’s ancient woodland maps).



**Fig 11. Ancient woodland and Other woodland HLC types (Holne Chase, Holne)**



*Fig 12.* Shutscombe Valley, Brayford. **‘Other woodland’ HLC type in the foreground and the distance, with ‘Quarries’ HLC type top right and patches of ‘Rough ground’** (Photo: Peter Chamberlain, Devon County Council).

### Conifer plantation

Based on modern and historic OS data (additional source: Forestry Commission’s Interpreted Forest Type Woodland Polygons (layer within DCC Corporate GIS, no. 162)).

### Other woodland

All other woodland including broad-leaved plantations, re-planted ancient woodland or secondary woodland that has grown up from scrub.

## 3.5 Water

### Marsh

Areas of freshwater marsh and bog and saltmarshes.

### Water

All water bodies (natural and artificial) such as lakes, large ponds and reservoirs.

## 3.6 Coastal Types

### Dunes

Coastal sand dunes.

### Mud

Normally mudflats in the intertidal zone.

### Sand

Normally beaches. Includes shingle and pebbles.

### Mud & Sand

Normally sand and mudflats in the intertidal zone.

### Outcrop, Scree, Cliffs

Includes cliffs (coastal and inland) and rocks exposed at low water.

## 3.7 Types relating to agricultural enclosures

### Introduction

The majority of Devon's landscape is made up of fields, but categorising them into different historical types/periods based on their morphology alone is a task fraught with problems. On one hand, the present project maintains the more 'objective' methods introduced in the Somerset HLC, describing the historic field boundaries in terms of curviness/straightness and blocks of fields in terms of regularity/irregularity. The present project follows the approach outlined for Somerset (Aldred 2001), although it has introduced the ability to record the dominant internal boundary character (i.e. the proportion of curved to straight boundaries). From such information can be gleaned some useful interpretations about landscape character and to some extent about the history of the landscape.

However, this approach used on its own risks excluding other important elements of historic landscape character, such as the more subtle differences between the many different types of enclosure that share sinuous field boundaries. These can be very hard to distinguish, and it is not clear that developments reflected in field and boundary morphology followed uniform paths in different parts of the county. Any categorisation based solely on morphology (particularly one undertaken as part of a large-scale study such as the Devon HLC) will therefore result in identifications that are approximate at best.

This has meant a certain amount of standardisation has been necessary (at least until enclosure processes in different areas are better understood). In order to standardise the attributes attached in the project database to different blocks or 'polygons' of fields across the county, the guidelines below have been prepared. These should help to explain to the

user the thinking behind the database entries attached to any individual polygon. It is important to bear in mind that this data does not represent a final statement on each polygon's landscape history: on the contrary, the interpretation in the HLC provides only an initial interpretation based on the limited sources used (and by analogy with the Case Studies and other published examples). More detailed work with more sources (including fieldwork) will be required in the future in order to provide more confident interpretations about each area.

In the meantime, some Case Studies with illustrations have been introduced to the text below. They are not characteristic of the HLC process itself but they provide examples that show how various HLC types have been arrived at for the purposes of this project. Though they are interspersed in the text between various HLC 'types', each Case Study may well include examples of several different 'types'.

### 3.7.1 Prehistoric Fields

Prehistoric fields in Devon include examples of regular/irregular aggregated and coaxial field systems as defined by the English Heritage *Monuments Protection Programme Single Monument Class Descriptions*.

Particularly well-known examples survive on Dartmoor (Fleming 1988; 1994a), but are also known on Exmoor (Riley & Wilson-North 2001) and in 'lowland' Devon (Gallant *et al.* 1985; Fitzpatrick *et al.* 1999).

Some of Devon's medieval field systems appear to be prehistoric field systems overlain with medieval banks and ditches. This has been shown by archaeological investigation at some sites (Fleming & Ralph 1982) and in other areas is implied by similar boundary alignments across areas of medieval fields and adjacent areas of prehistoric fields (see e.g. Corndon Tor, Dartmoor: Gerrard 1997, fig. 76). It is possible that prehistoric fields formed the basis of medieval and later fields in other areas (away from Dartmoor). Such areas may be identified in a few cases by surviving earthworks or more commonly by alignments of boundaries believed to be indicative of prehistoric field systems. Where it seems likely that such systems exist, **enclosures – prehistoric** will be a *previous historic character*.

*Example of a typical database entry for a prehistoric field system:*

*Historic character:* [enclosures] *Period:* [prehistoric] *Confidence:* [probable]

*Pattern:* [Regular] *Boundary Characteristic:* [coaxiality]

*Dominant boundary morphology:* [Sinuous]

*% dominant:* [1. >90%]

*Secondary boundary morphology:* [-]

*Previous historic character:* [-] *Period:* [-] *Confidence:* [-]

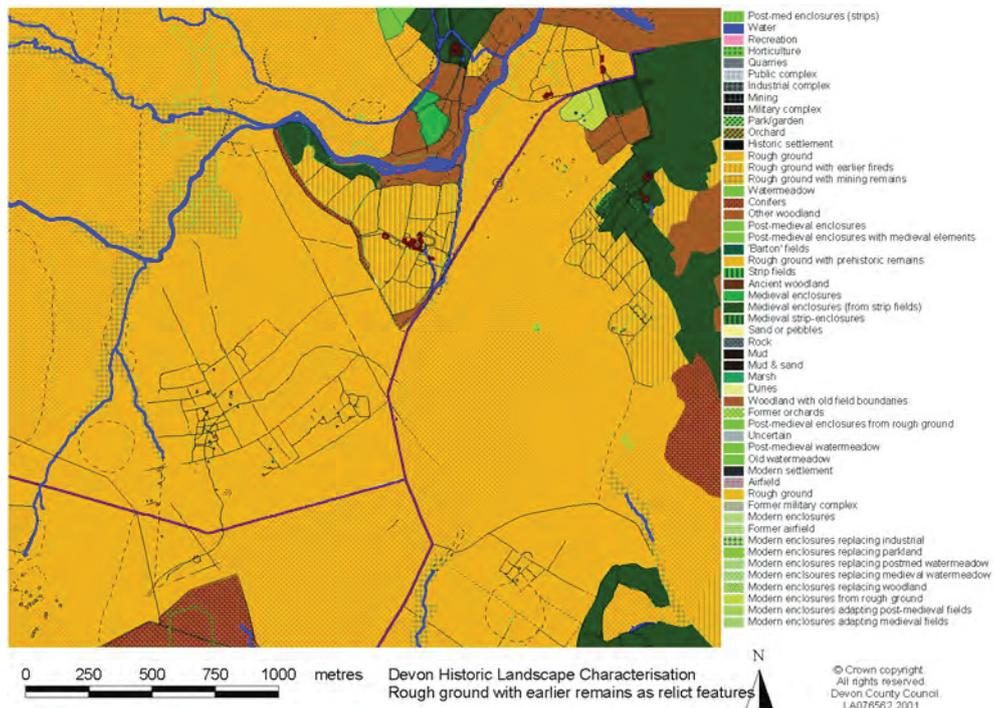


Fig 13. Rough ground HLC type with earlier remains (Shovel Down, Dartmoor)



Fig 14. Rough ground HLC type with earlier remains (prehistoric fields at Corndon Down. Photo: Frances Griffith, Devon County Council, 13th September 1994)

## 3.7.2 Medieval Fields

It seems likely that the greater part of the farmed landscape of Devon and Cornwall was divided into strips during the medieval period (Finberg 1952; Herring, forthcoming). The enclosure of strips can leave distinctive ‘markers’ behind in field boundaries and field patterns, such as bundles of narrow strip-enclosures, so-called ‘reversed-s’ or ‘reversed-j’ curves, or dog-legs. Strip fields of different sorts underwent enclosure in Devon from the thirteenth century (and probably earlier) until the nineteenth century. The different boundary morphologies and shapes of the resulting fields can throw some light onto the processes and dates of enclosure.

For the purposes of the Devon HLC, medieval field-types have been divided into five main categories:

- (a) *Strip fields*
- (b) *Enclosures (strips)*
- (c) *Enclosures (with Previous Historic Character Strip Fields)*
- (d) *Enclosures*
- (e) *Watermeadow*

### a) Strip fields as a medieval ‘historic character’ type

Medieval and early post-medieval strip field systems were often largely unenclosed (or at least not subdivided by field boundaries), particularly when held in common. However, it is not clear that all were, and many may have had long outer boundaries from a relatively early date (see Costen 1994: 100-2). They were also often held in common, with intermixed strips; however, some strip fields seem to have been held in large blocks of contiguous strips, particularly some demesne land and land of tenants in marginal areas (Alcock 1975; Brandon 1979; Austin et al. 1980). Neither are strips necessarily diagnostic of intensively cultivated inland: periodically cultivated outfield was also divided into strips in medieval and post-medieval Devon (e.g. at Kenton: Fox 1973; see below).

The use of the *Strip fields* historic character type does not therefore necessarily imply *open* strips held in common and forming the inland of a settlement. Nor does it imply open fields of the ‘Midland’ type with a 2- or 3-course rotation (in fact much longer rotations seem certain to have been the norm (Herring, forthcoming)). Nor can it be taken to imply anything about the frequency or type of cultivation, or the type of ownership of the land.

*Typical database entry for strip fields:*

*Historic character:* [strip fields] *Period:* [medieval] *Confidence:* [probable]

*Pattern:* [Regular] *Boundary Characteristic:* [s curve, dog leg]

*Dominant boundary morphology:* [Sinuous]

*% dominant:* [1. >90%]

*Secondary boundary morphology:* [-]

*Previous historic character:* [-] *Period:* [-] *Confidence:* [-]

This would refer to an existing strip field system (e.g. Braunton Great Field in north Devon, although this contains many apparently straight boundaries which have perhaps been regularised in recent times).

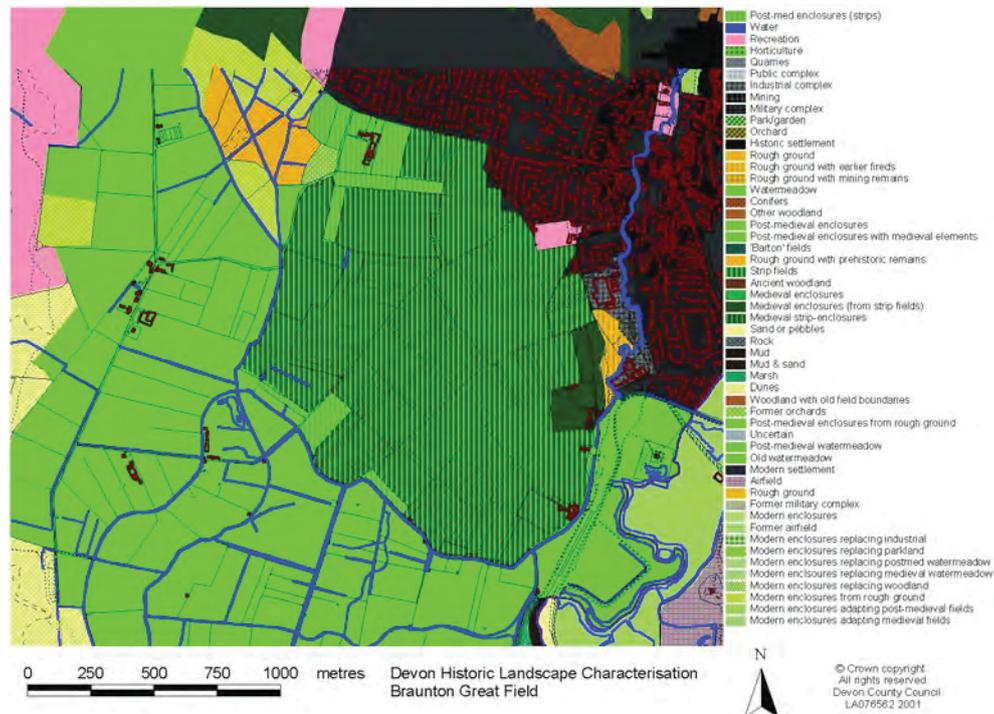


Fig 15. Strip fields HLC type (Braunton Great Field, Braunton)

A more common position for **strip fields** would be as an interpretation of previous historic character (*Stratigraphic Position*  $\geq 2$ ), e.g.:

*Typical database entry for strip fields as a Previous historic character type:*

*Historic character:* [enclosures (strips)] *Period:* [medieval] *Confidence:* [probable]

*Pattern:* [Regular] *Boundary Characteristic:* [s curve, dog leg]

*Dominant boundary morphology:* [Sinuous]

*% dominant:* [1. >90%]

*Secondary boundary morphology:* [-]

*Previous historic character:* [strip fields] *Period:* [medieval] *Confidence:* [probable]

In this case, the existing field system (enclosed strips: see below for definition of **enclosures (strips)**) has been interpreted as probably based on a *medieval* system of **strip fields**.



Fig 16. **Strip fields HLC type** (Braunton Great Field, Braunton, North Devon. Photo: Frances Griffith, Devon County Council, 18th December 1985).

### Case Study 1: Medieval and Post-Medieval Outfield Strips at Kenton

Publication: **Fox, H.**, 1973. 'Outfield cultivation in Devon and Cornwall: a reinterpretation' in M. Havinden (ed.), *Husbandry and Marketing in the South West, 1500-1800* (Exeter: Exeter Papers in Economic History 8), pp.19-38

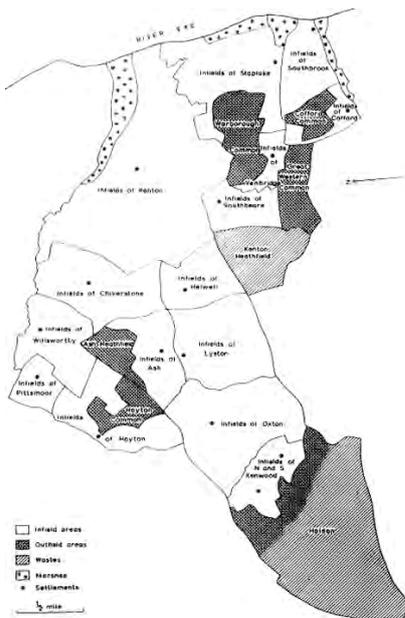


Fig 17. **Outfield and other resources in Kenton** (Fox 1973 fig. 1)

Fox discusses outfield cultivation in Devon based on medieval and post-medieval documentary sources. The case-study of Kenton is based on post-medieval documentary sources.

Fox argues that:

- a. outfield in the South West was somewhat different from other parts of the country and that:
  - i. it was primarily pasture land.
  - ii. it was used very occasionally to supplement arable infield, which itself was part of a system of convertible husbandry.
  - iii. it was part of a fully functioning integrated system of agriculture with the arable: it should not be considered a hang-over from 'Celtic' practice, nor a necessity due to unfavourable south-western conditions, nor a half-way point on an assumed road to developing a 'Midland' system.
- b. Fox argues from the documentary evidence that the periods when outfield was most commonly used were the 13th to early 14th century, the 16th century, and the mid-18th to 19th century (and intermittently at other times, with as long as 30-50 year gaps). Outfield cultivation is therefore not the same as convertible husbandry of the infield, but rather the periodic cultivation of specific areas of 'waste'
- c. Common outfields: outfield could be held in common (e.g. in Kenton manor the outfields known as Warborough, Cofford, Great Western Common and Hayon Common, where each strip was permanently allocated to a specific holding).
- d. Outfield in severalty: alternatively, outfield could be held in severalty (e.g. in Kenton the outfield known as Ash Heathfield and the lower slopes of Haldon, which according to Fox were '...within the ring fences of isolated farms...' (p.25): outfield held in severalty was under much simpler management regimes than that held in common.
- e. 16th century documents record that the common outfields were subdivided into long unenclosed strips, marked by 'landmarkes' and 'ancient boundmarks' ('...probably baulks of earth...', (p.25)). Of the former outfields in Kenton, parts were conifer plantation, parts woodland, parts enclosures on the 1st edition OS map. As this is the earliest source used in the Devon HLC, it would not have been possible to detect the outfield strips here as part of this project without reference to Fox's work.

On a map of 1783, the outfields stand out as areas of 'open field' surrounded by areas of enclosure. A similar example can be found in East Portlemouth, where a strip field on cliff-top at Rickham Common is depicted on the Tithe Map. Rare surviving earthworks of an outfield divided into strips can be seen at Tinhay Down, Lifton.



Fig 18. Earthwork remains of outfield strips (Tinhay Down, Lifton. Photo: Sam Turner)

## Case Study 2: Medieval Fields and their Enclosure around Axminster

Publication: **Fox, H.**, 1972. 'Field systems of East and South Devon. Part 1: East Devon' *Transactions of the Devonshire Association* 104, pp.81-135



Fig 19. Enclosures from strip-fields near Axminster (Fox 1972, fig 3)

Fox discussed a range of medieval enclosure processes in east Devon, with a specific case-study of Axminster, based on medieval and post-medieval documentary sources.

- a. Documentary sources suggest that enclosure of the subdivided strip-fields around Axminster began in the years after c.1250 and continued until it was almost complete in the later 14th century (Fig 19).
- b. Documentary evidence suggests that enclosure of waste & woodland commenced in the later 13th century and continued into the 16th century. In particular, there is documentary evidence for enclosure in the later 16th century from the area near the north-west parish boundary, at Cox Wood (Fig 20), Fawsmoor, Symonds Down (e.g. farm at Payne's Place); Whitcombe Wood was 'half felled' by 1574, and completely enclosed 'by uniform consent' amongst tenants by 1630.
- c. Documentary sources suggest that enclosures were being made at the granges of Newenham Abbey in the parish at Beavor, Furzley and Breweshays from the 13th /14th century.

Documentary evidence suggests relatively late enclosure within *existing* medieval closes (which were "...previously without internal subdivisions") in the demesne of Newenham Abbey (founded 1246) [although this presumably does not mean they could not have been ploughed in strips?]. In the 17th century some of these former monastic enclosures became farms in their own right, e.g. Balles Close (c.1625) and Slymelakes Close c.1634) (Fig 21).

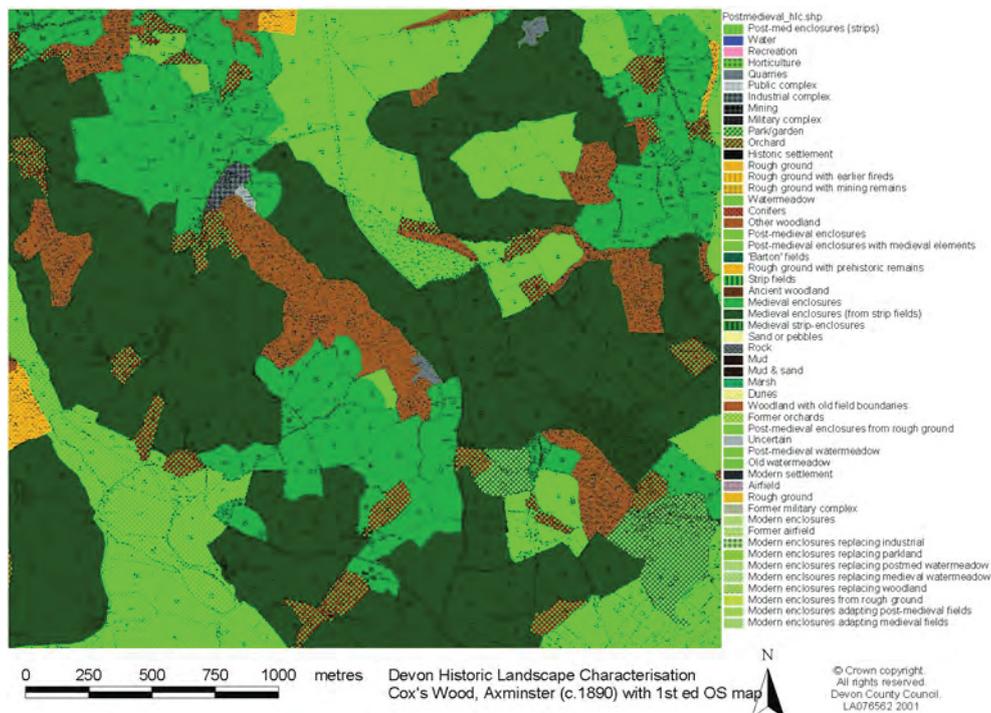


Fig 20. 1st ed OS map: Cox Wood, Axminster

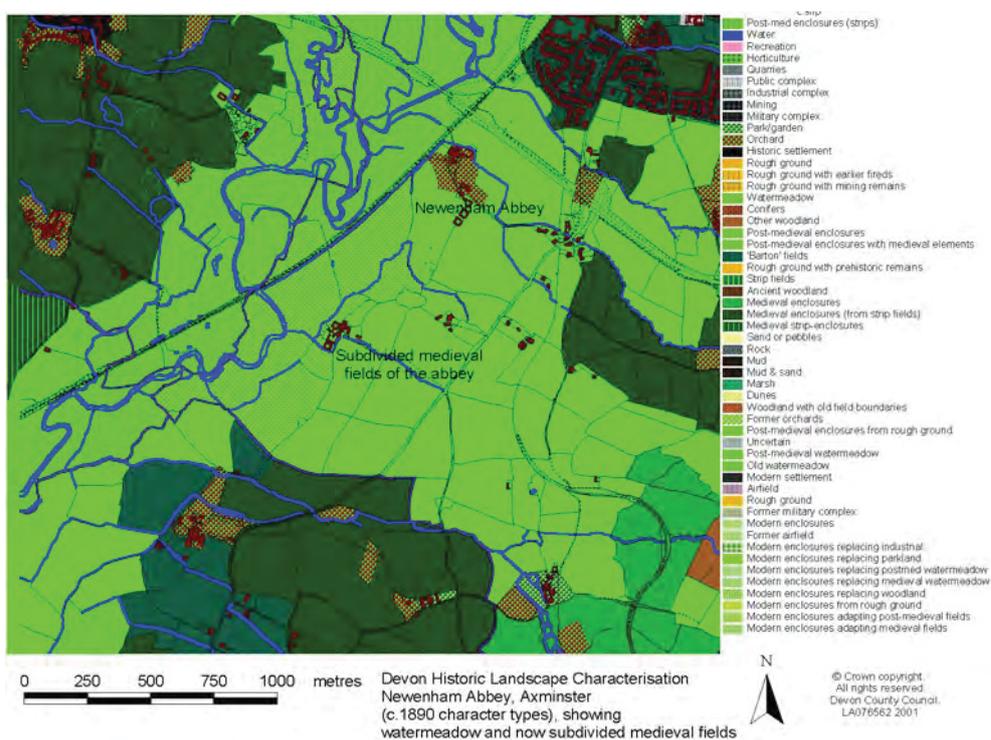


Fig 21. Newenham Abbey, Axminster, and fields (1st ed OS map, c.1890)

### b. Enclosures (strips)

Identification of enclosures (strips) is based on certain commonly-occurring characteristics. Most importantly, there must be long, thin enclosures within the polygon, representing individual strips or pairs of strips which have been enclosed. These may occur in polygons which include fields enclosed from more strips - three, four, etc.; nevertheless, these will generally be rectangular in shape (i.e. be longer than they are wide) and the curved boundaries (the 'aratra curve') will usually be along the long side (the strip length).

**Enclosures (strips)** are a common 'historic character'/field type in Devon, particularly in the north and east of the county. Harold Fox (e.g. 1972; see Axminster 'Case Study,' above) has argued convincingly that they derive from piecemeal enclosure by tenants of former strips or groups of strips in formerly common medieval strip fields. Fox argues from documentary evidence that this process began earliest in east Devon (perhaps as early as the mid-C13th, and that it was largely complete by the beginning of the C15th). Archaeological evidence tends to support a dating in the late medieval period elsewhere as well, e.g. from Leper Fields, Taddipport, Little Torrington, where unabraded pottery of the C13th-C14th has recently been recognised eroding from the field-bank of a strip-enclosure (Devon SMR SS41NE/80). Enclosures (strips) can therefore almost always be categorised for the purposes of the present project as 'medieval'. However, although it seems unlikely to have continued after c.1600, it is not completely clear that this type of enclosure was not undertaken in the post-medieval period.



Fig 22. Leper Fields, Little Torrington: two strip enclosures survive towards the right (photo: Sam Turner)

Typical database entry for Enclosures (strips):

Historic character: [enclosures (strips)] Period: [medieval] Confidence: [probable]  
 Pattern: [Regular] Boundary Characteristic: [s curve, dog leg]  
 Dominant boundary morphology: [Sinuous]  
 % dominant: [1. >90%]  
 Secondary boundary morphology: [-]  
 Previous historic character: [strip fields] Period: [medieval] Confidence: [probable]

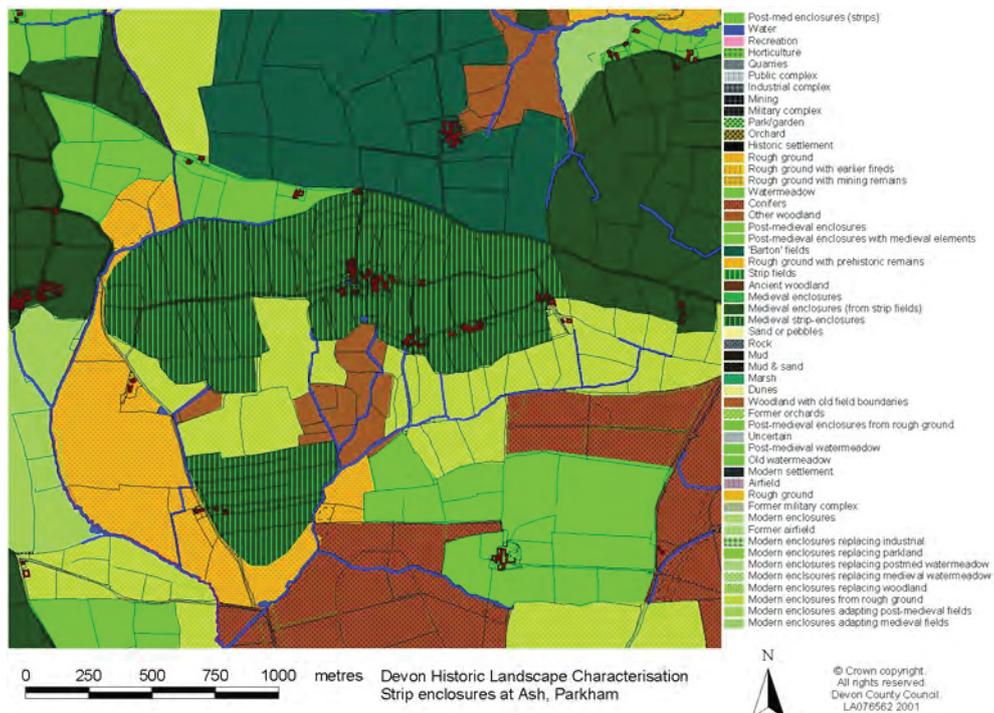
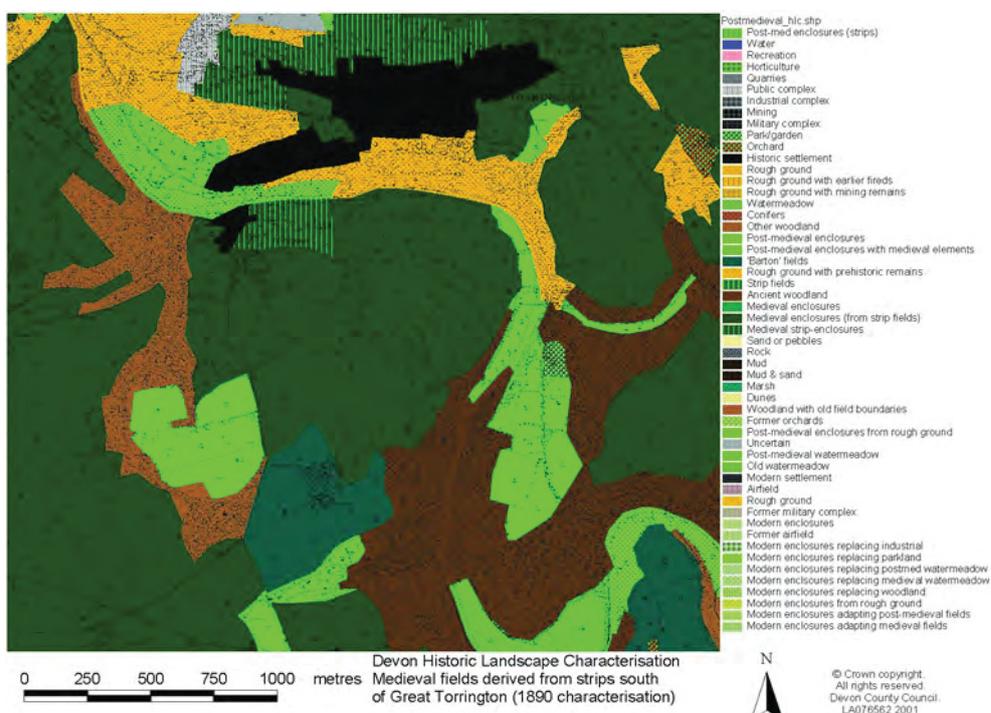


Fig 23. Enclosures (strips) HLC type. (Ash, Parkham)

### c. Medieval enclosures based on strip fields

Polygons of this type will contain fields with clear evidence for their basis being medieval strip fields. This evidence can take the form of so-called ‘aratra curves’ (also known as ‘reversed s’ or ‘reversed j’ curves) in their boundaries, and/or ‘dog-legs’. They are also commonly found in ‘regular’ field patterns. The difference between these fields and **enclosures (strips)** is that these fields are not necessarily longer than they are wide, and therefore have a significantly different character. The morphology of these fields also differs visibly from **Enclosures – post medieval based on medieval strip fields** (see below). Although both types commonly have sinuous boundaries, **enclosures - medieval based on strip fields** seem to have less regular sides than **enclosures - post-medieval based on strip fields** (see below) (e.g. boundaries with less regular curves) and the closes are generally smaller.



*Fig 24.* **Medieval enclosures based on strip fields HLC type.** (Fields in Little Torrington south of Great Torrington. Characterisation of the landscape in the late 19th century)

It is likely that they also result from slightly different processes of enclosure. **Enclosures (strips)** are generally the result of the piecemeal enclosure of one or two strips at a time by individual tenants (Fox 1972). However, medieval enclosures based on strip fields seem more likely to result from one of two processes:

- (1) where one farmer gained ownership/tenancy of a larger block of strips than a couple next to each other and enclosed them all at one time (sometimes as several contiguous fields, forming a regular pattern).
- (2) where fairly small fields divided into strips were enclosed from the outset.

Unfortunately, without detailed archaeological evidence (preferably excavation), these two processes seem practically indistinguishable (e.g. in parts of Challacombe's fields: Pattison 1999 - see Challacombe 'Case Study,' below).

The process of enclosure of strips is likely to have been most common in the 14th-16th century, although it may well have continued to some extent into the early post-medieval period (for example in the South Hams, where the process seems to have started in the 14th century and continued into the later 16th/early 17th century (e.g. Fox 1972: 85-6; 1975) or in the sub-division of existing enclosures); the appropriate *Confidence* indicator is therefore normally 'probable', sometimes 'possible'.

*Typical database entry for Enclosures - medieval based on strip fields:*

*Historic character:* [enclosures] *Period:* [medieval] *Confidence:* [probable]

*Pattern:* [Regular] *Boundary Characteristic:* [s curve]

*Dominant boundary morphology:* [Sinuous dog leg]

*% dominant:* [1. >90%]

*Secondary boundary morphology:* [-]

*Previous historic character:* [strip fields] *Period:* [medieval] *Confidence:* [probable]

### Case Study 3: Medieval and Post-Medieval Strips and Enclosures at Challacombe, Manaton (Dartmoor)

Publications: **Pattison, P.**, 1999. 'Challacombe revisited' in P. Pattison, D. Field & S. Ainsworth (eds.), *Patterns in the Past: Essays in Landscape History for Christopher Taylor* (Oxford: Oxbow), pp.61-70; **Bonney, D.**, 1971. 'Former farms and fields at Challacombe, Manaton, Dartmoor' in K. Gregory and W. Ravenhill (eds.), *Exeter Essays in Geography in Honour of Arthur Davies* (Exeter: University of Exeter), pp.83-91; **Bowen, H.**, 1961. *Ancient Fields* (Wakefield: SR Publishers); **Gawne, E.**, 1970. 'Field patterns in Widecombe parish and the forest of Dartmoor' *Transactions of the Devonshire Association* 102, pp.49-69; **Shorter, A.**, 1938. 'Challacombe, Dartmoor, Devon: terraced fields, illus.' *Antiquity* 12, pp.184ff.



*Fig 25.* The medieval and later strip fields at Challacombe, Dartmoor (Pattison 1999, fig. 25)

Post-medieval map evidence shows that the fields/strips at Challacombe were still in intermixed ownership in 1787. Based on a recent archaeological survey by the RCHM(E), Pattison (1999) has pointed out that:

- a. The large sub-oval enclosures south of East Challacombe are defined by corn-ditches (earth-banks faced with stone walls on one side). Some of the sub-dividing field walls are later (post-medieval?) than the outer field boundaries.
- b. An area of undated ridge-and-furrow (possibly early post-medieval) occurs on Challacombe Down inside the bottom of the so-called 'U'.
- c. The two strip fields at the NW corner of the plan, overlying the prehistoric settlement, are cut by later (strip-field) ploughing, loosely within the outer enclosure.
- d. The boundary walls of the 'wares' (large field blocks) are NOT necessarily later than the open strips/fields (although they could be, as claimed by Bonney), i.e. the outer enclosures of blocks of strips could well be medieval, and these fields/wares are mainly subrectangular in shape.

#### d. Enclosures – medieval

Like the previous category, this type stands for several field types which can be very hard to distinguish and date without detailed archaeological and historical research, e.g.:

- i. Large enclosures of demesne fields which were subsequently subdivided in the late- and/or early post-medieval period(s) (c. C14th-C17th) (and therefore not necessarily showing clear strip-derived boundaries) (e.g. at Bishop’s Clyst & Sowton: Alcock 1975 (see below))
- ii. Irregular medieval enclosures (as e.g. at Houndtor: Brandon 1979 (and see below)), often clearances from woodland, waste, etc. in the late- and early post-medieval periods (c. C13th/14th-C17th; see also Axminster ‘Case Study’, above)
- iii. Meadows (other than watermeadows)
- iv. Miscellaneous paddocks and closes (often around medieval farmsteads, e.g. Sourton Down enclosure (Weddell & Reed 1997); these may be distinguished by their small size)

The main distinguishing characteristics of polygons of this ‘type’ is that they all have fields with generally sinuous boundaries that do not necessarily show signs of division into strips.

It should be noted, however, that this does not mean they were not divided into strips: it seems likely that much cultivation would have taken place in strips that have left no signs of their existence (except in documentary sources or buried archaeology). For example, documentary evidence shows that meadows in the valley of the Axe near Axminster were divided into strips in the early post-medieval period, and it is likely that they were so divided in the medieval period as well (Fox 1972: 114). At Houndtor, the strip divisions in the fields have been preserved by the site's subsequent abandonment: without this, it would not have been evident from the morphology of the fields that they had previously been cultivated in strips (Brandon 1979).

The dating of these fields is problematical. Some are certainly medieval, although many others are probably post-medieval (e.g. enclosures of demesne fields). It may be that a substantial proportion of them represent post-medieval sub-divisions of larger medieval fields.

If the period qualifier is ‘medieval’, the appropriate confidence indicator is therefore ‘probable’ or ‘possible’.

*Typical database entry for Enclosures – medieval:*

*Historic character:* [enclosures] *Period:* [medieval] *Confidence:* [probable]

*Pattern:* [Regular/Irregular] *Boundary Characteristic:* [-]

*Dominant boundary morphology:* [Sinuous]

*% dominant:* [-]

*Secondary boundary morphology:* [-]

*Previous historic character:* [-] *Period:* [-] *Confidence:* [-]

## Case Study 4: Bishop's Clyst & Sowton

Publications: **Alcock, N.**, 1975. 'Fields and farms in an east Devon parish' *Transactions of the Devonshire Association* 107, pp.93-172; **Fox, H.**, 1972. 'Field systems of East and South Devon. Part 1: East Devon' *Transactions of the Devonshire Association* 104, pp.81-135

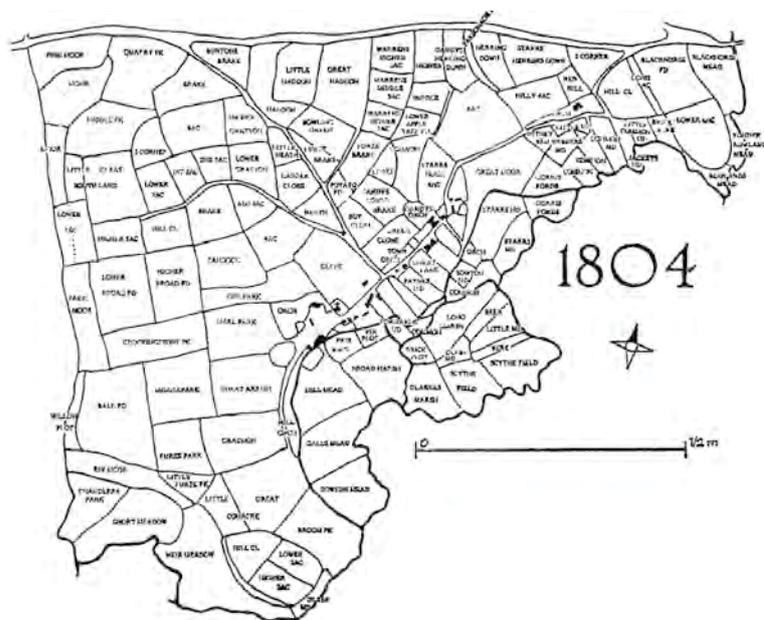


Fig 26. The fields of Sowton in 1804. (Alcock 1975, map 4)

These outline notes relevant to field/enclosure history are based on Alcock (1975). The evidence he drew on was from medieval & post medieval written surveys, and post-medieval maps.

### Sowton:

- a. Sowton manor has maps from 1804, 1781 & (partially) for 1552 (Alcock 1975: 107-110). There are strong similarities between C19th and C16th field arrangements, although not all fields for 1552 are certainly identified. (Those identified are: *Balfilde*, *Myddelparke*, *Crockconstileparke*, *White Arsshe*, *Shilparke*, *Sanbank* and *Marelpitparke* (although *Myddelparke* and *White Arsshe* may have extended further south. Those not securely identified are: *Brodefeld*, *Brodefeld More*, *White Arsshe Marshe*, *Rixmorewode* & *Rixmoremeade* (see maps/plans, below).
- b. Compare morphology of fields in areas of former heath to N of Sowton (enclosed shortly after 1653) to 'barton' fields mentioned above. The rectilinearity of these C16th (or earlier) enclosures in comparison to relatively curvilinear enclosures on much of former heath/[?outfield] is noticeable. This suggests that areas of medieval outfield enclosed in the post-medieval period, and areas of medieval infield enclosed in the medieval period may be hard to differentiate morphologically since both could

be subdivided into strips. Also note that some areas of medieval outfield maintained their strip-fields into the C19th (e.g. E. Portlemouth: see Fox 1973; and Case Study 1, above).



Fig 27. The barton fields and outfield of Sowton in 1552. (Alcock 1975, map 6)

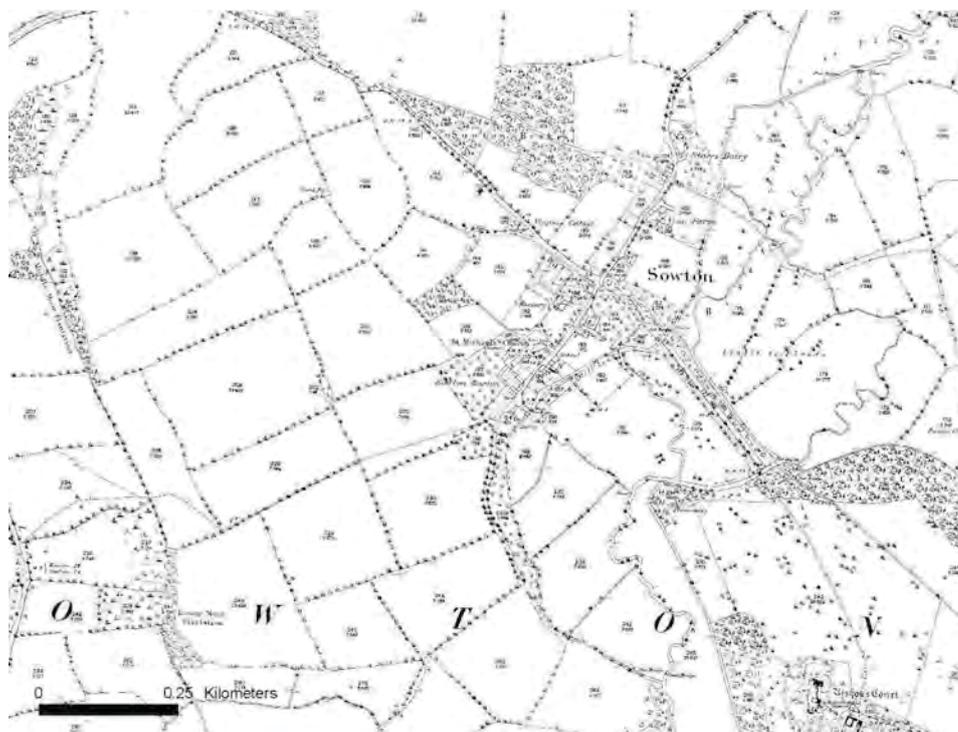


Fig 28. Sowton. 1st ed OS 25in (c.1890): 'barton' fields to the west of the village.

**Bishop's Clyst:**

- Alcock's figures (1975: 111-124) give plans of the manor from C15th-C19th. Note that medieval account rolls after 1420 give names of demesne fields, which change after 1505, perhaps indicating some fields had been subdivided (Alcock 1975: 139).
- While some of the demesne fields were divided only into relatively large closes in the post-medieval period (e.g. *Westmysterfield*), others were divided into a greater number of strips (e.g. *Middelfeld*). Nevertheless, the tenant lands was divided into smaller closes (commonly in the form of enclosed strips) by the post-medieval period (at least by C17th) – i.e. earlier than the demesne lands.

### Case Study 5: Houndtor

Publications: **Brandon, P.**, 1979. 'Appendix: the medieval fields', pp.150-152 in G. Beresford, 'Three deserted medieval settlements on Dartmoor: a report on the late E Marie Minter's excavations' *Medieval Archaeology* 23, pp.98-158; **Butler, J.**, 1991. *Dartmoor Atlas of Antiquities, Volume 1 - the East* (Kingskerswell: Town & Country Books); **Fleming, A.**, 1994b. 'Medieval and post-medieval cultivation on Dartmoor: a landscape archaeologist's view' *Devon Archaeological Society Proceedings* 52, pp.101-117

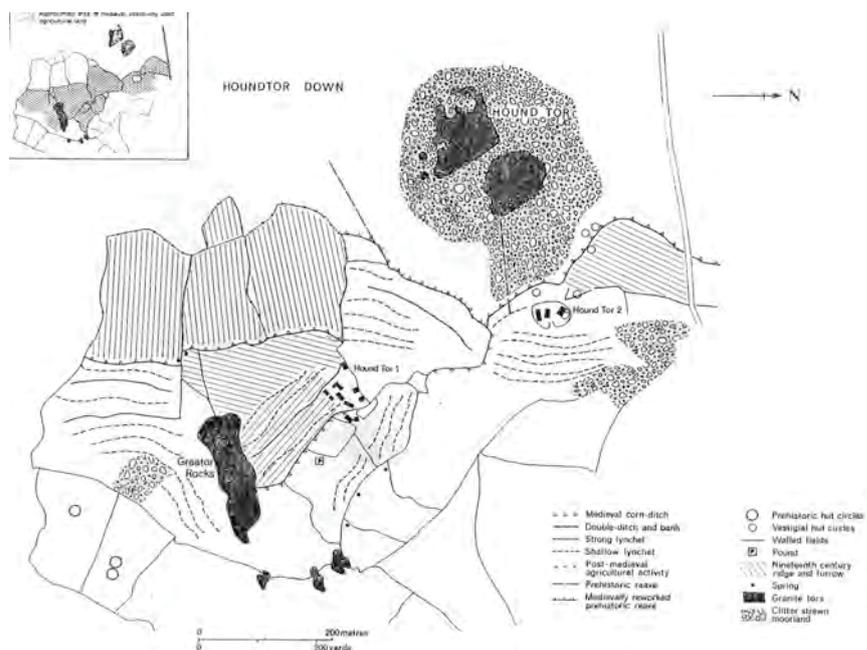


Fig 29. Houndtor: medieval fields (Brandon 1979, fig 27).

Brandon (1979) discusses the fields, and Fleming (1994b) notes some interpretations from air photos.

- Both 'narrow rig' (thought by Brandon to be C19th, by Fleming to be C16th/C17th/C18th) and medieval strips lynchets certainly occur on the site.

- b. Fleming identifies cross-contour 'broad rig' stratigraphically below 'narrow rig' at SX 744 787 (1994b: 109).
- c. The medieval fields overlie a prehistoric field system with hut circles. However, Brandon's plan shows that the boundaries in the ridge-and-furrow are not defined so clearly by the prehistoric boundaries as they appear to be on Butler's (1991) plan (e.g. immediately SW of Houndtor 1). Brandon's plan also shows more detailed ridge and furrow than Butler's (Butler only has a schematic representation of the location of ridge and furrow rather than showing the positions of the actual ridges themselves).
- d. Brandon refers to the field at SX 744 787 as 'outfield'. However, Fleming has it with his 'broad rig' in it (implying it is of early date. The term 'outfield' does not appear to be used here in Fox's (1973) sense).



*Fig 30.* 'Broad ridge' and medieval field boundaries at Houndtor (Fleming 1994b, fig. 4).

- e. Fleming also argues that the 'broad rig' here pre-dates the corn-ditch because it is only untidily enclosed by the corn-ditch (which he also believes to antedate disafforestation in the middle of the thirteenth century). However, it is important to note a few points:
  - (i) The so-called 'broad rigs' here are hard to identify because of the disturbance caused by the post-medieval 'narrow rig' and can only be seen in certain light conditions (it is possible that not all have been identified)
  - (ii) Brandon does not identify the outer boundary of the field as enclosed by a corn-ditch, but rather a post-medieval boundary
  - (iii) If the field was sporadically cultivated outfield held in severalty (or infrequently cultivated infield) and was not held in common, there seems little reason why the ridge and furrow should necessarily match up to the field boundaries
  - (iv) Note that the 'broad rig' identified by Fleming is on a generally different alignment to Brandon's strip lynchets in the field immediately to the N (although this need not necessarily be significant)



### 3.7.3 Post-Medieval Fields

#### a. Enclosures – post medieval based on medieval strip fields

Fields in this category are the result of a similar process to those medieval strip-fields which were enclosed in the late medieval period (Fox 1972). They appear to result from the post-medieval enclosure and/or rearrangement of medieval field systems, most commonly those based on fields remaining as strips at the time of their post-medieval alteration. In common with late medieval enclosures described above, they often appear to have come into the possession of a single landowner who re-organised the fields to suit changing agricultural conditions (see Turner, forthcoming).

They may be identified by a mixture of sinuous boundaries (particularly in cases where some evidence survives of ‘aratra’ curves, etc.), almost-straight boundaries with regular curves (which are commonly within the field system and do not necessarily also form its outer boundaries), and some straight boundaries; they also commonly contain relatively large fields. Documentary evidence suggests that they were formed largely between the very late middle ages and the end of the C17th (pers. comm. Peter Herring, 2003). This type generally corresponds to the ‘Barton enclosures’ type used in the Cornwall Archaeological Unit’s *Lynher Valley HLC* (pers. comm. Peter Herring and Bryn Tapper, 2003), and will be referred to as such in order to avoid confusion (see Section 4, below).



Fig 32. ‘Barton’-type fields around Stoke Fleming (Fox 1972, fig 3 (bottom))

*Typical database entry for Enclosures - post medieval based on strip fields – medieval:*

*Historic character:* [enclosures] *Period:* [post medieval] *Confidence:* [probable]  
*Pattern:* [Regular] *Boundary Characteristic:* [-]  
*Dominant boundary morphology:* [Sinuous]  
*% dominant:* [2. 70-89%]  
*Secondary boundary morphology:* [Straight]  
*Previous historic character:* [strip fields] *Period:* [medieval] *Confidence:* [possible]

## b. Enclosures – post medieval based on enclosures - medieval

A second type of post-medieval enclosures are those based largely on (or within) existing medieval enclosures. In these cases the existing fields have commonly been divided or substantially rearranged in the post-medieval period

Examples in east Devon include the fields around Bishop's Clyst (Alcock 1975; see Case Study 4, above) and the former fields of Newenham Abbey, S of Axminster (Fox 1972: 119-121, who describes it as 'enclosure within existing closes'; Case Study 2, above). Other clear examples can be seen in west Devon around Buckland Abbey, the C18th home of the well-known agricultural commentator William Marshall. Many parishes in the west and north of the county have extensive areas with this type of historic character.

*Typical database entry for Enclosures - post medieval based on enclosures – medieval:*

*Historic character:* [enclosures] *Period:* [post medieval] *Confidence:* [probable]  
*Pattern:* [Irregular] *Boundary Characteristic:* [-]  
*Dominant boundary morphology:* [Sinuous]  
*% dominant:* [1. 51-69%]  
*Secondary boundary morphology:* [Straight]  
*Previous Historic character:* [enclosures] *Period:* [medieval] *Confidence:* [possible]

## c. Enclosures - post-medieval

This character type covers a fairly wide range of different kinds of fields, united by the morphology of their boundaries which tend to be overwhelmingly straight (surveyed) (Herring 1998: 29; Turner 2004). Some significant sub-types can be identified by analysing the size of fields within the polygons, e.g. very small plots associated with industrial workers, or their location in relation to other historic character 'types' (e.g. extensions of medieval field systems being adjacent to medieval fields (*ibid*). Post-medieval enclosures are sometimes clearly based on earlier medieval systems or prehistoric systems (e.g. Tor Royal: Dunn & Fletcher 1999): this will be reflected in the previous *historic character* sections. However, such straight-sided post-medieval fields often erase traces of earlier arrangements (at least as far as map evidence is concerned), and it has not always been possible to offer an interpretation of medieval or earlier field types/'historic character' type.

*Typical database entry for Enclosures - post medieval:*

*Historic character:* [enclosures] *Period:* [post medieval] *Confidence:* [probable]

*Pattern:* [Irregular/Regular] *Boundary Characteristic:* [-]

*Dominant boundary morphology:* [Straight]

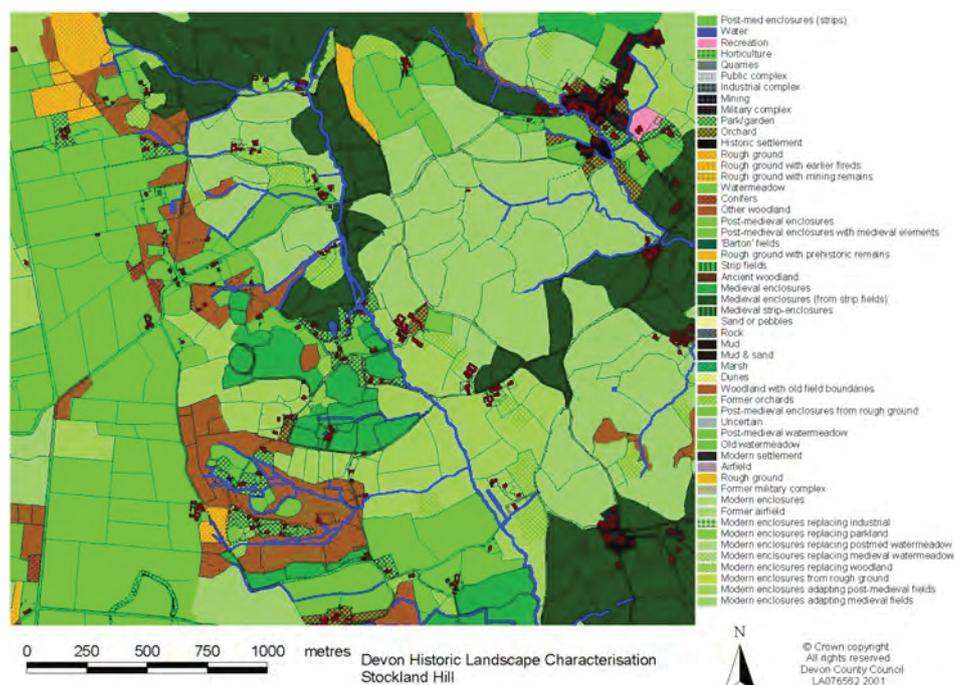
*% dominant:* [3. >90%]

*Secondary boundary morphology:* [-]

*Previous historic character:* [-] *Period:* [-] *Confidence:* [-]



**Fig 33. Post-medieval enclosures HLC type on the top of Stockland Hill. Medieval enclosures, medieval enclosures based on strip fields, and other HLC types lie on the hillsides** (see fig. 34, below. Photo: Frances Griffith, Devon County Council, 21 March 1988).



**Fig 34. Stockland Hill, modern HLC.** Many of the fields in the foreground of Fig 33 have been affected by the removal of field boundaries in the C20th, giving them a 'modern enclosures' HLC type. However, the surviving boundaries are derived from their former type, 'medieval enclosures based on strip fields', and it is important that this information is conveyed in the characterisation.

#### d. Strip fields – post medieval

Some types of strip field, normally cultivated in narrow strips ('narrow rig') seem to belong to the post-medieval period, particularly those formed as a result of outfield cultivation of upland rough grazing (or 'waste'). They have generally been identified through archaeological evidence (see e.g. Fleming 1994b (and Case Study 5, above); Weddell & Reed 1997). These are commonly on the site of earlier field systems, although not always (*ibid*). Where they make use of existing enclosures without altering them, they are not generally differentiated in this project's database. However, they are sometimes related to distinctive new post-medieval enclosures, and are sometimes unenclosed – in these cases they are differentiated with their own database entry in the relevant place.

#### e. Watermeadows – post medieval

Post-medieval innovations in irrigation which involved complicated networks of channels allowed more land in river valleys to be used as watermeadows, giving improved early grazing and yields of hay (Turner 2004). Although rudimentary systems of control are likely to have existed in the medieval period, the main periods of development were probably the seventeenth and eighteenth centuries (Betty 1973: 14-15).

A second type of post-medieval watermeadow is known as the field-gutter or catch-meadow system. This allowed sloping fields to be irrigated through the provision of leats. These are sometimes recognisable using archaeological evidence (either as earthworks or in air photography: Riley & Wilson-North 2001; Griffith 1988: 104), and are also commonly recorded on the 1st edition OS ordnance survey maps. The main period of development and use of these irrigation systems appears to have been the later eighteenth and nineteenth centuries. A few are still very occasionally used, as at Walscott, North Molton.



*Fig 35.* Earthworks of post-medieval watermeadow leats visible on the steep valley sides at Walscott, North Molton. (Photo: Getmapping.com 1999/2000 under licence to DCC)

## f. Orchard – post medieval

Orchards formed an important part of the post-medieval agricultural economy in Devon.

They commonly cluster in small enclosures around farmsteads and hamlets, although in some parts of the county (e.g. around Whimble in east Devon) there were extensive areas of orchard planted in large fields.

The identification of post-medieval orchards is based on the 1st edition OS map, and includes all types of fruit trees.

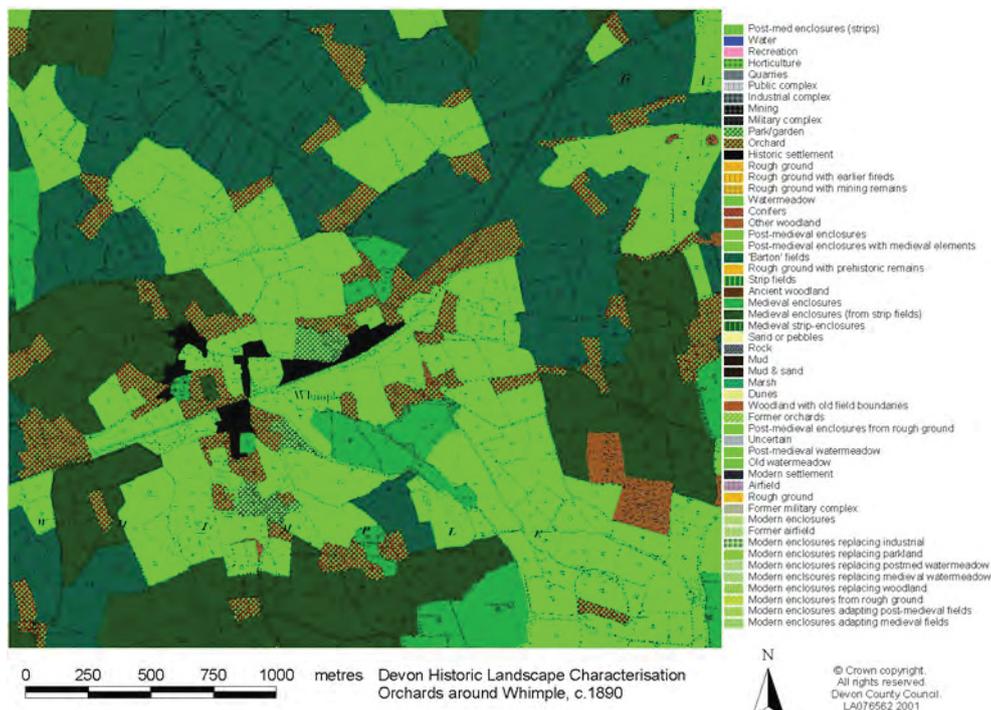


Fig 36. Post-medieval orchard HLC type (in c.1890) around Whimble

## 3.7.4 Modern fields

In some places field systems have undergone major developments in the twentieth century: these include rearrangement of earlier field systems and changes in use which have led to changes in historic character type.

Analysis of the database will show all areas where a modern historic character type has replaced different, earlier ones.

The most common agriculture-related types are noted below.

### a. Enclosures - modern

Two main types of enclosures are included in this category.

Firstly, polygons where modern (i.e. since 1st ed OS maps) developments (such as boundary loss or removal and replacement with boundaries on a different alignment) have rendered the field system in a polygon unrecognisable or significantly altered in character in comparison to its earlier form (e.g. where a landscape of smallish enclosures has been changed by boundary loss into one of large arable fields).

The cut-off point for assigning a polygon to this character type is that half as many fields or less should exist in 2000 compared to the 1st ed OS map (exceptions have been made where there were only 1 or 2 fields in the polygon in the 1890s).

Secondly, those fields where the historic character type has changed in the modern period, e.g. where a post-medieval orchard or some ancient woodland has lost its trees and become an ordinary field since the 1st edition OS map.

Differentiation between these types is possible by looking at previous *historic character types*.

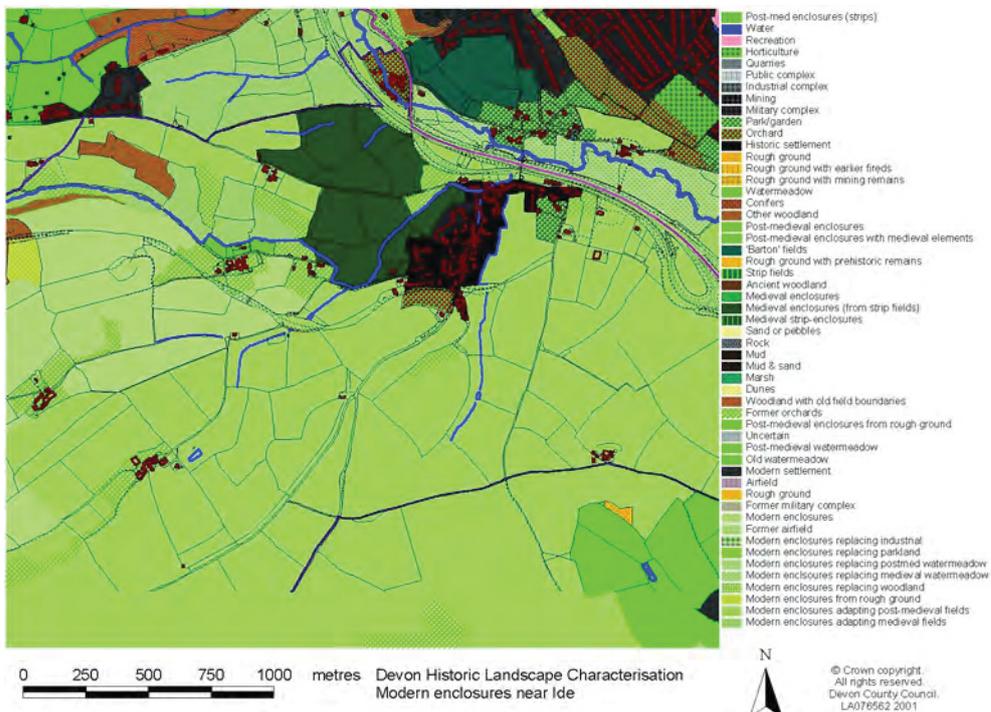


Fig 37. Modern enclosures HLC type near Ide.



*Fig 38.* **Modern enclosures HLC type** (around Nether Exe Barton (centre left), Nether Exe, looking north. This area has seen significant field boundary loss in the 20th century (Photo: Frances Griffith, Devon County Council, 6th July 1984).

**b. Horticulture - modern**

Encompasses polygons made up of greenhouses, nurseries and related extensive areas of market gardening (where identifiable from map or air photo evidence).

**c. Orchard - modern**

This type represents areas of orchard identified from the modern OS 1:25000 maps that were not also orchard on the 1st ed OS maps.



# 4. Examples of results

The Devon HLC has a flexible database that can be queried either in Access or after the data has been incorporated into ArcView (or a similar package). This allows the user to focus in on questions of particular interest relating to specific Historic Landscape Character Types.

A few examples, illustrated on the enclosed CD, are discussed below. These are the examples intended for display in the internet version of the characterisation.

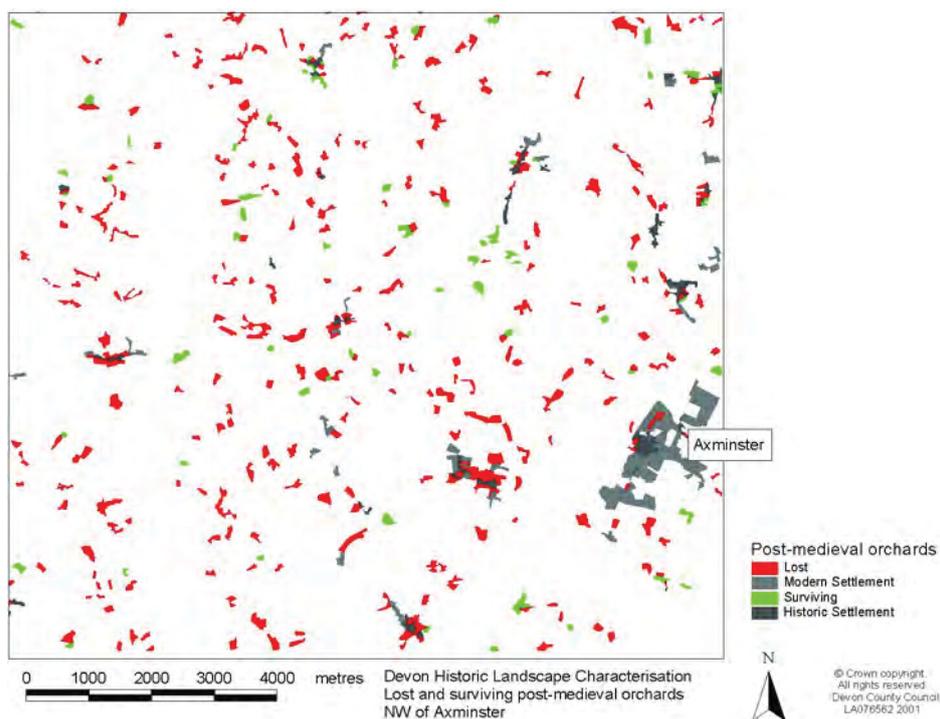
The enclosed data CD includes examples of shapefiles (and accompanying legends) that have been created using the Historic Landscape Characterisation:

## a. HLC Data

This folder contains the shapefiles as they were digitised and the HLC database (hlc db.mdb).

## b. RawHLC

This folder contains the final raw HLC data in shapefile format (rawhlc.shp). The spatial data presents polygons for the whole of the county. Attached to each polygon in the shapefile is all the data relating to that polygon from the project database.



*Fig 39.* Lost and surviving C19th orchards NW of Axminster.

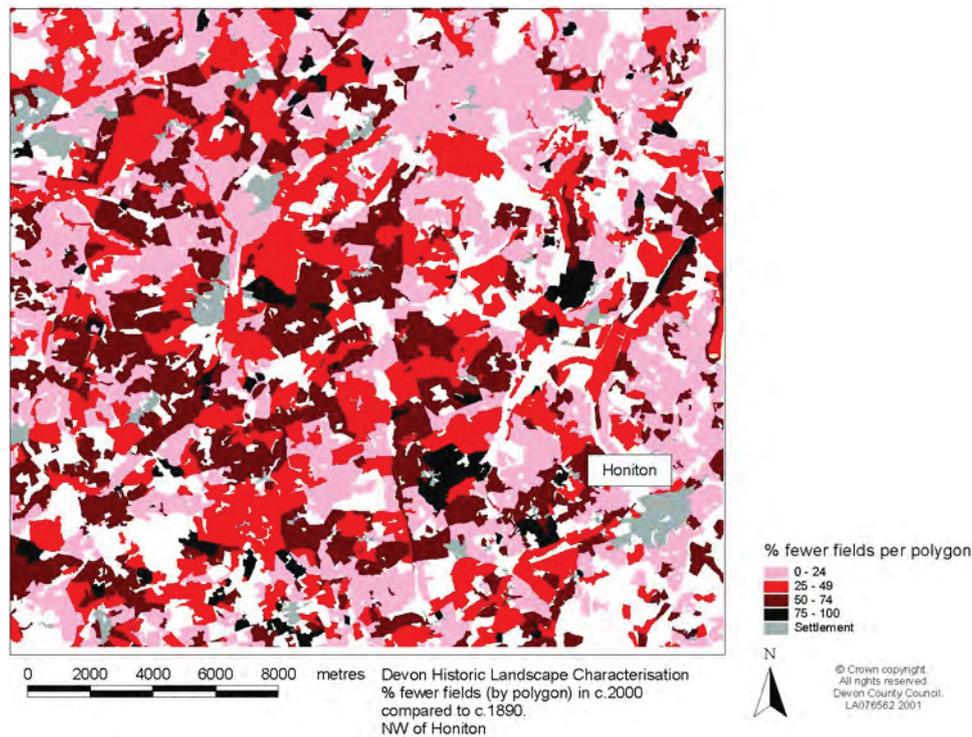
### c. Orchards

The folder contains a shapefile (*lost\_orchards.shp*) showing the distribution of orchards in Devon in the late C19th (both still surviving and destroyed in the C20th) and the distribution of modern and historic (i.e. late C19th) areas of dense settlement. It shows clearly how great the loss in orchards has been: around 85% of all orchards depicted on the 1st ed OS map have been lost (see fig 39, above).

### d. Loss of field boundaries

The shapefile (*%fld\_loss\_settlements.shp*) represents the difference in the number of fields in 1890 compared to the present day (areas of modern settlement are also included in the polygon). This correlates strongly to the degree of field boundary loss, since the commonest reason for a reduction in the number of fields between the late C19th and late C20th is the destruction of field boundaries to create bigger fields.

The map clearly reveals very substantial losses in many parts of the county. These have occurred not only in areas where such changes might be most expected, e.g. regions with a strong tradition of intensive arable like the South Hams and the central Exe valley, but also in much of north Devon including areas like Hartland, and parts of the Blackdown Hills on the Devon/Somerset boundary..



*Fig 40.* Percentage fewer fields by (polygon) in 2000 compared to c.1890, NW of Honiton.

### e. HLC of the Modern Landscape

The shapefile called 'modern\_hlc.shp' presents a characterisation of the whole modern landscape of Devon. The landscape has been divided into a number of character types based on the methods described in Section 3 (above), with a few extra types added to reflect the previous historic characters (mainly where the current character has emerged in the C20th). All these types are listed in the following table, together with the types used (below) in *f. HLC of the Post-Medieval Landscape*. Clearly, future users of the HLC could define further character types based on combinations of modern and previous historic characters in the HLC database to address questions of specific interest to them.

*Code No. / Title / Text*

- 1 **Post-medieval strip-enclosures**  
Unusual long narrow enclosures, probably of the post-medieval period, whose boundaries follow divisions in the earlier medieval open field
- 2 **Water**  
Either an artificially-created water body (e.g. a pond, lake, reservoir) or a natural lake
- 3 **Recreation**  
Areas set aside for recreation including sports fields and stadiums, golf courses, fishing lakes, campsites

- 4 **Horticulture**  
Market gardening, glasshouses, allotments or nurseries
- 5 **Quarries**  
This character type represents extractive industries including quarries and clay pits
- 6 **Public complex**  
Represents public buildings and other related complexes including schools, colleges, hospitals, government offices, civic centres and cemeteries
- 7 **Industrial complex**  
Industrial complex (e.g. factory, mill, warehouses, retail centre, rail terminal)
- 8 **Mining**  
Mines and associated features
- 9 **Military complex**  
A military installation, e.g. a barracks, camp, fortification or dockyard
- 10 **Park/garden**  
A park planted with ornamental trees or a garden round a house
- 11 **Orchard**  
Orchards planted with fruit trees
- 12 **Historic settlements**  
The core area of a historic settlement, based on the late C19th 1st edition (25 inch) Ordnance Survey maps
- 13 **Rough ground**  
Rough grazing ground, heathland or moorland
- 14 **Rough ground with former enclosure**  
Rough grazing ground, heathland or moorland that shows signs of earlier historical use as agricultural land
- 15 **Rough ground with mining remains**  
Earthworks in this rough grazing ground, heathland or moorland show areas of historic mining activity
- 16 **Watermeadow**  
This area was probably watermeadows in the late medieval and/or post-medieval periods, and has changed little in the C20th
- 17 **Conifers**  
Conifer plantation
- 18 **Other woodland**  
Broad-leaved plantations, re-planted ancient woodland or secondary woodland that has grown up from scrub
- 19 **Post-medieval enclosures**  
Enclosures of post-medieval date. Fields laid out in the C18th and C19th commonly have many surveyed dead-straight field boundaries
- 20 **Post-medieval enclosures with medieval elements**  
These enclosures are probably based on medieval fields, but the many straight field boundaries suggest they were substantially re-organised in the post-medieval period

- 21 'Barton' fields**  
These relatively large, regular enclosures seem likely to have been laid out between C15th-C18th. Some curving boundaries may be following earlier divisions in the pre-existing medieval fields. In Cornwall such enclosures are sometimes called 'Barton' fields
- 22 Rough ground with prehistoric remains**  
Earthworks in this rough grazing ground, heathland or moorland preserve the remains of a prehistoric landscape
- 23 Strip fields**  
A rare surviving example of the unenclosed strips of a medieval open field or outfield
- 24 Ancient woodland**  
Ancient woodland that may date back to the medieval period
- 25 Medieval enclosures**  
Fields probably first enclosed with hedge-banks during the Middle Ages
- 26 Medieval enclosures based on strip fields**  
This area was probably first enclosed with hedge-banks during the later Middle Ages. The curving form of the hedge-banks suggests that earlier it may have been farmed as open strip-fields
- 27 Medieval strip-enclosures**  
These narrow, curving strip-enclosures derive from the enclosure of open-field strips with hedge-banks during the later Middle Ages
- 28 Sand**  
Sand and pebbles
- 29 Rock**  
Cliffs, outcrops, rocks and scree (both around the coast and inland)
- 30 Mud and sand**  
Mud and sand (normally in the intertidal zone)
- 31 Mud**  
Mud (normally in the intertidal zone)
- 32 Marsh**  
Marshes, mires and bogs, either coastal or freshwater
- 33 Dunes**  
Sand dunes
- 34 Modern settlement**  
This is an area of modern settlement that was developed during the C20th
- 35 Airfield**  
A civil or military airfield
- 36 Woodland with old field boundaries**  
Broad-leaved plantations, re-planted ancient woodland or secondary woodland that has grown up from scrub, incorporating the remains of earlier field boundaries
- 37 Rough ground**  
The modern character of this area reflects its earlier use as rough grazing ground, heathland or moorland
- 38 Former military complex**  
This is a former military base that was established on what had earlier been rough grazing ground, heathland or moorland

- 39 **Modern enclosures**  
These modern enclosures have replaced a different type of earlier landuse
- 40 **Former airfield**  
These modern enclosures replace a historic civil or military airfield
- 41 **Modern enclosures**  
These modern enclosures replace an earlier historic industrial complex. Earthworks or other remains may be visible
- 42 **Modern enclosures**  
These modern enclosures replace an earlier area of historic parkland, elements of which may be retained within them
- 43 **Modern enclosure**  
Modern enclosures have replaced post-medieval watermeadows here. These were once common in Devon but are now very rarely used
- 44 **Modern enclosures**  
Modern enclosures have probably replaced medieval watermeadows on the valley bottom
- 45 **Modern enclosures**  
Modern enclosures have replaced earlier woodland here
- 46 **Former orchards**  
This area was once an orchard planted with fruit trees, but these have been lost in the C20th
- 47 **Modern enclosures**  
These modern enclosures have been created out of earlier rough grazing ground, heathland or moorland in the C20th
- 48 **Modern enclosures**  
Modern enclosures that have been created by adapting earlier fields of probable post-medieval date
- 49 **Modern enclosures**  
These modern fields have been created out of probable medieval enclosures. The sinuous medieval boundaries survive in places
- 50 **Post-medieval enclosures**  
These post-medieval enclosures have probably been created out of earlier rough grazing ground, heathland or moorland
- 51 **Uncertain**  
The character of this area has changed significantly in the C20th, and its earlier character is presently uncertain
- 52 **Post-medieval watermeadow**  
A distinctive post-medieval type of watermeadow incorporating a system of leats and channels. These were common in C19th Devon, particularly around Exmoor, in the Exe Valley, and in the South Hams
- 53 **Old watermeadow**  
This area may have been managed as valley-bottom watermeadows in the late medieval and/or post-medieval periods

Many interesting conclusions could be drawn from in-depth study of this map. For example, the HLC suggests that the historic character type of around 42% of Devon has changed in the C20th. However, the rate of change has varied across the county, and it would be useful to understand for both planning and landscape history how and why different regions have changed at different speeds. Comparing two largely rural areas, for example, the distribution of 'modern' field types in the Tamar Valley is much thinner than the Dart Valley: there has been (relatively speaking) much less destruction of hedge-banks during the C20th in the Tamar than in the Dart. Without further research, the reasons why this has been the case will remain unclear. Similar questions could be posed across the county for many of the historic landscape character types recorded by the project: rough ground, orchards, woodlands of all sorts, and so on.

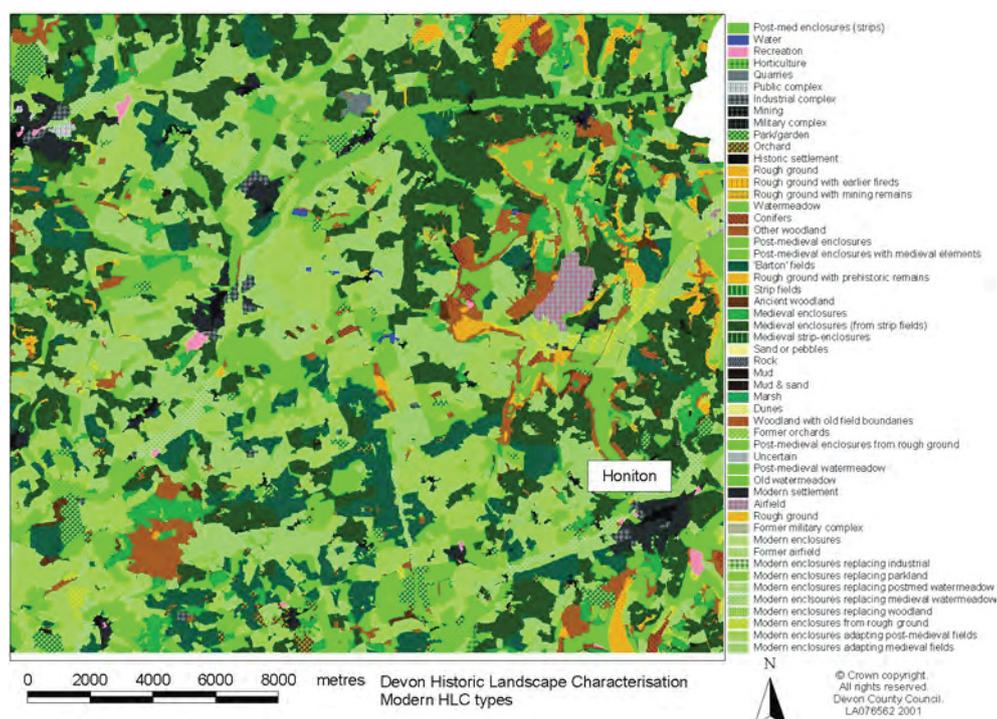


Fig 41. Modern HLC types (from modern\_hlc.shp)

#### f. HLC of the Post-Medieval Landscape

'Postmedieval\_hlc.shp' presents a characterisation of the whole landscape of Devon in the late C19th based on the 1st edition OS maps. The landscape has been divided into a number of character types based on the methods described in Section 3 (above), with a few extra types added to reflect previous historic characters that significantly affect modern character (mainly where the current character has emerged in the C20th). All these types are listed in the table above, together with the types used in *e. HLC of the Modern Landscape*.

The shapefile was created by querying the database to extract all the polygons whose Current Historic Character did not have the value 'modern' in the Period field. The

remaining polygons in the database were added after being queried to extract their most recent (and then earlier) Previous Historic Characters that did not have the value 'modern' in the Period field. In this way modern changes to the landscape were discarded and a map of the whole county before the modern alterations of the C20th was created.

If the user wished, the process could be repeated to show a partial representation of the medieval landscape by removing all those Previous Historic Characters with the value 'Post-medieval' in the Period field (this would be partial because 'medieval' characters have been interpreted only for some polygons, whereas all were assigned a post-medieval character type. For an example, see Section 5 (below), Case Study: Kingskerswell By-Pass).

Interesting observation can be made about the post-medieval and medieval landscape based on this map. It suggests, for example, that at least 43% of the total landscape of Devon was covered by medieval or early post-medieval fields based on strip fields, and that around 17% of the total area of Devon comprised newly enclosed or substantially altered fields of the later post-medieval period. Much further analysis could be undertaken to illuminate the history of specific periods, character types and regions, and indeed the relationships between them.

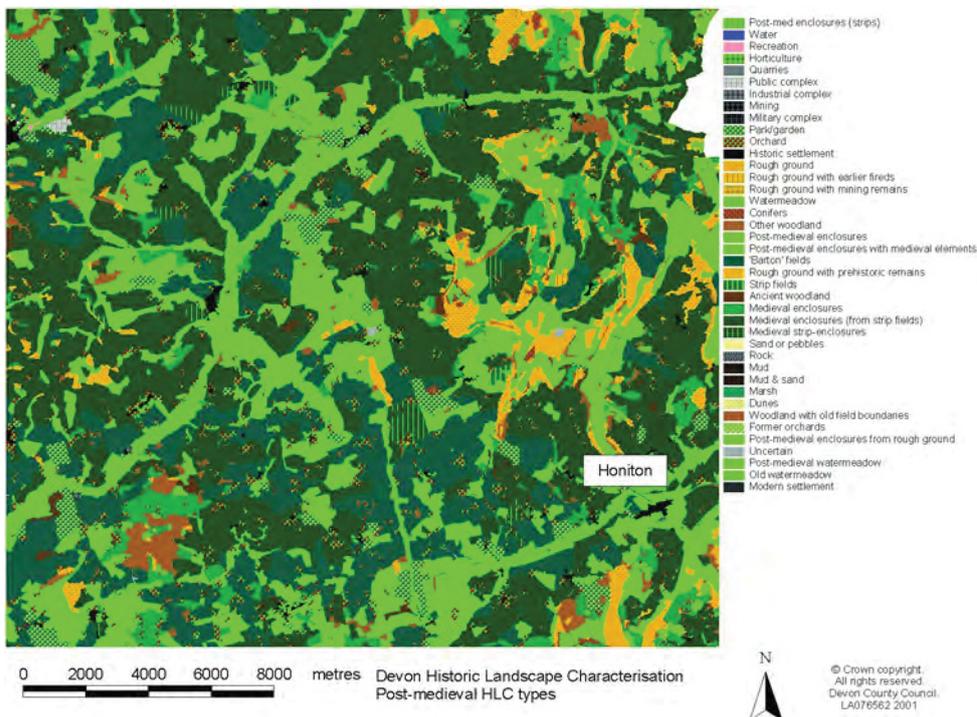


Fig 42. Postmedieval HLC types (from postmedieval\_hlc.shp)

# 5. Examples of applications

**A**pplications of HLC have recently been reviewed by Clark et al., (2004). The Devon HLC Project has already supplied various bodies with planning-related HLC data. To date, this has usually consisted simply of HLC data (shapefile with associated data for each polygon from project database). Some projects have been provided with purpose-built characterisations of the post-medieval and/or modern landscapes of their study areas.

The names of the projects supplied with data together with the bodies undertaking them are listed below:

*Project:*

**Exeter Airport extension**  
**A30 improvement (Blackdown Hills)**  
**Kingskerswell by-pass**  
**Ottery St Mary sewer improvements**  
**Mining World Heritage Site bid**  
**East Devon New Town**  
**South Hams New Town**  
**Community Landscapes Project**  
**Exeter M5 corridor development envelope**

*HLC data provided to:*

English Heritage  
 Wessex Archaeology  
 Wessex Archaeology  
 Atkins Heritage  
 Cornwall County Council  
 Devon County Council  
 Devon County Council  
 University of Exeter  
 Devon County Council

### Case Study: Kingskerswell By-pass

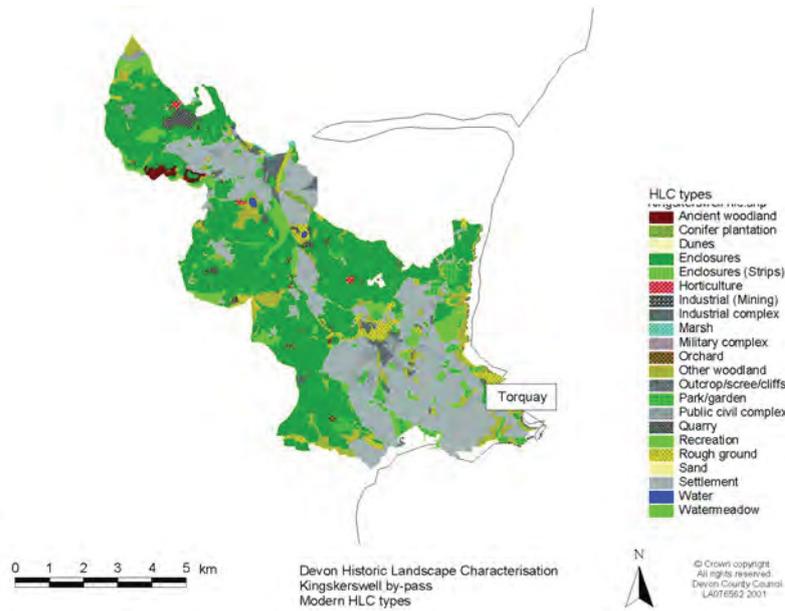


Fig 43. Kingskerswell by-pass: HLC of modern landscape.

An Historic Landscape Characterisation was prepared for Wessex Archaeology of a corridor of historic landscape between 2 and 6 km wide (a total of around 60km<sup>2</sup>) that would be affected by improvements to the A380 Kingskerswell by-pass between Newton Abbot and Torquay. This included shapefiles representing the modern, post-medieval and medieval landscape character of the area (prepared using a similar method to that discussed above, 4(e) and 4(f)).

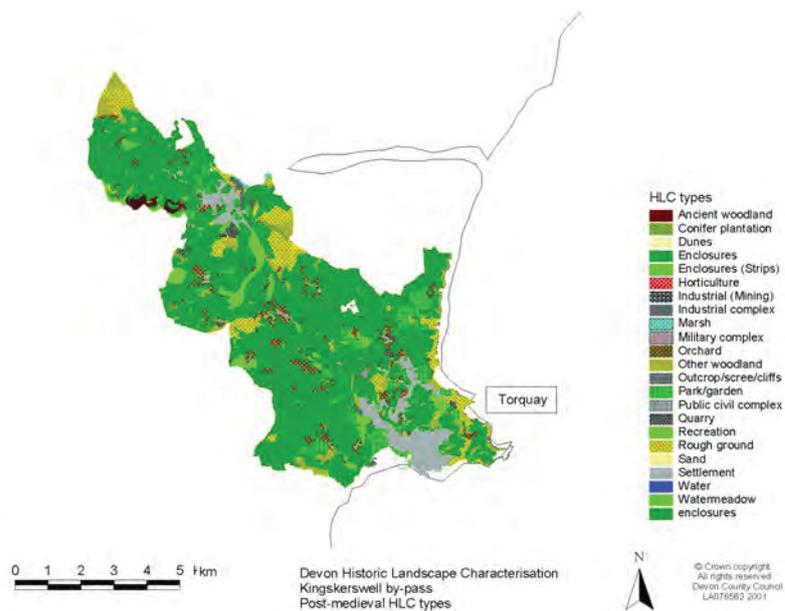
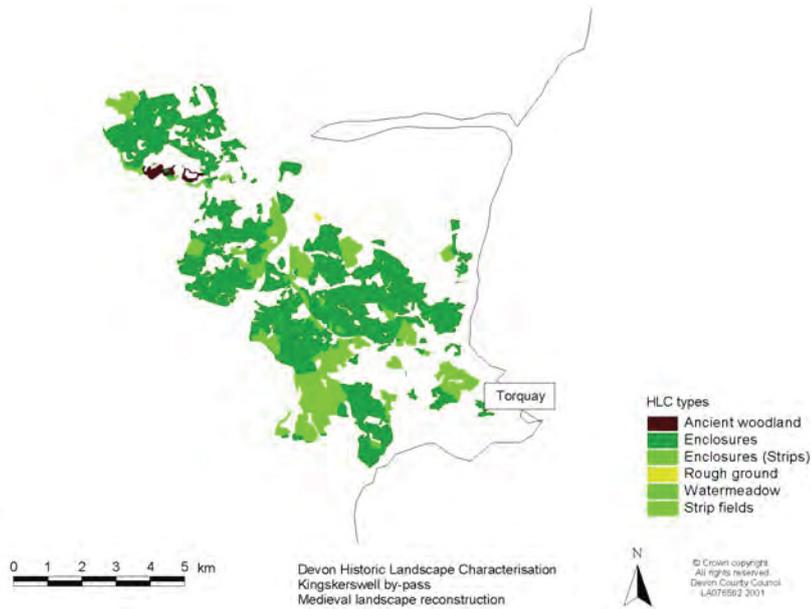


Fig 44. Kingskerswell by-pass: HLC of post-medieval landscape.

The consultants were also provided with the preliminary text discussing the different historic landscape character types mapped by the project. Using this text, the shapefiles enabled consultants to look at the preservation and distribution of different historic landscape character types in the study area and the effects of landscape change in the C20th.



*Fig 45.* Kingskerswell by-pass: partial HLC reconstruction map of medieval landscape.



# 6. Review and future opportunities

A recent methodological review undertaken by English Heritage identified many of the key aims and methodological approaches of the Devon HLC as ‘core’ for HLC in general (Aldred & Fairclough 2003, Ch.4; English Heritage 2002). It recommended as best practice many of the methods adopted for this project, including the data sources, data structure, documentation, and potential for analysis. However there are several ways the HLC methodology could be improved upon, and a number of ways the results of the Devon HLC could be developed in the future. The most obvious of these include:

## Achieving a better understanding of individual historic landscape character types in Devon

There are many ways future research using the HLC could improve our understanding of the distribution of different landscape character types, and the different rates of change in the Devon landscape. Some basic examples were introduced above, under Section 3(c), (d), (e) and (f).

## Achieving a better understanding of the interaction of individual polygons of HLC ‘types’ in the creation of Local Landscape Character

Preliminary analysis undertaken on the Devon HLC clearly shows the benefits of collecting HLC data at a detailed scale, and the GIS files and database provide an extremely detailed source for investigating the landscape history of the county. However, time constraints were an issue for the project, and whilst the rate of digitisation generally fell

within the 'core' time-cost allowed under the National HLC Method Review (Aldred & Fairclough 2003), the size and complexity of the county meant there was little time left to assess the potential of analysing the current and historic landscape character of the county at scales above the basic scale of digitisation.

However, it has been increasingly apparent during the course of the project that a better understanding of the interaction of different historic landscape character types in local areas would produce significant benefits both for planning / management and for landscape history. For example, large-scale developments like some of the examples mentioned under Section 5 (above) always impact on more than one historic landscape character type. It is therefore crucial to understand how best to manage the historic landscape character of local areas rather than individual 'polygons'. Likewise for landscape history it is necessary to understand in interaction of different elements of the historic landscape and the ways they combined to create distinctive regions in the past. These aims can only be achieved by analysing the HLC at a range of scales.

*Two further recommendations are therefore that:*

- (a) work should be directed towards understanding the ways landscape character in local areas is derived from specific combinations of historic landscape character types;
- (b) future HLC projects should consider this aspect at the Project Design stage and adopt appropriate strategies to include it.

## Clearer presentation to a wider public

Historic landscape characterisation is potentially a useful tool for a wide range of activities from outreach and education to planning and research. However, most characterisations have yet to fully realise their potential in these respects. To reach appropriate audiences the HLC needs to be presented in appropriate ways. In order to achieve this, the Devon HLC should be developed in the following ways:

- Fully accessible HLC be made available in the Devon County Council HER for planners, researchers and others concerned with the historic environment. This resource should include a full version of all the final HLC data, the shapefiles prepared for the web version (below), together with the text of this document.
- Web version of the HLC to be made available as soon as possible on the internet. To include the webviews produced in the shapefiles on the accompanying CD with the limited explanatory text provided in Table 1 (above).
- A technical article be published in an appropriate forum to inform planners, archaeologists, countryside managers, etc about the project, its methodology and uses.
- Regular (annual?) meetings/seminars be provided at DCC to introduce planners and countryside managers in Devon to the HLC and to appropriate ways of using it.
- A semi-popular, well-illustrated book be prepared emphasising the richness of Devon's landscape history and the ways HLC can contribute to a better understanding of it, to be marketed at the interested general reader, especially in Devon and the South West.

# 7. References

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