



SUFFOLK TRADITIONAL ORCHARD GROUP

Advice Note 1 (STOGAN1)

ORCHARD TRADITIONS IN SUFFOLK

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ORCHARD TRADITIONS IN SUFFOLK

INTRODUCTION

The traditional orchard habitat was given UK Priority Habitat status by the JNCC in July 2007, after many years of representation by ecologists and enthusiasts. Subsequently, the Traditional Orchards Habitat Action Plan (HAP) Steering Group was set up to create definitions, actions and targets. The joint lead partners are Natural England and the National Trust, and the Steering Group includes representatives from Natural England, the Countryside Council for Wales, Scottish Natural Heritage, the Environment and Heritage Service, Northern Ireland, the National Trust, the People's Trust for Endangered Species, the Tree Council, Herefordshire Wildlife Trust, Somerset County Council, Weston's, the Ancient Tree Forum, and Common Ground.

From an East Anglian perspective the national group tends to produce information with a distinct West Country flavour. Earlier definitions and statements from the group tended to refer to larger commercial orchards rather than the smaller family farmstead orchards more typical of Suffolk.

The Appendices to this Advice Note include the HAP Steering Group's current official "definition" of a Traditional Orchard and targets, Natural England's Technical Information Notes on Traditional orchards, plus references, websites and contacts.

Defra's current definition of a Traditional Orchard is 5 or more top fruit trees with no mention of minimum size. The HAP Steering Group's definition of a Traditional Orchard was originally a description typical of a West Country cider apple or perry pear orchard, but later this was modified, after complaints, to the current broader less prescriptive definition.

The definition of a Traditional Orchard is now generally agreed by all parties to be: 5 or more unsprayed fruit and nut trees on vigorous rootstocks "at low densities" in grazed, or at least grazeable, ground cover, with their canopies no more than 20m apart. This is qualified by the acceptance of varying local traditions, together with the recognition of features that add value by benefiting wildlife. For example, the retention of deadwood, both the canopy and on the ground provides additional habitat for invertebrates. There are a number of situations where this definition does not fit long standing regional traditional orchard forms, but in general this definition is widely understood. Orchard surveys have generally taken a wide and pragmatic view of what is, or isn't, a traditional orchard.

In general, the oldest orchards in Suffolk are akin to the Priority Habitat definition with some additional features. For example, they are often small, usually much less than a hectare, but not uniform, often having a mix of tall standards, half-standards, multi-stemmed trees, big cobnut stools and a wide range of species and varieties on the same site. There are often sheltering hedges containing additional planted hedge fruit such as damsons, bullace, cherry plums and old blackberry varieties.

Elsewhere in England there are other tree forms, including multi-stemmed trees (e.g. damsons), and vast half-standards branching only a foot or so above ground level (e.g. fenland apples, a form that exists very locally in NW Suffolk). In general the bearing branches are at head height or higher. In many orchards the rows were originally inter-planted with soft fruit or other crops, including sometimes top fruit on **dwarfing** rootstocks, these were taken out as the tree canopies closed, and only intensely commercial few orchards were never grassed down. In many cases of very ancient farmhouse orchards, the original planting method is unknown, and the trees may well have been planted directly into grassland.

This general orchard type with, a variety of fruit and nut species, varieties and forms and with branches high enough to be able to walk beneath the trees, is not only the traditional regional form, but is also the one most desired for amenity and community use, for its visual landscape value and the convenience of visitors. It is also the only objective for the agri-environment Higher Level Stewardship scheme planting. Unfortunately the importance of the right rootstock hasn't been appreciated in some new schemes, where trees on dwarf stocks can be seen struggling to compete with a grass sward. These orchards may never produce the landscape the owners intended.

By April 2012, Suffolk Traditional Orchard survey had recorded information from about 130 of the 470 Suffolk parishes, so there is a great deal of information still to collect. This advice note is based on the data collected to date.

The East Anglian fens retain some extensive commercial orchards, and some commercial orchards still exist on the claylands. These are either recent new sites, or replacements of the original traditional large trees, as close spaced low bush plants on dwarfing rootstocks. However most Suffolk orchards were sited near homesteads to feed a family and the farm and estate workers, or were small-holdings for market produce, usually a few miles from a market town. Some were planted in the grounds of institutions such as workhouses, hospitals, schools and colleges, some at country houses large and small, a few were planted in elegant walled gardens and some grown behind the pub for cider.

This information originates from the orchards recorded on the 2nd Ed OS maps (between 1905 and 1928). It seems that almost every farm house in the county had a small orchard somewhere; these made up the vast majority of the 6,200 sites recorded for Suffolk.

Where new "traditional orchard" plantings are planned, whether part of a Higher Level Stewardship management plan or for a new community or amenity site, it is assumed that this local small scale, "farm orchard" type, is the general format that would be preferred and this is the basis of the STOG recommendations.

ORCHARDS IN SUFFOLK

2nd Ed OS map approximately 1904 - 1920s

In 2007 Suffolk Biological Record Centre (SBRC) drew up a digital map layer of all the orchards in the county shown on the 2nd Ed OS 6" to the mile maps (Fig. 1).

The original maps were drawn over a period from approximately 1904 to the 1920s, with the north of the county surveyed first, followed by the central area and then the south, eventually showing 6,200 sites. SBRC mapped each orchard site as a polygon following the orchard boundaries.

This permitted the old orchard map layer to be superimposed on a modern digital map for use by orchard surveyors on the ground. These maps are produced as needed, usually just covering a single parish. Most of these sites have been lost, and surveying on the ground is the only method of checking what remains. Extrapolating from the surveys completed so far, about 15% are probably still in existence.

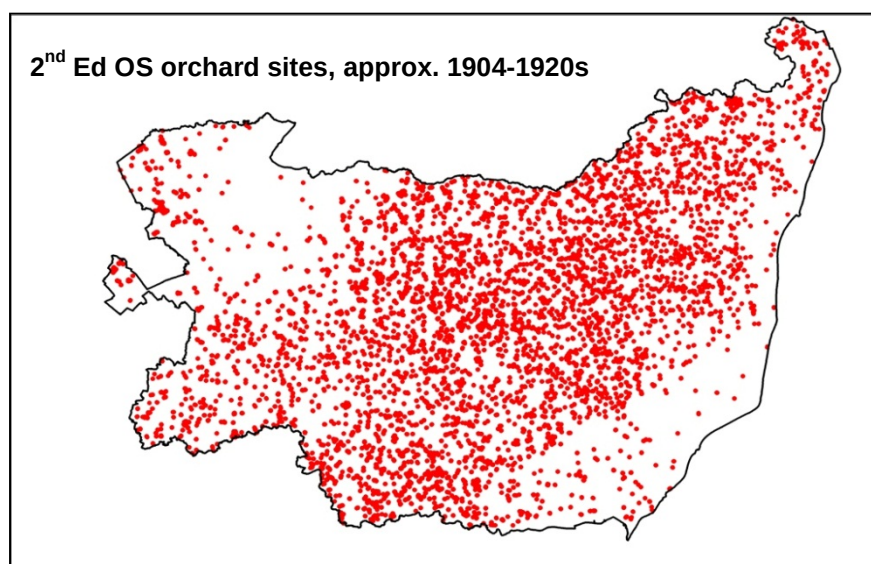


Fig 1

By mid-2011, 40 parishes (out of 470) surveyed had identified 88 traditional sites, suggesting about 1,000 sites may still exist.

Modern OS digital MasterMap

The current digital OS maps show orchards, although generally only large sites over 0.5 ha, with a green dotted symbol. This orchard map layer is overlain on the 2nd Ed OS map, providing parish surveyors additionally with a current view that almost always refers to commercial, and therefore usually dwarf variety, orchards. However, some old commercial sites have a few large unmanaged trees left, perhaps in awkward sites or corners or as windbreaks. These are often only identified from this modern map layer.

People's Trust for Endangered Species orchard map

Natural England commissioned a national inventory of Traditional Orchards in England from the People's Trust for Endangered Species (PTES) – Fig 2. Aerial surveys were used to produce maps on a county basis, resulting in another digital map layer.

Suffolk was one of the last counties to be mapped and this map was made available to Suffolk Traditional Orchard Survey in 2010. The PTES list contains 590 sites. About 60-80% may be genuine orchards, although many are modern dwarf tree orchards, and about 20-40% are not orchards, but rather other tree plantations.

A sizeable proportion of sites already surveyed and found to be important orchards are not mapped by PTES. This is usually because the tree sizes are not uniform or because the tree are no longer in lines. Nevertheless the list does have some sites shown on modern digital MasterMap and planted after the 2nd Ed OS maps. STOG surveyors are now provided with a map of their parish with all these three layers; red for the 2nd Ed OS map, green for the modern MasterMap, and blue for the PTES sites. In many cases other small orchards are discovered that are on none of these!

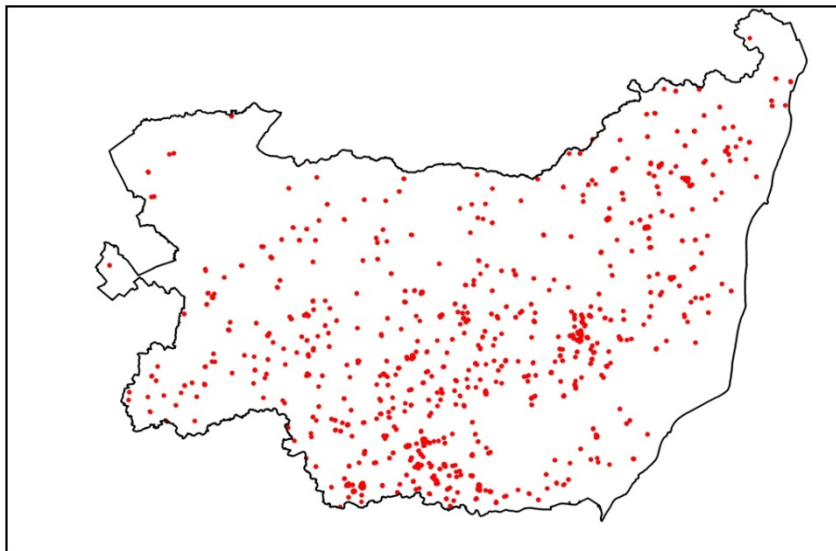
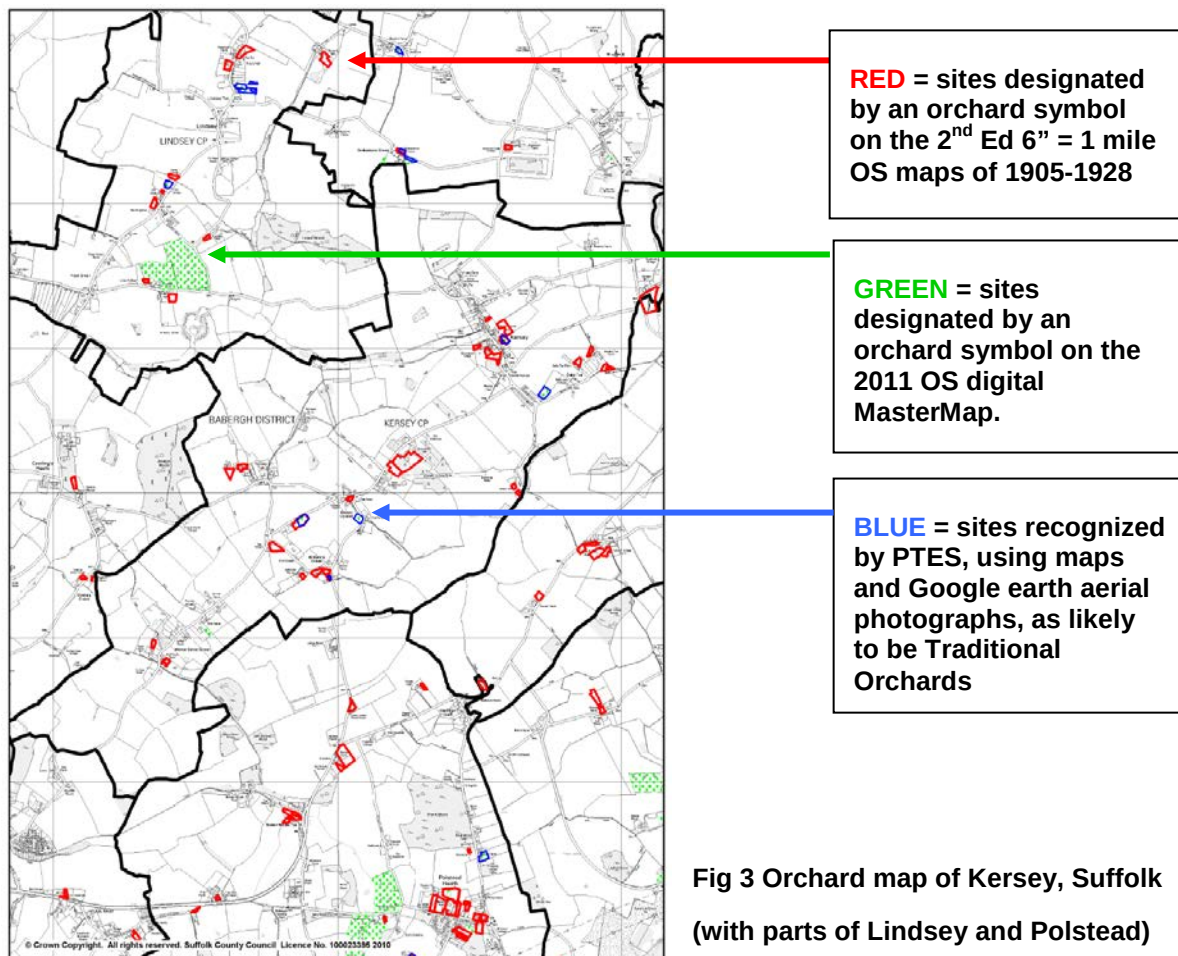


Fig 2
PTES has recorded 590 sites in Suffolk. Some are not orchards and a number of already surveyed orchards are not shown on their map.

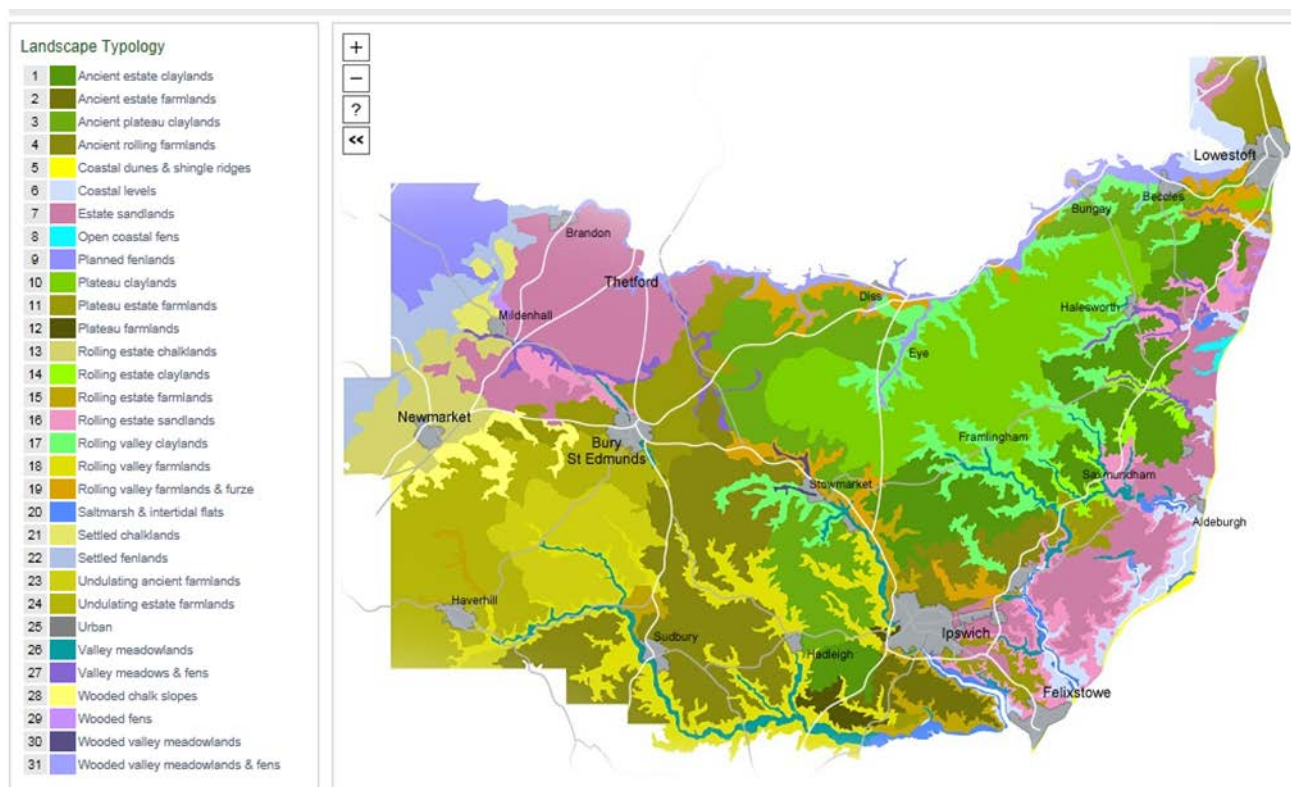
Fig 3 shows a typical survey map used by a surveyor with the three map layers combined.



Orchards are clearly distributed across the county in relation to landscape types and soil conditions and probably to factors that we do not yet recognize. It has already been possible to separate out certain traditional, relatively long standing, orchard types that relate to orchard areas. To date, the following have been broadly recognized, with characteristic crop and tree forms, but also less obvious characters, such as relationship to houses and farmsteads, and topography, all of which still has to be recorded and analysed.

- 1 **The Claylands**
- 2 **The Sandlings**
- 3 **South Suffolk "hills"**
- 4 **The Brecks**
- 5 **Light lands south-west of Bury St Edmunds**
- 6 **Fen edge and fens of NW Suffolk**
- 7 **Lothingland**

In addition, there are other areas that may, or may not, fit into these, or may have their own character; Shotley and Felixstowe peninsulars for example. Suffolk is a very diverse county. Fig 4 shows the landscape character types of Suffolk.



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Fig 4. Landscape character map of Suffolk showing clearly the different regions which are also reflected in the orchard types - Central High Suffolk claylands in shades of green, Sandlings and Brecks in purple, the dissected hills and valleys of south Suffolk, light lands in the SW in yellow, in blue the heavy fen-edge clays to the NW, Lothingland to the NE, and the two more diverse peninsulars of Felixstowe and Shotley in the SE.

The Claylands, the Sandlings and South Suffolk hills currently have enough surveyors actively engaged to be able to make some very basic initial comments, about the claylands in particular. Later editions of this Advice Note will add to and quantify this information, and add data about other regions as they are surveyed.

THE CLAYLANDS

The claylands area has the most number of orchard surveyors, and has, for several reasons, attracted the greatest interest from both inside and outside the county. It has a high density of old orchard sites which are probably the oldest orchards in the county, many associated with the oldest farm houses. They also support a surprising number of crop varieties, many of which are not easy to identify and some of which are turning out to be previously unknown, or at least unrecorded. In respect of orchard history and orchard “character”, the area seems to be identical to, and shared with, south Norfolk, at least north to Attleborough and Long Stratton and perhaps to Norwich. However, this area is attracting far less attention in Norfolk.



Fig 5 Old claylands farm orchard with 26 trees - apples, plums, cherry plums, bullace, damsons, cherries and several culinary pears including one 20m high (centre).

The East Anglian Claylands have few commercial orchards today, and the tithe maps of the 1830's and 40's do not show many commercial sites at all. However, they do show that almost every farm house and many cottages had an attached orchard, averaging in this region over 16 per parish. It is thought from the sample surveyed in Suffolk that about 15% still exist either intact, or as a reduced group of trees. Many have been incorporated, and gentrified, into gardens, some have been abandoned (many within the last twenty years), and even more are fragmented and left as just a single tree or two. Most losses seem due a lack of appreciation of the fruit and its uses, to housing development, and, recently, conversion to horse paddocks. These last two causes are perhaps inevitable as these orchards were almost always closely associated with houses.



Fig 6 An old claylands farm orchard, abandoned for decades, contains apples, plums and pears and a wide variety of bulbs. It was clearly planted as a spring garden. The hedges contain bullace and a cultivated blackberry.

Although these orchards may have originated centuries ago (typically every currently listed farmhouse had an orchard in 1900), the trees in them are not generally that old. Most of the oldest apple trees generally date from the 1930's, and pears, if on wild pear rootstocks, from 1900 or earlier. The last standard large trees were planted, at the latest, in the 1960's. Plums are frequently indicated by a mass of suckers or seedlings on the site of a dead tree. Rarely, a few trees may have been planted as long ago as the end of the 19th century, with just very old pears. Typically, mixed with these old trees is a miscellany of semi-dwarf trees from modern garden centres - struggling, just hanging on, or moribund.

While there are many variations in planting and tree forms there are some broad generalizations that we can use as initial principles to describe the orchards of this region, to be updated as the survey continues. These same characters can be used as a set of principles to define any new traditional orchard planting.

- 1 **Area** usually less than 1ha (2.5 acres), average is probably 0.3ha (0.7 acre).
- 2 **Standard trees** predominate except for cobnuts and some damsons, which are usually multi-stemmed and coppiced. Grafts or budding were generally just above ground level, except cherries (see below) although some apples, and pears on wild pear rootstock, and some on Quince, may be "scion rooted" – the top, scion variety, having rooted, and the tree is now on its own roots.
- 3 **High species diversity** - apples, pears, plums, nuts, quince etc. mixed.
- 4 **High clonal diversity** - many farm orchards have only one tree of each variety. The range of fruit cultivars within an orchard can be considerable.
- 5 **Apples are occasionally top "reworked"** above the main branching level to change the variety.
- 6 **Apples** seem to comprise up to 80%, pears up to 10%, of fruit varieties grown (but this may be due to the loss of shorter lived plums).
- 7 **Cherries** are rare in this region's orchards, and of those found many are "pole-grafted" at head height or above. Almost all cherry varieties required cross pollination, so at least two varieties, and therefore at least two trees, were originally grown. This explains a frequent complaint that a single remaining cherry doesn't crop.
- 8 **Pears, even tall 5m trees, on quince are frequent.** A large proportion of standard pears planted even before WW1, were on quince stock, and many of these were "bridge grafted" with a short compatible "inter-stock" between the rootstock and the grafted variety. Culinary pears (sometimes called 'wardens') are still found regularly in this area. These are hard pears that can keep until spring and always cooked.
- 9 **Large pear trees on wild pear rootstock**, or on their own roots, especially those considered to be planted in the 18th and 19th centuries, are common. Trees over 150 years old are generally not the relatively modern succulent and sweet *beurré* pears, but their crunchy forerunners (termed *crevers* or *cassante* in France), or culinary wardens. A surprising number of large old pears are summer ripe varieties and would have been eaten straight from the tree.
- 10 **Plums may only be present as suckers** or seedlings (as they are shorter lived than apples, in part due to silver leaf disease). Large old plum trees are rare, probably having succumbed to silver leaf, but a few monsters still exist, especially of cherry plums that are not as susceptible.

- 11 **Spacing in farm orchards** is often very erratic and variable, especially on very old sites. Presumably they were almost always planted in rows, but replanting over the years has lost the geometric layout. A few old sites are really wood-pasture, with canopies widely separated, but with the same high diversity of crop species and varieties. These sites often have huge pears and large cobnuts, and it has been assumed that the apples and plums have died out leaving the most long lived trees.
- 12 **Quincunx (diamond) layouts** are frequent (where the old planting pattern can be recognized).
- 13 **Final tree spacing** varied. Where the planting was 5m or less in the row, intermediate trees were probably removed as the canopies touched to a final spacing up to 10m. Mixed variety orchards comprise trees of very varied size - Bramley's Seedling can be huge, Cox's are never large, and spacing sometimes varied within farm orchards to accommodate this variation.
- 14 Very rarely there is evidence of **soft-fruit**, gooseberries and currants in particular, strawberries rarely, **and vegetables**, between the rows.
- 15 **"Grassing down" or "letting down to grass"** (carried out when the canopies closed over, and soft fruit was shaded out) may have been practiced, although many old farm orchards defy this sort of interpretation, and may have been planted directly into existing meadow land.
- 16 **Occasionally orchards were grazed** although very rarely today; geese, sheep, chickens, and turkeys are recorded. Pig grazing here is largely anecdotal; only two orchards are recorded where this definitely took place, relatively recently (and probably later regretted!).
- 17 **No recent evidence of hay cropping in orchards.**
- 18 **No specialist cyder (local spelling) apples.** Cider was and is made in Suffolk from a mix of culinary and dessert apples, with no addition of specialist bitter-sharp or bitter-sweet apple varieties of western counties. Perry is recorded as being made in East Anglia but there seems to be no recent references, but pears are still juiced and added to cyder. There are memories of traveling cider makers as well as static equipment; most was made on farms and by pubs. Today many orchard owners take all of their windfall crop to be juiced and bottled at local plants, a few then fermenting the juice.
- 19 **Old hedges provided shelter**, but were almost all conventional hedge mixtures, with additional trees. There were not the specialist "modern" high tree shelter belts of poplar or alder, except for some recent commercial plantings
- 20 **Older orchard sites probably all had a range of intentionally cultivated hedge crops.** The most common of these are green and black bullace and damsons (with much local confusion between damsons, bullace and "white" damsons), cherry-plums and old forms of cultivated blackberry. A few ancient sites also have the small St Julien-type gages, several small wild true plums, especially a small local yellow plum. It is often difficult to be sure how much of this hedge diversity was intentional and how much arrived from rootstock suckers or crop seedlings, but it is known that hedge crops were encouraged and helped to spread the cropping season, especially from early cherry plums.

- 21 A large proportion of unidentified crop varieties**, as mentioned above. This requires a lot more investigation. At present some of this evidence is anecdotal; clearly one reason could be that the varieties are from other areas of England and therefore unknown to East Anglian fruit identifiers. The trees are often old, and in many cases are clearly grafted and so, therefore, presumably once desired and considered worth the effort. Some are also either on their own roots or graft scars haven't been seen, but then it is becoming known that many old varieties were propagated from suckers (for example some pears and the plum, Yellow Egg). Others were seed propagated because they were "populations" (for example Greengages), rather than clonal varieties, like almost all apples.



Fig 7 An Old claylands farm orchard which includes a pond, pears, plums, cobnuts, and a walnut. This is, in effect, wood-pasture with large trees, now grazed with chickens.

THE SANDLING ORCHARDS

This characterization is in preparation and these notes are some tentative discoveries.

- 1 No commercial orchards.**
- 2 Sites are often isolated from farmhouse**, more so than in the claylands and many are associated with isolated farm buildings (some of which may have been farmhouses).
- 3 Country house estate orchards are more likely to be associated with gardens**, especially walled garden sites.
- 4 A number of orchards have been identified in very isolated sites**, near seawalls, in open heathland close to commons etc.
- 5 Some isolated cottages or cottage groups have small orchards.**
- 6 Apples clearly don't do well in these dry soils.** There seems to be a limited range of cultivars that are presumably tolerant of poor, dry and, in a few cases, acid soils.

- 7 **In contradiction, there are a significant number of apple and also a few pear trees, all probably seedlings, growing very close to the sea** and at least three have been propagated for seaside gardens. One at Thorpeness is within 100 m of the sea on a shingle bank. Dunwich Heath has several feral fruit trees on the cliff top.
- 8 **Pears are common**, or at least there is a high proportion of pears in orchards (despite the widespread belief that pears do well on wetter soils than apples).
- 9 **Plums are also common and appear to live longer and grow larger** than considered normal (and may be the reason why they appear more common than in the nearby claylands). Less silverleaf disease is reported.
- 10 **Several groups of large cobnut stools** on sandy sites have been found.

SOUTH SUFFOLK HILLS

This characterization is in preparation. These notes are only the start of collating information about the unique and fascinating orchards of this important area.

Unfortunately much of the traditional and very local market garden production of this area is in the process of being replaced by modern fruit production for modern mass markets; 50 trees to the acre is being replaced by thousands. The area is relatively close to market towns in Suffolk and Essex, and to the larger town of Ipswich, and it would seem that the combination of a warm dry climate and lots of south facing slopes situated close enough for a cart to reach a market town for the weekly market may be responsible for the orchard type and the crops once grown here. These are now just a memory, with very few traces left. These orchards were just a part of a much wider commercial vegetable and fruit growing tradition.

There were, and still are, orchards associated with farms, in the same way as in the claylands. However, in this area the crops are far more “conventional”, the houses often grander, larger and less bucolic, their gardens have more modern varieties and it seems less isolated than the claylands. Garden orchard trees are of much more recent varieties such as Laxton’s and Rivers’ rather than the older Catsheads and Warner’s Kings. Plums are of more well-known varieties than in the claylands too.

- 1 **Soils** are relatively light well-drained with some significant areas of acid sand (which now grow blueberries under polythene)
- 2 **A locally valuable commercial crop was sweet cherries**, on tall pole-grafted standard trees, needing 40 rung ladders. (One site recorded using two 60 rung ladders tied at the top to reach the highest crop!).
- 3 **A number of extremely local cherry variety names are known** (however if other cherry names are similar then they will probably turn out to be national widespread varieties, but only DNA will answer that question).
- 4 **Before WW2 there was a widespread production of acid cherries, morellos or dukes**, and a few orchards still retain these as small free-standing open-ground trees. They tend to be very gnarled and hollow with extensive rot, but are still productive, although unfortunately there is no market to supply!

- 5 **A recent discovery is extensive growing of cobnuts**, most grown as large multi-stemmed stools. However, two sites have grown out stools that look as if they were short stemmed and with a single trunk base similar to the local Kentish method.



Fig 8 A typical commercial south Suffolk apple orchard planted between 1930 and 1960 on M2, a vigorous rootstock. Pruned in this manner it is now retained for its landscape value. Pears, plums and morellos were grown in a similar way.



Fig 9 A 2-acre south Suffolk sheep-grazed cherry orchard in the process of restoration and some replanting under the Higher Level Stewardship agri-environment scheme. An old site present in 1905, this was part of a market garden that supplied Ipswich. It contains mostly standard cherries, but there are also some large pear trees.

Paul Read
March 2012

APPENDIX 1: TRADITIONAL ORCHARDS WORKING UK HABITAT ACTION PLAN

DEFINITION

Traditional Orchards are defined, for priority habitat purposes, as groups of fruit and nut trees planted on vigorous rootstocks at low densities in permanent grassland; and managed in a low intensity way. Cobnut plats are also included.

Background / Explanation to Definition

Traditional Orchards are a long-established and widely distributed habitat and make a significant contribution to biodiversity, landscape character and local distinctiveness across the UK. There are many regional variations on this theme, including apple, pear, cherry, plum, damson, and walnut orchards. Although cobnut plat structure and management varies between fruit tree orchards and has affinities with coppice woodland, they are also included in the definition.

Traditional orchards are a composite habitat (similar to wood-pasture and parkland), defined by their structure rather than vegetation type, which can include trees, scrub, grassland, ponds, walls, hedgerows and hedgerow trees. Traditional Orchards can take several different distribution patterns, including small and large patches, along linear boundaries, and trees dispersed among settlements.

Prime Traditional Orchard habitat consists of grazed grassland with fruit trees of varying age structure, with an abundance of standing and fallen dead and decaying wood. Young trees and newly planted orchards that are managed in a low intensity way are also included in the definition.

Low intensity management refers to orchards that are managed extensively, with little or no use of chemicals such as pesticides, herbicides and inorganic fertilisers, with relatively long-lived trees that are allowed to reach the veteran stage, and with a permanent grass sward that is usually grazed by cattle or sheep or cut for hay. Although Traditional Orchards have sometimes been established with soft fruit or other crops grown between rows, where these are managed extensively, the orchard floor has usually been grassed over once the trees have matured and the canopy has closed over.

TARGETS

1. No net loss of Traditional Orchards across the UK.

The aim of this target is to ensure there is no loss of Traditional Orchards of high nature quality but we acknowledge there will be some losses and gains in space and time.

2. Improve Traditional Orchards to a favourable condition.

A condition assessment has been agreed and is being used. The aim for this target is for the Traditional Orchard resource to be in favourable condition within an appropriate landscape unit.

3. Increase the extent of Traditional Orchards across the UK.

This target aims to expand the number of Traditional Orchards to counter the rapid decline in the second half of the 20th century. It can be delivered in three ways:

- *Planting fruit trees and / or clearing scrub on land parcels with scattered fruit trees (less than five and more than 20m apart) i.e. a relict orchard.*
- *Planting fruit trees on historic orchard sites where no fruit trees remain.*
- *Planting fruit trees where none occurred before.*

NB. we are actively seeking to map relict and historic orchard sites by the end of 2012 using the pilot methodology trialled in Monmouthshire, Wales.

Target 1. No net loss of Traditional Orchards across the UK

	2010 (baseline)*	2015	2020
UK	25,350	25,350	25,350
E	24,600	24,600	24,600
W	440	440	440
S	250	250	250
NI	60	60	60

* NB. we are actively seeking to refine the estimates by the end of 2011.

England: Ordnance Survey area in 2006 minus area of commercial orchards in Agricultural census of 2006 defined as intensive (84%) by lack of fully grassed orchard floor (Central Science Laboratory data).

Wales and Scotland: Ordnance Survey area minus area of commercial orchards in agricultural censuses of 2003 and 2002 respectively. Note that some of the commercial orchards in Scotland and Wales may be Traditional Orchards; thus the estimate of Traditional Orchard area may be an underestimate.

Northern Ireland: estimate from figure given in the Environmentally Sensitive Areas scheme booklet, Traditional Orchards option.

The Ordnance Survey data, which do not distinguish traditional and intensive orchards, show that orchards are dispersed throughout the lowlands of Britain, although there are concentrations in some areas particularly Kent, Cambridgeshire, Somerset and the Three Counties (Herefordshire, Worcestershire and Gloucestershire). The bulk (78%) of the commercial fruit production occurs in these concentrations in England, which implies that Traditional Orchards comprise the majority of the orchards elsewhere, as well as being known to occur in the orchard concentration areas.

Target 2. Improve Traditional Orchards to a favourable condition – a minimum of Good/Fair is to be reached across the current resource

	2010 (baseline)	2015	2020
UK	~	~	100%
E*	51%**	75%**	100%
W	~	~	100%
S	~	~	100%
NI	~	~	100%

* based on assessments of 4.3% of sites in England (N=22855 of which 983 have been assessed).

** based on no loss within current resource of Good/Fair & Excellent condition and restoration of 49% in Poor/[Destroyed] condition.

~ indicates there is currently no data.

PTES inventory condition data (covers 25 counties in England) Excellent (6%)
Good/Fair (45%)
Poor/[Destroyed] (49%)

Excellent (*Favourable - no change*);

Good/Fair (*Favourable - no change, Favourable – declining, Unfavourable – recovering*);

Poor (*Unfavourable - no change, Unfavourable - declining*);

Destroyed (*Unfavourable - destroyed*).

Given the current extent this would mean improving c6,000 ha by 2015 and a further c6,000 ha by 2020 – or just over 1,000ha/yr. We see agri-environment schemes as the main mechanism to achieve this target.

Target 3. Increase the extent of Traditional Orchards across the UK – a minimum of current area (ha) expanded by 50%.

	2010 (baseline)*	2015	2020
UK	25,350	31,687.5	38,025
E	24,600	30,750	36,900
W	440	550	660
S	250	312.5	375
NI	60	75	90

* NB. we are actively seeking to refine the estimates by the end of 2011.

England: Ordnance Survey area in 2006 minus area of commercial orchards in Agricultural census of 2006 defined as intensive (84%) by lack of fully grassed orchard floor (Central Science Laboratory data).

Wales and Scotland: Ordnance Survey area minus area of commercial orchards in agricultural censuses of 2003 and 2002 respectively. Note that some of the commercial orchards in Scotland and Wales may be Traditional Orchards; thus the estimate of Traditional Orchard area may be an underestimate.

Northern Ireland: estimate from figure given in the Environmentally Sensitive Areas scheme booklet, Traditional Orchards option.

At least half of the Traditional Orchards area (ha) in the UK has been lost over the last 60 years, so at least 50% (12,675ha) of the current area should be expanded by 2020 i.e. just over 1,000 ha/yr. This should aim to include an increase in the number of sites by at least 1% over 2010 to 2020. Again we see agri-environment schemes as the main mechanism to achieve this target but the role of LBAPs in identifying suitable areas for expansion is also crucial e.g. in orchard landscapes with noble chafer population concentrations. Some LBAPs are already adopting expansion targets, e.g. Norfolk has a 2 ha / year expansion target. Such LBAP targets may also be related to a future target for improving the connectivity or resilience of habitats and species populations, and to cross-plan action, especially with HAPs for hedgerows and wood pastures and parkland. In contrast, intensive management refers to orchards managed to maximise fruit production, usually including several of the following management practices; dense planting of short-lived trees on dwarfing rootstocks, high chemical inputs, intensive pruning to remove dead and decaying wood and maintain the trees in a restricted form, and frequent mowing and spraying of the orchard floor. Planting density depends on the species of tree. For apple, pear and cherry this will usually be less than 150 trees/ha. (approximately 8 m spacing between the trees), but for other species such as plum and damson this density may be higher. Tree form will usually be standards or half-standards, but will vary accordingly to species and local practice. Vigorous rootstocks include trees that are grown on their own rootstock, seedling rootstocks, and named rootstocks that allow the tree to develop to its full size.

The minimum size of a Traditional Orchard is defined as five trees with crown edges less than 20m apart. However the potential biological and genetic interest of sites with fewer trees, such as relict orchards and individual trees within gardens, is noted. Where appropriate these should be considered as potential restoration sites. It is recognised that other sites which fall outside the definition, such as organic bush orchards and fruit collections in walled gardens may also have biodiversity value, as well as historic, cultural and genetic

APPENDIX 2: SUFFOLK LOCAL BIODIVERSITY ACTION PLAN; TRADITIONAL ORCHARDS 2007

(Please note that the Action Plan will be revised shortly and probably combined with the Norfolk Action Plan)

1 Definition of habitat

a) Ecological

Traditional orchards are the products of historic land management systems, and represent a vegetation structure rather than being a particular plant community. In Suffolk it seems likely that this structure comprises mostly large, mature or over mature open-grown fruit trees at various densities, in a grazed mown or uncut grassland, but other structures, including hedges, may be present .

b) Horticultural

A mixed plantation of fruit (and/or nut) tree varieties (or species), which may include planted hedges, with trees propagated on traditional rootstocks, or on their own roots, and grown as coppice (in the case of nuts especially), half standards or standards.

This ecosystem is likely to be of interest for invertebrates (especially the saproxylics), epiphytes, lichens, bryophytes, fungi, bats as well as Bullfinch and Lesser Spotted Woodpecker, Song Thrush and Spotted Flycatcher.

2 Current status

National

The UK BAP review 2005 estimated that there were 28000 ha of traditional orchards in England based on Ordnance Survey area minus area of commercial orchards in census of 2000 defined as intensive (84%) by lack of fully grassed orchard floor (Central Science Laboratory data).

Historical data gathered from England show that over the whole country orchard area has declined by 57%.

Local

Based on mapping comparative areas of orchards on 1920 OS mapping and modern data, it has been possible to scope the number of potential remnant traditional orchard sites. The number of sites in 2007 is estimated at 271 with an estimated area of 81.14 ha.

However, this work is at an early stage and there is a great deal of scope for follow up surveys.

In addition the specific character of orchards in Suffolk appears to be highly variable. Across England as a whole traditional management styles and practices are extremely varied and within Suffolk there is some evidence to suggest this habitat falls in to several types dependent largely on soil type and economic factors.

- i. High Suffolk Claylands
- ii. Fenland
- iii. Coasts and heaths
- iv. South Suffolk

Although it is expected that a range of species is associated with this habitat there is no direct evidence of this locally because the habitat has not been recognised and specifically surveyed. Also because the sites are small, any records from orchards are not necessarily tied to that site

Natural Areas

Traditional orchards occur in all natural areas of Suffolk although the largest number are found in the Claylands

3 Current factors affecting the species or habitats

This habitat is generally found in small patches within, or adjacent to, settlements, therefore it is extremely susceptible to piecemeal loss from construction projects and conversion to gardens or pony paddocks

All orchard production is under considerable commercial pressure and traditional orchards are less economically viable in the current market place. However there has been some recent change with an increasing area of organic production and attempts to market some traditional varieties more aggressively. However the old small orchards, especially in the claylands, have been under severe pressure since 1950.

Site management issues:

- Neglect of trees and inappropriate pruning
- Inappropriate grazing, and/or lack of tree protection from grazing animals
- Poor management of grassland around the trees
- Failure to replace trees as they are lost

4 Current action

Action has been limited to some initial mapping work by SBRC so far.

5 Targets

Maintain current extent as at 2007 by 2010.

Expand the habitat in Suffolk creating two new sites (of local genetic stock) by 2010.

Improve condition of one traditional orchard sites annually by implementing appropriate management.

Locate, identify and record sources of clonal material of local and traditional top fruit and nut cultivars, (following, or in parallel with, the identification and surveying of orchard sites in the county), that can be made available for propagation, and the planting of new traditional orchards.

Identify varieties and cultivar clones, traditional management methods and orchard structures that favour orchard habitat biodiversity in the county (to provide data for future advice and guidance on new planting and habitat restoration).

6 Actions

Action	Achieve by date	Delivery partners)
Policy & Legislation		
Develop LDF policy for traditional orchards that can be used by District Councils in their LDFs in Suffolk.	2007	SLOG, DCs, SCC, NE.
Site specific allocations should be checked against habitat data for traditional orchards.	2007-2010	SCC, DCs.
Site safeguard and management		
Integrate protection of this habitat into the planning system at district level	2007	SCC SLOG DC's
Ensure that traditional orchard BAP data is available to planning officers through GIS layers provided by SBRC to DCs.	2007	SBRC, DCs.
Include data on the distribution of this habitat in the En Check system	2007	SCC
Develop draft criteria for Trad orchard County Wildlife Sites panel (CWS) panel.	2010	CWS panel & EEAOP
Safeguard Traditional orchards using Tree Protection Orders where required.	2007 and ongoing	Mid Suffolk DC, DCs.
Research and monitoring		
Develop a pilot scheme to assess the type and the extent of the habitat in each Joint Character Area in Suffolk, drawing from best practice in other parts of the region.	2007 - 2010 annually	SWT, SCC SBRC
Identify a programme of survey needs engaging local volunteers in survey and identify and apply for funding if needed.	2007 ongoing	SWT, EEOAP, SCC SBRC

Form a specialist team for in depth survey of selected Traditional orchard sites target known areas of known potential development (this team could also be used for wood pasture).	2008	SBRC Recorders, Suffolk bat group?
Advisory		
Provide advice to owners and managers of traditional orchard concerning appropriate management.	2007 -on-going	FWA , DCs, NE, SCC, landowners and managers.
Communications and publicity		
Devise a launch event for this HAP that engages the public.	Autumn 07 or spring	FWAG SCC EEAOP , SWT.
Support and work in partnership with other BAPs in the East Of England to support community lead traditional orchard initiatives.	2007 - 2010 Annual	SCC, SWT, EEAOP..

Monitoring of progress:

Reported annually on the UK BAP reporting system BARS Biodiversity Action Reporting system.

Objectives currently not achievable by the plan partners: none identified.

List of organisations that have been or will be consulted regarding this plan and have agreed to aim to deliver their organisations commitments:

Paul Read – Independent expert
Suffolk County Council
Suffolk Biodiversity Partnership
Suffolk FWAG
Suffolk Biological Records Centre
Suffolk Wildlife Trust
RSPB
Suffolk Coast and Heaths AONB Unit
Suffolk Landscape Officers Group

Others groups consulted:

Greenlight Trust
District and Borough Councils
East of England Apples and Orchards Project

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APPENDIX 3 REFERENCES, WEBSITES AND CONTACTS

Suffolk Biodiversity Partnership, <http://www.suffolkbiodiversity.org> for Habitat Action Plan and Suffolk Traditional Orchard Group, information, Advice Notes and other downloads,

Suffolk Landscape www.suffolklandscape.org.uk/

Natural England's Technical Information Notes on Traditional Orchards (downloadable TINs), TIN012 to TIN020,
<http://nepubprod.appspot.com/category/9001#content/>

Peoples Trust for Endangered Species, www.ptes.org