

1. Introduction

Traditional orchards have been added to the list of Priority Habitats under the UK Biodiversity Action Plan (published in August 2007) and are defined as including the following characteristic features:

- Orchards managed in a low intensity way, with little use of chemical pesticides and fertilisers and often grazed by cattle or sheep or cut for hay.
- Supporting at least five fruit trees within 20 metres of each other's crown edges.
- Having a low density of planting resulting in trees being widely spaced (between 3 metres in some plum orchards and 20 metres in perry pear and cherry orchards, reflecting regional differences).
- Including trees that are long-lived and allowed to reach the veteran-hollowed and gnarled stage.

Orchards support a wide range of wildlife due to the mosaic of habitats they encompass including fruit trees, standing and fallen dead wood, scrub and hedgerows. Fruit tree blossom is an important nectar and pollen source for moths, butterflies and bees whilst the fruit is an important food source for mammals, birds and insects. The trees are also valuable hosts for mistletoe and epiphytic lichens. Standing and fallen dead and decaying wood provide nesting sites for some birds and roosts for many bat species and are also important for fungi and bryophytes (mosses and liverworts). Boundary hedges surrounding orchards protect the trees from frost and wind damage and also provide additional habitats for wildlife. Reptiles and amphibians may also be found particularly where pond features are also present.

The Traditional Orchards Habitat Action Plan for Hertfordshire will include orchards that are currently managed at a low level of intensity and remnants of old orchard sites with fruit trees on them.

2. Current status

Traditional orchards are found in all countries of the UK although England has the bulk of the resource. The estimated extent of traditional orchards in the UK is 28,750ha as digitally mapped from the Ordnance Survey material although this does not distinguish between traditional and intensive orchards (BRIG, 2007). Ordnance Survey MasterMap data indicate the presence of 398 orchards covering 145.2ha in Hertfordshire.

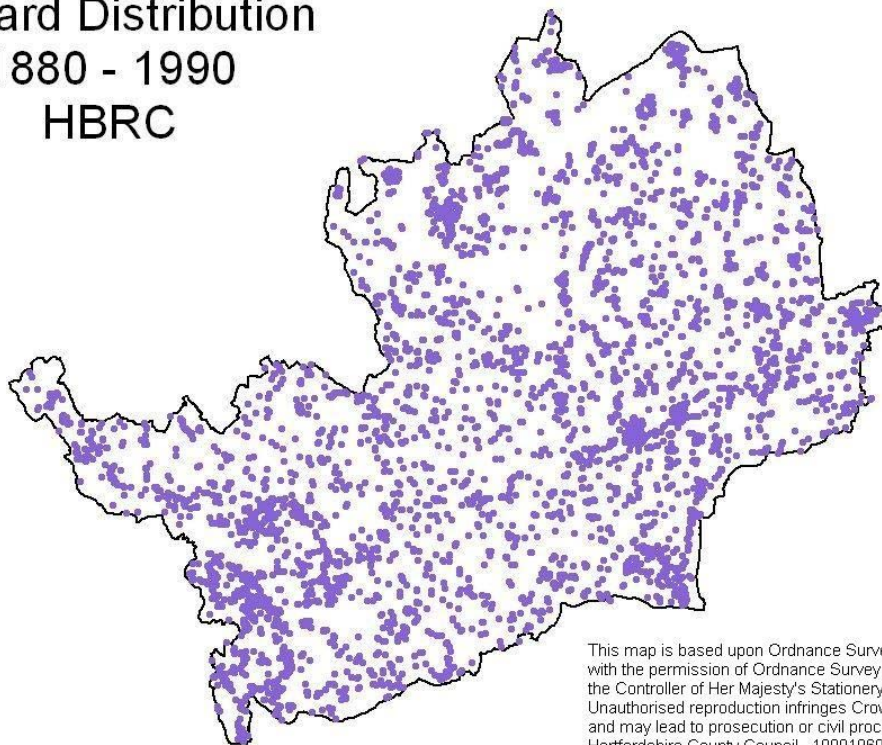
Historical data show that the orchard area across England has declined by over 56% since 1950. This figure has been derived by comparing the agricultural census figure of 108,555ha of orchards in 1950 with the current Ordnance Survey figure of 47,000ha (BRIG, 2007).

A detailed review of the historic distribution of orchards in the county - recorded on 1880s, 1930s and 1980s maps as well as 1990 aerial photos - was carried out by the

Hertfordshire Biological Records Centre and University of Hertfordshire (1998 – 2001). This process sought to identify all remaining sites supporting trees. On this basis, it has been estimated that some 2,500 sites may remain from the 6,000 originally identified. Orchard sites have been plotted on a GIS (Geographical Information System), as points, illustrated in map 1 overleaf.

Initial indicators show a decline of 58% in the number of orchard sites in Hertfordshire over the past 100 years with most of the surviving orchards being in relatively poor condition. Many of these orchards would have contained fruit varieties local to Hertfordshire with the result that many local varieties of fruit may have been lost.

Orchard Distribution 1880 - 1990 HBRC



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Map 1: Historic orchard distribution in Hertfordshire

3. Current factors causing loss or decline

- Economic changes leading to neglect: with the gradual loss of fruit markets and a cultural decline in the use of local fruit, there was little commercial incentive for orchard owners to retain and manage orchards as productive resources.
- A decline in management practices including grazing, pruning, cutting, tree management/replacement has resulted in many remaining orchards being in a derelict state, either with a few remnant trees or reversion to scrub or woodland.
- Pressure to provide extra housing and the general lack of any legal protection has resulted in the direct loss of orchard sites to development. Historically orchards have been fragmented and incorporated into gardens as low-density development progressed within the county. Currently numerous such 'garden' orchards are themselves threatened by development as backland plots are sought for building.

4. Current action

4.1. Legal status and site protection

Opportunities for the protection of traditional orchards have been very limited.

- The main protection of orchards is as part of a SSSI (Sites of Special Scientific Interest) designation. In Hertfordshire there are no orchard sites which fall within existing SSSIs.
- Local Nature Reserves (LNRs) are designated by Local Authorities in consultation with Natural England. To declare a LNR, the local authority must have a legal interest in the land, either by ownership, lease or management. An orchard could be declared a Local Nature Reserve or could be protected as an element within a Local Nature Reserve. Only 1 orchard site (Chorleywood Community Orchard) falls within a Local Nature Reserve within the County.
- TPOs (Tree Preservation Orders) can be used by Local Authorities to protect fruit trees where it is in the interest of amenity to do so. Amenity can also include scarcity and wildlife value. There are no known orchard sites protected by TPOs in Hertfordshire.
- The identification of sites as Local Wildlife Sites is a non-statutory process. Orchard Wildlife Site criteria, written in 1997, include Old Orchards defined as 'Surviving old orchards shown on Ordnance Survey first edition six inch maps with 10 or more trees'. There are 11 Local Wildlife Sites in Hertfordshire for which orchards are included within the habitat site description. In light of more recent descriptions of Traditional Orchard habitat, this criterion needs updating.
- Orchard sites are afforded some protection by planning policies in a number of Districts or through generic policies covering the Local Biodiversity Action Plan and its habitats and species. Sites can also be protected (or new sites created) through conditions and Section 106 agreements as part of the planning process.
- Traditional Orchards are included on the Section 41 (S41) List of Habitats of Principal Importance in England used to guide decision-makers such as public bodies in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006.

4.2. Mechanisms targeting the habitat

4.2.1. Grant Aid for restoration, management and guidance

Environmental Stewardship (ES), Defra's agri-environment scheme implemented by Natural England, includes positive incentives for the maintenance and restoration of existing traditional orchards, the recreation of small orchards on sites that either contain remnant trees or are known to have been orchards in the past and the planting of new orchards.

Funding bodies have also enabled the planting of orchards. Codicote Community Orchard for example was planted by parishioners in 1997/98 with funding from Rural Action, Hertfordshire County Council, North Herts District Council and Codicote Parish Council. The Tree Council have also funded two school orchard planting schemes in Hertfordshire.

4.2.2. Hertfordshire Orchard Initiative (HOI)

Hertfordshire Orchard Initiative (HOI), a voluntary not for profit group was established in 1998 in response to the rapid decline of Hertfordshire's orchards and fruit heritage. It is run by a group of Local Government Officers, orchard owners and wildlife

experts to enable and support the conservation and management of Hertfordshire's fruit orchards and cultivars and promote healthy eating. HOI has become the Habitat Action Plan working group for the Traditional Orchards Habitat Action Plan (HAP) in Hertfordshire.

Aims and Objectives of HOI are:

- To promote and encourage a greater appreciation of Hertfordshire's fruit heritage and healthy eating.
- To conserve and maintain the remaining traditional orchards and create new ones where appropriate.
- To create and maintain a database of sites and cultivars.
- To maintain and enhance the biodiversity associated with Traditional Orchards.

The group have also set themselves a target to increase the number of bottles of apple juice produced from Hertfordshire orchards to 10,000 annually by 2012.

4.2.3. Research and recording

HOI produced and disseminated an orchards survey questionnaire in 1998. The results of this questionnaire were used along with historic maps, aerial photos and Phase 1 survey data by the Hertfordshire Biological Records Centre to carry out a desktop survey charting the historical changes and current day distribution of orchards in the County. The results of this desktop survey have been mapped onto a GIS. HOI continues to work to collect and collate data on orchard sites and fruit varieties and this data will be maintained at the Hertfordshire Biological Records Centre.

From 2009, the University of Hertfordshire will be leading a Big Lottery-funded community science project, OPAL (Open Air Laboratories) East of England, carrying out research and involving people in exploring and recording the wildlife within orchards with a particular focus on mosses, liverworts, lichens and fungi growing on and around different varieties of fruit trees.

PTES (People's Trust for Endangered Species) is currently working in collaboration with Natural England and Esmée Fairbairn Foundation to create an inventory of traditional orchards throughout England. Using the latest MasterMap data and aerial photographs, it aims to locate and map the remaining traditional orchards using local volunteers to ground-truth the results. An inventory of Hertfordshire's traditional orchard sites will be undertaken in 2010.

The East of England Apples and Orchards Project (EEAOP) has also undertaken recording of cultivars on certain sites.

4.2.4. Advice and guidance

Hertfordshire Orchard Initiative (HOI) provides specialist advice and guidance on the management and restoration of old orchard sites and on the creation of new orchards. Some examples include:

- Fairshot Court, St. Albans
- Heartwood Forest (Woodland Trust) Orchard, St. Albans
- Knebworth - farm orchard restoration project
- Oaklands College, Smallford Campus
- Radwell - farm orchard restoration project
- Simon Balle School, Hertford

HOI also enables and supports community and school orchard projects when the opportunity arises. HOI Steering Group members have been instrumental in establishing the following orchard community projects in the last 5 years:

- Aldenham School
- Baldock Community Orchard
- Broadfield Junior School, Hemel Hempstead
- Cheshunt Park Community Orchard
- Chorleywood Community Orchard
- Dundale School, Tring
- Fairshot Court Community Orchard, St. Albans
- Hillside Gate, St. Albans Community Orchard
- Kimpton Community Orchard
- Preston Community Orchard (planted for the Millennium)
- Rivers Orchard, Sawbridgeworth and associated planting in local schools
- Riverside Road, St. Albans Community Project
- St Peters Churchyard Project, St. Albans
- YWAM, The Oval, Harpenden Community Orchard

Management for biodiversity in orchards is embraced within orchard conservation generally but site-specific wildlife enhancement is also provided.

EAAOP has also provided advice on orchards within the county and provides a nursery service of regional cultivars for sale.

4.2.5. Practical opportunities for orchard managers

HOI has supported and encouraged the development of a formal juicing facility at Shenley Park in 2006 to help HOI members and others create a marketable product from their produce. It also uses and supports other such facilities at Cam Valley Orchards near Royston and Meads Farm near Tring.

4.2.6. Publicity and Marketing

HOI promotes and encourages a greater appreciation of Hertfordshire's orchard and fruit growing heritage through giving talks and orchard guided walks, holding orchard open days, providing juicing demonstrations and displays at events such as Farmers Markets and Country Fairs. It promotes an extensive programme of events throughout October each year in support of numerous 'Apple Days' throughout the county where biodiversity is promoted as a key element of orchards.

There are numerous local groups and initiatives within the county that further promote their own orchard activities, from holding apple days to giving talks. Examples include:

- Community Orchard Project at Rivers, Sawbridgeworth
- Tewin Orchard, one of the first to hold an Apple Day event nationally
- Codicote Community Orchard
- Chorleywood House Estate Community Orchard
- Highfield Park Orchards
- Jeacocks Orchard and Tring's Own Apple Fayre
- Shenley Park Stanley Lord Orchard
- St Albans Watercress Wildlife Association
- Tewin Millennium Community Orchard

There is also an increasing interest within the Transition Towns movement, especially those with local food groups which are trying to encourage and promote the growing and use of local produce, and HOI would seek to engage these groups as well.

With funding from Common Ground, Hertfordshire County Council, St. Albans City and District Council and Watling Chase, HOI produced a comprehensive information pack on Hertfordshire Orchards to include a guide to their History, Conservation and Management. In addition, an Orchard Guide leaflet has been reprinted twice and leaflets promoting all apple day events produced since 2006.

HOI have developed a website (<http://www.hertfordshireorchardinitiative.org.uk/>) providing information on their aims and objectives, members, dates of Apple Day events and a list of useful contacts.

Rivers group have recently published a book on Hertfordshire's heritage of fruit varieties and the horticultural and social history of fruit growing in the area. Mike Clark of Tewin has written a Whittet Guide to Apple Identification and there are plans to prepare a reprint of this popular book.

HOI will be working with Learning Through Landscapes (LTL) on their *Fruit-full Schools* programme in Hertfordshire to enable children to establish heritage fruit orchards within their school grounds and in partnership with their local communities.

EEAOP (East of England Apples and Orchards Project), a registered charity, also promotes awareness of traditional orchard fruits in Norfolk, Suffolk, Cambridgeshire, Essex, Hertfordshire, Lincolnshire and Bedfordshire. They propagate local varieties in their own nurseries to sell to their members and others to establish more orchards and garden trees using heritage varieties.

5. Traditional Orchards Action Plan

Objectives, targets and actions

Objectives

- To prevent further loss of Traditional Orchard habitat
- To manage and restore remaining Traditional Orchard sites
- To create new Traditional Orchard habitat where appropriate and ensure local heritage fruit varieties are included in planting schemes
- To promote and raise awareness of Traditional Orchards and their biodiversity value to key target audiences such as orchard owners, land managers, local authorities and the general public

Targets

- To support the PTES Traditional Orchard surveys in 2010 and 2011
- To restore 5 Traditional Orchard sites by 2015
- To create 10ha of Traditional Orchard habitat by 2015
- To hold three awareness raising events annually

Proposed actions with lead agencies

Action	Start date	End date	Lead partner	Other partners
5.1 Policy and legislation				
Ensure orchards are protected by the inclusion of Local Biodiversity Action Plan policies within Local Development Framework documents.	2010	Ongoing	HBRC	HMWT
Review criteria for the selection of Traditional Orchards as Local Wildlife Sites.	2010	2011	WSP	
Identify suitable orchards to be designated as Traditional Orchard Local Wildlife Sites.	2010	Ongoing	WSP	
Identify suitable orchards for LNR (Local Nature Reserve) designation.	2010	2011	HOI	LAs NE
5.2 Site safeguard and management				
Defend important orchard sites when threatened by damaging development.	2010	Ongoing	HOI	HBRC HMWT
Support the application of TPOs to protect orchard trees/sites where appropriate.	2010	Ongoing	LAs	HBRC HMWT
Use planning Conditions or S106 agreements to maintain, enhance or restore Traditional Orchard sites where the opportunity arises.	2010	Ongoing	HBRC	HMWT
Encourage the establishment of new Community Orchards where the opportunity arises.	2010	Ongoing	HOI	CMS
Encourage the establishment of new School Orchards where the opportunity arises.	2010	Ongoing	HOI	
Encourage the planting of local heritage fruit varieties and keep a record where appropriate.	2010	Ongoing	HOI	HMWT
Encourage the uptake of agri-environment scheme options for the maintenance, restoration and creation of Traditional Orchards.	2010	Ongoing	CMS	FWAG HBRC NE

5.3 Advisory				
Provide advice on the planting of local varieties in new orchards, schools or community orchard projects.	2010	Ongoing	HOI	
Provide advice on the implementation of favourable management on existing Traditional Orchard sites where the opportunity arises.	2010	Ongoing	HOI	
Provide advice on the restoration of derelict/neglected Traditional Orchard sites where the opportunity arises.	2010	Ongoing	HOI	
5.4 Research and monitoring				
Support the PTES Traditional Orchards survey, providing additional information and support for fieldwork where appropriate.	2010	2010	HBRC	Volunteer surveyors
Ensure results from the Traditional Orchards inventory are sent to the Hertfordshire Biological Records Centre.	2010	2011	PTES	
Ensure results from the OPAL orchard research and biodiversity events are sent to the Hertfordshire Biological Records Centre.	2010	2012	UH	
Undertake biodiversity studies of orchard sites as opportunities arise.	2010	Ongoing	HOI	
Maintain the database of known orchard sites and cultivars.	2010	Ongoing	HBRC	HOI
Continue searching for known lost Herts varieties.	2010	Ongoing	HOI	
Identify key orchard landscape areas - as defined by historic patterns of land use.	2010	2010	HBRC	
5.5 Communications and publicity				
Publicise and deliver annual Apple Day events.	2010	Ongoing	HOI	
Attend Farmers Markets and Country Fairs.	2010	Ongoing	HOI	
Give talks to local horticultural and other interest groups across the County.	2010	Ongoing	HOI	
Update the HOI Information Pack on Hertfordshire Orchards.	2010	2011	HOI	
Develop and maintain the HOI website to provide information on orchard management and restoration, local fruit varieties, date of farmers markets and events and a list of useful contacts.	2010	Ongoing	HOI	
Write two media releases per year on an orchard/fruit theme.	2010	Ongoing	HOI	
Work with the national charity Learning through Landscapes (LTL) on their <i>Fruit-full Schools</i> programme.	2010	Ongoing	HOI	
Establish links with regional and national orchard groups as well as other local food initiatives.	2010	Ongoing	HOI	

Key References

BRIG (Biodiversity Reporting and Information Group) 2007. Report on the Species and Habitat Review: Report to the UK Biodiversity Partnership.

Abbreviations (Partners)

CMS – Countryside Management Service

EA – Environment Agency

FC – Forestry Commission

FWAG – Farming and Wildlife Advisory Group

HBRC – Hertfordshire Biological Records Centre

HMWT – Herts & Middlesex Wildlife Trust

HOI – Hertfordshire Orchard Initiative

LAs – Local Authorities

LVRPA – Lee Valley Regional Park Authority

NE – Natural England

UH – University of Hertfordshire (OPAL East of England)

WSP – Wildlife Sites Partnership (Chilterns AONB, CMS, EA, FC, FWAG, HBRC, HMWT, LVRPA, NE)

Contact:

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