

URBAN FOREST

LOCAL HABITAT ACTION PLAN FOR CAMBRIDGESHIRE

Last reviewed: January 2000

1 CURRENT STATUS

1.1 Context

The urban forest collectively describes all trees and woodland in an urban area (NUFU 1999). With approximately 10% of the UK land surface in urban use (HMSO 1994) and this being home to the majority of the population the urban forest contributes to biodiversity in the following ways:

- It supports genetic variation within and between tree species.
- It provides a habitat to flora and fauna.
- It provides a framework ameliorating the urban environment by climate regulation, water protection, noise and pollution abatement (Kanijnendijk 1999) within which other habitats benefit.
- It raises the awareness of biodiversity amongst the general public by bringing nature to its doorstep.

1.2 Biological Status

The urban forest includes trees in woodlands, parks, streets, industrial estates, private gardens etc. The nature conservation value of the urban forest has primarily been studied in terms of these land use types. It has been found that biodiversity is inversely proportional to the degree of urbanisation (Cole 1983). For example areas of encapsulated countryside such as Sheep's Green in Cambridge have a higher biodiversity than the built and street environment. It can also generally be said that larger and older trees (especially veterans) support a greater degree of wildlife as do larger groupings of trees (eg thickets of natural regeneration, carrs, scrub, woodland etc), and native species (especially of local provenance). Deadwood is also a valuable component of the urban forest providing a range of habitats from; dead limbs on living trees; decay columns in trunks and branches; rot holes in standing trees; standing and fallen deadwood of varying proportions.

The range and value of habitats provided by the urban forest may conflict with other land use priorities; the duty of care expected of tree owners and managers in respect of safety to the general public and property; and the importance of exotic species in providing a diverse visual amenity whilst withstanding the many hostile growing conditions found in the urban situation.

1.3 Current National Status

A study by the Land Use Consultants (1993) on behalf of the Dept. of Environment examined the nature of the urban tree resource in England through a sample of 66 representative settlements. The following figures have been drawn from this report.

Tree densities Residential areas have the highest density at an average of 54 trees per hectare. Residential areas make up between 45-65% of the total land areas in towns, reflecting their importance in the make up of the urban forest.

Tree cover Urban woodlands showed the greatest ground cover, followed by canal banks, formal green space, road corridors and churchyards.

Tree species Cypress types emerged as the commonest tree at 22% of the overall proportion of species groups followed by small native broadleaved species, sycamores then decorative species all at 8% each. The greatest diversity of species occurs amongst trees 50-100 years old and the least amongst trees planted 10-25 years ago.

Tree status 80% of trees are in private ownership.

Age of trees 73% of all trees were found to be under 25 years old. The highest proportion of trees over 50 years were found in churchyards, formal recreation grounds and formal open space. The ratio between trees of different ages is important to ensure that there is a long term continuity in tree cover.

Condition of trees 4% of trees surveyed were found to be dead, dying or diseased. 12% were in poor condition. The highest number of these being found in heavily industrialised areas. These figures do not indicate the rate at which damage and disease occurs or what numbers of dead and dying trees are removed each year.

Naturally regenerating trees Naturally regenerating trees are most prominent in town centres. This is followed by industrial estates, remnant countryside, informal space and residential gardens. The contribution that naturally regenerating trees make to wildlife depends on their location.

Trends There has been a small overall increase in the urban tree population of 4% since the late 1960's. It should be stressed that considering the rate of land use change since the late 1960's the general increase may obscure losses elsewhere.

1.4 Current Local Status

Locally the urban forest resource has not been evaluated, however much of the information may already exist in the form of; aerial photographs; OS maps; land ownership maps; specialist surveys for arboriculture or nature conservation; TPO registers; tree work applications; street tree maintenance schedules; local authority planting records; Forestry Commission Woodland Grant Scheme records etc (NUFU 1999).

Analysis of part of one the county's council managed tree stock (CCC 1996) shows a lack of diversity apparent amongst tree families and genera making it more vulnerable to disease or the stress of climate change. Currently the Rosaceae family appears over

represented at 40% of the total stock with cherry species and varieties making up 50% of this.

This data, although useful as a representative of part of one the county's local authority tree stock, is unlikely to reflect the position of the urban forest as a whole. It is more likely to follow national trends with an increased bias toward willow and poplar trees reflecting the local prominence of these species and local fruit tree varieties as remnants of the county's past fruit growing industry.

1.5 Species

The urban forest can contain important tree collections such as the arboretum at Cambridge University Botanic Gardens. A nationally rare species found in the county's urban environment is *Populus nigra* var. *betulifolia*. Local fruit tree varieties such as the Cambridge Gage and Histon Favourite (Halford & Knight 1999) may not be rare but are an important part of the county's genetic heritage.

Wildlife associated with urban trees are generally not rare and can usually be found in greater numbers in the wider countryside. Nature conservation in towns is primarily for people's benefit and therefore it may only be necessary to attract the more visible and conspicuous species, particularly birds (eg tits, robins, finches, blackbirds etc) which are popular with the general public and the more highly visible invertebrates (eg butterflies such as the holly blue, speckled wood and comma) (Game 1997).

It should be stressed that there are those habitats within the urban forest which have a high nature conservation value or potential which should be managed according to their specific requirements.

2. CURRENT FACTORS AFFECTING LOSS AND DECLINE

- 2.1 **Climate Change** - Extremes of weather such as high winds, high temperatures, droughts and excessive rainfall have all been features of the recent past. These extremes can cause severe damage to the urban forest. Conversely milder winters and wetter summers, as have recently been experienced, can cause proliferation of fungal infections and insect infestations (Lonsdale 1999) which when extended over a number of years can significantly degrade the urban tree population.
- 2.2 **Development Pressures** - Cambridgeshire is one of the fastest growing regions both economically and in terms of population. Development in urban areas to accommodate this increase leading to a densification of the built landscape will gradually erode the current urban forest and the potential to enhance it.
- 2.3 **Trenching** - close to trees can cause root damage and reduce their safe useful life expectancy precipitating their early removal. Principal causes of this type of root damage occur during the installation and maintenance of cable TV, IT networks and of statutory services (eg water, gas, electricity and sewerage) (Baines 1994). The construction and improvement of highways can be locally significant.
- 2.4 **Subsidence** - Since the mid 1970's the pressure to severely lop or remove trees to either avoid or abate structural subsidence has lead to a significant level of damage to the urban tree stock. Evaluation systems, selection of species to plant and the education of

society and the insurance and building industries is improving. There will always be problems of subsidence but there are indicators that the ferocity of the resulting tree losses has peaked.

2.5 Dutch Elm Disease - Dutch Elm Disease has had significant adverse effect on the elm population in Cambridgeshire and Peterborough. However, unlike in other areas of the country there are still a significant amount of mature and veteran live elms. These can be threatened because they 'might contract the disease' thus precipitating their early removal on safety or amenity grounds or because they are judged to be a low priority in new development sites.

2.6 Other - The annual rate of establishing new trees in public areas remains depressingly low. Though vandalism is often blamed, and is a factor, the quality of handling and planting trees together with inadequate post planting maintenance are the more likely reasons for failure. Mechanical damage associated with grass maintenance together with inappropriate selection of and use of herbicides remains probably the largest factor of tree loss or decline in their first seven years.

3. CURRENT ACTION

3.1 Legislation - There are a wide range of statutory acts (namely the Town and Country Planning Act 1990 and Wildlife and Countryside Act 1981) and local by-laws, that impose a duty on local authorities and the general public to protect certain trees, habitats and the species that use them, which can be applied to the urban forest. These are supported by guidance from government, government agencies and non-government organisations in the form of circulars, advisory and practice notes. Although some sites are protected because of their habitat value (eg Local Nature Reserves) those trees protected under the Town and Country Planning Act are chosen principally because of their visual amenity, whilst their habitat value remains a secondary consideration or unassessed altogether. Recent recognition of nature conservation issues means that the case for protection based solely on significant habitat amenity could be argued. Amendments to the Town and Country Planning Act regulations have afforded a greater protection to fruit trees however lobbying government still needs to be encouraged to remove dead and dying trees from exemption as they are all potentially valuable habitats and their safety can often be managed.

3.2 Management - of the urban forest is by the various local authorities within the county and private landowners or their agents. Although the majority of the urban forest is in private ownership local authorities influence its management through the planning system. Regional Planning Guidance, Unitary Development Plans, Structure and Local Plans, Supplementary Planning Guidance as well as Arboricultural and Nature Conservation Strategies all provide a framework for the management of the urban tree population. TPO and Conservation Area designation help protect the urban forest. Site specific development briefs and planning conditions and agreements provide opportunities to maintain and enhance the urban forest in new development sites (NUFU 1999).

4. OBJECTIVES AND LONG TERM TARGETS

4.1 Objectives

- To halt the indiscriminate loss of and damage to urban trees.
- To diversify the age structure of the urban forest.
- To increase the range of tree species.
- To make greater use of native species where appropriate.
- To maintain and enhance the nature conservation value of the urban forest.
- Consolidate the elm recovery programme.

4.2 5 Year Targets for 2005

- Have a countywide compatible basic database describing the character and extent of the urban forest.
- Publish awareness of the contribution that the urban forest makes to biodiversity to all sections of the community.
- Produce a community based strategy for the management of the urban forest integrating nature conservation and arboricultural values.
- Publish information on tree management to reduce damage to and loss of urban trees.

4.3 10 Year Targets for 2010

To be decided, see Section 5, Proposed Action, Policy

5. PROPOSED ACTION WITH TARGETS

Action for the next three years is detailed in the attached programme.

5.1 Policy

- Produce a community based strategy for the management of the urban forest integrating nature conservation and arboricultural values.
- Promote the community value and benefits of the urban forest.
- Develop an integrated approach to the management of the urban forest not only between local authorities and its departments but with the general public and interested outside bodies.
- Lobby the government for research into subsidence related structural damage.
- Lobby government for changes to the Town and Country Planning Act to

recognise biodiversity values as a primary material consideration.

- Determine 10 year targets for 2010.

5.2 Management

- Create new pollards to be managed as future veteran pollards and where appropriate top and lop existing trees to accelerate colonisation of decay agents.
- Create new deadwood habitats of all types.
- Employ other nature conservation techniques for increasing habitat potential where appropriate.
- Address species diversity, including trees of local genetic significance through the various local authority 'free tree schemes'.
- Identify valuable tree, woodland and deadwood habitats and protect where appropriate.
- Continue to collect elm cuttings for the elm hedge at the Botanic Gardens.

5.3 Monitoring and research

- Create a regionally compatible database.
- Identify the characteristics, value and extent of the urban forest resource.
- Identify methodology of data collection, storage and retrieval.
- Review the status of elm for the future programme and collate existing elm records.

5.4 Advisory

- Provide site specific interpretive material on habitat value within the urban forest.
- Provide information on tree species selection to ensure a greater diversity.
- Provide other advice on management for nature conservation.

5.5 Communications and publicity

- Publish material on the biodiversity value of the urban forest.
- Publish information on tree management to reduce damage to and loss of urban trees.
- Publicise the live elm story and encourage landowners to safeguard live elms.

6 LINKS TO OTHER PLANS

The urban environment can be seen as a mosaic of different habitats. These habitats may already have separate habitat action plans which should be read in conjunction with this plan where they include trees that are part of the urban forest. The habitat action plans may include:

Scrub	Reedbeds	Lowland Calcareous
Woodlands	Ditches	Grassland
Cereal Field Margins	Wetlands	Hedgerows
Wet Woodlands	Veteran Trees and	Mineral Restorations
Gardens	Parkland	Arable Land
Allotments	Traditional Orchards	Meadows and Pastures
Road Verges	Brownfield Sites and	Fens
	Built Environment	

7 REVIEW OF ACTION PLAN

Arrange monitoring and review of these targets annually and reset targets and responsibilities for the following three years accordingly.

8 REFERENCES

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- CCC (1996) **A Citywide Arboricultural Strategy**. Cambridge City Council.
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- HMSO (1994) **Biodiversity: The UK Action Plan**. HMSO London.
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- Halford, B & Knight, P (1999) **Habitat Action Plan for Traditional Orchards in Cambridgeshire**. First draft. Trees and Woodlands Working Group, Cambridgeshire's Local Biodiversity Action Plan (unpublished).

9 LIST OF INDIVIDUALS AND ORGANISATIONS CONSULTED

Anglian Water Services Ltd
Arboricultural Association
Beetles Recorder for Huntingdonshire Fauna & Flora Society
Beetle specialists
Bird Recorder for Huntingdonshire Fauna & Flora Society

Bird specialists
Biodiversity Partnership Co-ordinator
Botanists
BSBI Recorders
Butterfly Conservation Society
Cambridge Amateur Entomologists
Cambridge Bird Club
Cambridge City Council
Cambridge Natural History Society
Cambridge Preservation Society
Cambridgeshire County Council
Dr Max Walters
East Cambridgeshire District Council
English Nature
Environment Agency
Farming & Rural Conservation Agency
Farming & Wildlife Advisory Group
Fenland District Council
Flies specialists
Flowering plant recorder for Huntingdonshire Fauna & Flora Society
Forest Enterprise
Forestry Authority
Forestry Commission
Fungi recorder for Huntingdonshire Fauna & Flora Society
Fungi specialists
HFFS for Huntingdonshire Fauna & Flora Society
Hinchingsbrooke Country Park
Huntingdonshire District Council
Institute of Terrestrial Ecology
JNCC
Landscape 2000
Local naturalists
Moth recorders for Huntingdonshire Fauna & Flora Society
National Urban Forestry Unit
Peterborough City Council
RSPB - East Anglia
South Cambridgeshire District Council
The National Trust
The Urban Wildlife Partnership
The Wildlife Trust
The Woodland Trust
Urban Wildlife Partnership
Warden at Gamlingay Wood
Woodland specialists

**CAMBRIDGESHIRE LHAP: URBAN FOREST
3 YEAR PROGRAMME 2000 - 2003**

ACTION	RESPONSIBLE AGENCIES	TIMETABLE		
		2000	2001	2002
A. Policy	CCC, LA's	*	*	*
Produce a community based strategy				
Promote the community value and benefits of the urban forest	LA's, WiT, EN, FC, CCC	*	*	*
Develop an integrated approach to the management of the urban forest	LA's, WiT, EN, FA, CCC	*	*	*
Lobby the government for research into subsidence	AA, LA's		*	
Lobby government for changes to the Town and Country Planning Act	AA, EN		*	
Decide 10 year targets	TWWG		*	
B. Management	LA's, CCC, WiT	*	*	*
Create new pollards and where appropriate top and lop existing trees				
Create new dead wood habitats	LA's, WiT, CCC	*	*	*
Employ other nature conservation techniques	LA's, WiT, CCC	*	*	*
Address species diversity	LA's, CCC	*	*	*
Identify valuable habitats	LA's, CWT, EN, CCC			*
Collect elm cuttings	CCC	*	*	*

ACTION	RESPONSIBLE AGENCIES	TIMETABLE		
		2000	2001	2002
C. Monitoring and research	CCC	*		
Create a countywide compatible database				
Identify the characteristics and extent of the urban forest resource	LA's, CCC		*	
Identify methodology of data collection, storage and retrieval	CCC, EN	*		
Review the status of elm for the future programme	CCC	*	*	
D. Advisory	LA's, WiT, CCC		*	
Provide site specific interpretive material				
Provide other advice on nature conservation	LA's, EN, WiT, CCC		*	
Provide information on tree species selection	LA's, CCC		*	
E. Communications and publicity	CCC, CWT, EN, FA, RSPB		*	
Publish material on the biodiversity value of the urban forest				
Publish information on tree management to reduce damage to and loss of urban trees	CCC, EN, FA			*
Publicise the live elm story	CCC	*	*	*

AA	Arboricultural Association
WiT	The Wildlife Trust
CCC	Cambridgeshire County Council
EN	English Nature
FC	Forestry Commission
LA's	Local Authorities (not including Cambridgeshire County Council)
RSPB	Royal Society for the Protection of Birds
TWWG	Trees and Woodlands Working Group