

Trees in Towns II

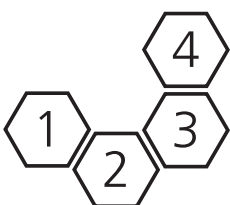
A new survey of urban trees in England and their condition and management

Chris Britt & Mark Johnston



Cover illustrations:

Main picture: Urban trees in Fulwood, Sheffield (Photo: Sheffield CC)



1. Planting for the future: A new orchard in grounds of primary school, Epsom (Photo: Epsom & Ewell BC)
2. Peace and tranquility – Westport Lake, Stoke on Trent (Photo: City of Stoke on Trent)
3. Fig CS3.1. Just four months after planting, trees and shrubs make a noticeable addition to the local landscape (Photo: Trees for Cities)
4. Suburban Victorian heritage. Mature lime avenue heading towards city centre (Photo: Sheffield CC)



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A new survey of urban trees in England and their condition and management

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Executive Summary

Introduction

1. Urban trees have an important role in sustainable communities, providing numerous aesthetic, social and health benefits. Their importance, within urban 'green spaces' has been emphasised by a number of Government reports.
2. A new national survey of England's urban trees and their management was commissioned by the Office of the Deputy Prime Minister (ODPM) in February 2004.
3. This research, *Trees in Towns II*, builds upon the original *Trees in Towns* survey, undertaken for the Department of the Environment in 1992/93.
4. The overall aim of the project was:
 - To provide up-to-date information on the national urban tree stock and urban tree management by local authorities.
5. This new research, completed in 2005, was structured into three distinct (but inter-related) tasks:
 - [Strand 1: National tree survey](#)
 - [Strand 2: Survey of local authorities](#)
 - [Integration of Strands 1 and 2.](#)
6. The direction of the survey was informed by a [Focus Group](#) of interested parties, which included the ODPM, the research contractors (ADAS and Myerscough College) and a number of leading arboricultural organisations.
7. A [Project Advisory Group](#) was also established to provide ongoing support and advice to the project. This group met regularly throughout the duration of the project.

Strand 1 – National Tree Survey

8. The [Strand 1 field survey](#) had the following objectives:
 - To provide an overall assessment of the condition, extent, and characteristics of the urban tree populations (including trees in hedges) of England.
 - To identify and evaluate regional variations, variations by size and type of town, and variation between different land-uses in urban areas.
 - To identify and evaluate trends in the urban tree population since the 1992-93 *Trees in Towns* study.
 - To identify the factors, both positive and negative, faced by urban tree populations and determine the extent to which such pressures are affecting both existing stock and new planting choices.
 - To collate, map and present output information using current best practice.
 - To deliver datasets collected to enable use with appropriate geo-coding and case referencing.

Methodology

9. Strand 1, the national survey of urban trees in England, included a greater number of towns and cities than the 1992 survey, with increased replication. London was included for the first time. Some land classes that were poorly represented in the original survey were omitted, eg woodlands.
10. The Strand 1 survey was stratified at three levels:
 - Region
 - London
 - South East (SE)
 - South West (SW)
 - West Midlands (WM)
 - East Midlands (EM)
 - Eastern
 - Yorkshire and The Humber
 - North East (NE)
 - North West (NW)

- Town size
 - Small 3-10,000 population
 - Medium 10-80,000 population
 - Large >80,000 population
 - Land use
 - Low density residential
 - Medium density residential
 - High density residential
 - Town centre/commercial
 - Industrial
 - Open space
11. A total of 147 towns and cities were surveyed, including 10 London boroughs – compared with 66 in 1992. Within each selected town, up to four 4 ha plots (200 x 200 m) were selected from each land use type sufficiently represented there. Plots were randomly selected using on-screen analysis of aerial photos and digital maps.
 12. A total of 590 plots (2,360 ha) were surveyed on the ground during June to August 2004, one plot per land use type per town. However, not all of the six land use types were present in sufficiently large and uniform areas within every town to permit even one survey plot to be identified. Consequently, replication was unequal for some land classes, particularly in the small towns – where high density residential, town centre and open space plots were often under-represented.
 13. Data were collected using hand-held dataloggers and every tree or group of trees was geo-referenced using a GPS.
 14. Variables recorded were very similar to the 1992 survey:
 - tree status
 - species and variety/form
 - height, stem diameter and crown spread
 - age
 - maturity
 - condition

- management history
 - contribution to the urban environment.
15. Aerial photographs, for a total of 1,783 plots, were analysed to measure the extent of tree canopy cover.

Results

Tree numbers and densities

16. The average density of trees and shrubs recorded in the survey was 58.4 ha⁻¹, but densities ranged from 1.0 ha⁻¹ (at three sites) to 886.5 ha⁻¹ (Poole, Dorset). Approximately 50% of all surveyed sites had between 10 and 50 trees or shrubs/ha.
17. The highest tree and shrub densities were recorded in the South West (79.5 ha⁻¹) and East (74.7 ha⁻¹). The lowest densities were in Yorkshire and the Humber (39.8 ha⁻¹), the North East (42.3 ha⁻¹) and East Midlands (44.9 ha⁻¹).
18. Differences between land use classes were similar to those recorded in the 1992 *Trees in Towns* survey. Low density residential and open space areas had the highest tree/shrub densities. Town centres and high density residential areas had the lowest densities.
19. Town size had no effect on tree density.
20. Direct comparisons with data from the 1992 survey are difficult, largely because of the inclusion of woodland plots (with very high tree densities) in the earlier survey and some differences in classifications. Results appear to suggest increases in tree densities in the East, South East and South West, although there is no obvious explanation for this.

Tree status

21. Two thirds of all trees and shrubs were on private property (mainly in gardens) or on less accessible public land (e.g. schools, churchyards, allotments, etc.). Almost 20% were located in public parks and open space. Some 12% were street or highway trees.
22. The SW had a relatively high proportion (and the highest numbers) of street/highway trees. Eastern region and the West Midlands had relatively high proportions of park trees.
23. Trees on private or less accessible public land were the most frequently recorded 'status' category in all land use classes except open space. In low density residential areas 91% of all trees and shrubs were in this category.

24. Comparisons with data collected in 1992 suggest a possible increase in the overall proportion of street/roadside trees, particularly in residential and industrial areas. However, further sampling and analysis is required before it can be said if this is the result of changed planting patterns.

Species composition

25. The species composition of our urban forests is of great importance, for a number of reasons. Data that show that tree densities are being increased may be a positive indication of a successful strategy and improvements in the environment for local residents. However, such data may mask the truth. For example, the replacement of one large, native tree with two trees of a relatively small, ornamental cultivar is likely to have a negative environmental impact – providing significantly less biodiversity and aesthetic value.
26. Large broadleaved tree species made up approximately 26% of the total number of trees and shrubs in the survey, or 31% of all trees. Small broadleaved tree species made up 35% of the overall total, or 42% of all trees. Conifers comprised 23% of the total, or 27% of all trees, with Leyland cypress (x *Cuprocyparis leylandii*) being the dominant species. Shrub species accounted for some 16% of the total.
27. The number of different species/genera recorded in each region ranged from 148 in the NE to 196 in the SW. The mean number of species per ha, across the 590 surveyed plots, ranged from 0.25 to 19.0.
28. Low and medium density residential (MDR) areas had the greatest species richness (234 and 233 species respectively) and industrial areas the poorest (152 species) – although data will have been influenced by the greater representation of some land use classes (e.g. MDR) than others (e.g. industrial) in the survey.
29. The six most frequently recorded species, in order, were: Leyland cypress (x *Cuprocyparis leylandii*) (12.3% of all trees and shrubs), hawthorn (*Crataegus* spp.) (6.3%), sycamore (*Acer pseudoplatanus*) (5.7%), silver birch (*Betula pendula*) (4.6%), common ash (*Fraxinus excelsior*) (4.1%) and privet (*Ligustrum* spp.) (3.7%). Other common species included Lawson cypress, pedunculate oak, apples (*Malus* spp.), Japanese cherry, holly, rowan and beech.
30. Leyland cypress densities were highest in the SE and lowest in Yorkshire and The Humber.
31. Hawthorn was the most frequently recorded small tree, followed by cherries, birches, *Sorbus* species and maples. Hawthorn densities were highest in Eastern region, and in open space plots.
32. Sycamore was the most frequently recorded large tree species. The highest densities were recorded in Yorkshire and The Humber, the NE and NW, and in open space and low density residential areas. The NE had a relatively high proportion of older sycamore trees.
33. Silver birch was most commonly recorded in Yorkshire and The Humber and in industrial areas.

34. Ash trees were recorded in similar numbers in all regions, but occurred more frequently in open space areas than in any other land use class. The NE had a relatively high proportion of older ash trees.
35. Privet was particularly common in London, but also occurred frequently in the SE. It was much more common in residential areas than in other land use classes.

Height, diameter and crown spread

36. Most trees in the survey were estimated to be between 2.5 and 9.9 m tall. Relatively few were taller than 10 m.
37. Trees less than 2.5 m tall were most frequent in the NW (8.8 ha⁻¹) and East (8.0 ha⁻¹) and least frequent in the NE (0.2 ha⁻¹). The SE had more trees (4.9 ha⁻¹) in the tallest height class (20 m or more) than any other region. Most other regions had <2 trees ha⁻¹ in this height class.
38. Differences in tree height between land use classes reflected differences in total trees numbers, although open space plots had more trees <2.5 m than any other land use.
39. In all regions except the SE only 10-20% of trees had a trunk/stem diameter (dbh) of 30 cm or more. The SE (where almost 23% of trees had a dbh >30 cm) had the highest numbers of trees in the 30-59 and 60+ cm diameter classes. The NW had more 0-4.9 cm diameter trees and shrubs than any other region except the Eastern region.
40. As for tree heights, very small diameter trees (< 5 cm) were recorded most frequently in open space plots. For all land use classes, the most frequently recorded diameter was 10-29 cm. Large diameter trees (60+ cm) were also most common in open space plots.
41. There were more large diameter (60+ cm) trees in large towns than in medium or small towns.
42. Field estimates of crown spread indicated that only 1-6% of trees in each region had a spread of 15 m or more. In most regions, approximately half of all trees had a spread of 2-4.9 m.
43. In the NW 40% of trees/shrubs had a crown spread of less than 2 m, again reflecting the very high proportion of young trees in that region. Eastern region also had a relatively high proportion (32%) of trees in this small crown spread class. The SE had the highest numbers of trees in each of the top three crown size categories (10-14.9, 15-19.9 and 20+ m), although the proportions of trees in these classes were similar in the NE (where total tree numbers were lower).
44. Trees and shrubs with a crown spread of less than 2 m were most frequently recorded in open space (22 trees ha⁻¹), medium (19 ha⁻¹) and low density (18 ha⁻¹) residential areas. For each of the top three crown size classes, the highest densities were recorded in low density residential and open space plots.

Canopy cover

45. The overall mean tree canopy cover, as calculated from aerial photographs, was 8.2%.
46. Mean canopy areas per plot in the SW (11.1%) and SE (11.8%) were higher than those in all other regions. Canopy cover in the NE (4.0%) was lower than in any other region. All other regions had between 7.1 and 8.2% cover.
47. Of the 20 towns with the highest mean canopy areas, 14 were in either the SE or SW regions. Of the 20 with the lowest means, 11 were in the NE.
48. Mean canopy cover in different land use classes ranged from 3.6% in industrial and high density residential areas to 22.8% in low density residential plots.
49. The mean canopy area in low density residential plots (2,281 m² ha⁻¹) was greater than in any other land use class. Formal/informal open space had a higher mean canopy area (1,595 m² ha⁻¹) than the other seven land use classes.
50. The lowest mean canopy areas were recorded in town centre/commercial (465 m² ha⁻¹), industrial (356 m² ha⁻¹) and high density residential areas (361 m² ha⁻¹).
51. Town size had no significant effect on mean tree canopy area.
52. Street and roadside trees comprised between 2% (SW) and 14% (London) of the total canopy area in different regions. Street trees were relatively unimportant in formal/informal and institutional open space and in remnant countryside, but provided 22% of the total canopy area in high density residential areas.
53. Park and open space trees comprised between 11% (West Midlands) and 33% (NE) of the total canopy area in different regions. Park trees were also of greater importance in large towns and London, and least important in small towns. Trees in this status class dominated the formal/informal and institutional open space land use classes, providing 98% of the total canopy cover in each, but were relatively unimportant in industrial and residential areas.
54. 'Open' trees on private land (e.g. in front gardens) comprised between 12% (London) and 26% (NW and Yorkshire and The Humber) of the total canopy area in different regions. Open trees appeared to be less important in London than in the small, medium or large town size groups. These open trees were relatively unimportant in all open space land use classes, where most trees are publicly owned – providing only 0-2% of the total canopy area. However, over 20% of the canopy area in low and medium density residential areas, town centres and industrial areas came from trees allocated to this status class.
55. 'Enclosed' trees on private land (e.g. in back gardens) was the dominant group in all regions, comprising between 37% (NE) and 60% (SW) of total canopy area. Enclosed trees were of greatest importance in small towns. Enclosed trees provided over 60% of total canopy cover in most land use classes. Mean cover varied from 1% (formal/informal and institutional open space) to 75% (remnant countryside).

Age and maturity

56. Most trees were estimated to be between 10 and 50 years old.
57. In terms of maturity, most trees were either semi-mature (41%) or early mature (27%). The proportions of young (14%), mature (17%) or over-mature (0.2%) trees were relatively small.
58. Very young trees and shrubs (0-5 years) were relatively frequent in the NW (9.1 ha⁻¹), but poorly represented elsewhere (<2 ha⁻¹ in all other regions). Native broadleaves were used predominantly in recent planting schemes in the NW.
59. The NE and SE had the highest proportions of trees and shrubs over 25 years-old (approximately 60%). In the NE a relatively high proportion (20%) were estimated to be at least 50 years old. Numbers of 10-25 year-old trees were relatively high in the East.
60. The NE and SE also had the highest numbers of trees over 100 years old, but numbers of these older trees were relatively low in the SW, East Midlands, West Midlands and Yorkshire and The Humber.
61. Assessments of tree maturity, which depend upon species as well as age, showed that Yorkshire and The Humber had a very high proportion of young trees. The East Midlands and NW also had relatively high proportions of young trees, but fewer than 3% of trees in the SE, SW, East and London were classed as 'young'.
62. The highest proportions of mature trees were recorded in the NE, NW and West Midlands.
63. Medium and high density residential areas and town centres had a similar age distribution, with approximately 50% of all trees aged 10-25 years and 35% 25-50 years-old.
64. Low density residential and open space areas had the highest proportions of older trees, with approximately 15% aged 50-100 years and 3% aged 100 years or more.
65. Open space areas had the most even age distribution. Only open space plots had a significant proportion of trees and shrubs (12%) in the 0-5 years age group. For all other land use classes the proportions in this age group were only 1-2%. Open space areas had more 0-5 and 5-10 year-old trees than any other land use class.
66. Open space plots had the highest proportion of young trees (26%) and low density residential areas the highest proportion of mature trees (27%).
67. Although concerns about public safety will always restrict the number of mature and over-mature trees along roads and highways, policies for routine removal of all large trees during the early phases of maturity and their replacement with smaller, 'safer' alternatives should be challenged. The importance of mature and ancient trees in urban areas is undeniable and local authorities responsible for their management must balance public safety against their responsibilities for protecting and enhancing the environment. Decisions should be based on reasonable and

realistic risk assessments, with the initial presumption being for protection of the tree, rather than removal. Local authorities need to act more proactively, with regular, professional tree inspections – prioritising street and roadside trees, and others in high-risk zones.

68. Comparisons with data from the 1992 survey show a big reduction in the percentages of trees in the youngest age bands and a corresponding increase in the percentage of trees aged 10-50 years. These results indicate that the high rates of urban tree planting undertaken in the 10 year period from 1983 to 1992 were not maintained in the 1995-2004 period. This reduction in new planting, and the threats to older trees in urban areas, have resulted in an unsatisfactory age structure – an issue that needs to be urgently addressed.

Tree condition

69. A large majority (70%) of all surveyed trees were in good condition. Very few (3%) were poor, dying or dead.
70. The NE and SW had relatively low proportions (approximately 50%) of trees in good condition, although apparent regional differences may have been due in part to some differences in the subjective views of different surveyors.
71. The overall distribution of trees in each condition class within different land use classes suggests that tree condition in low and medium density residential areas and open space was slightly better than in high density residential areas, town centres and industrial areas.
72. The density of dead or dying trees was very low, but there were more in London than in the small, medium or large town size groups.
73. Comparisons with the results of the 1992 survey, suggest an overall decrease in the proportion of trees in good condition, but also a slight decrease in the proportion of trees considered to be either poor, or dead or dying. These apparent differences could, however, be largely due to changes in the descriptions of some condition classes and inevitable differences between surveyors making subjective assessments in two surveys undertaken 12 years apart.
74. In 1992, the highest proportions of dead or dying and poor condition trees were found on heavy industrial sites and trees in town centres showed no more evidence of damage or disease than trees in other land use classes. Surprisingly, low density residential areas had a higher proportion of poor condition trees than either medium or high density housing areas. In contrast, the 2004 survey (based on much larger sample sizes), indicate that trees in low and medium density residential areas and open space were generally in better condition than those in other classes.

Previous maintenance

75. Relatively high proportions of trees and shrubs in London (64%), the SE (62%), SW (49%) and NE (47%), but only low percentages of trees in the E Midlands

(15%) and Yorkshire and the Humber (9%), had been regularly maintained. London, the SE and SW had more trees in this category than any other region.

76. A large proportion in the W Midlands (54%) and Yorkshire and The Humber (44%), but only a very small proportion in the East (3%) and London (2%), had no evidence of previous maintenance. The W Midlands had more trees in this category than any other region, except Yorkshire and The Humber.
77. In the East, 78% of all trees and shrubs had been occasionally maintained, with more trees in this category than any other region.
78. Residential areas and town centres had the highest proportions of regularly maintained trees. Low density residential areas had more regularly maintained trees than any other land use class.
79. Industrial areas and open space had the highest proportions of trees with no evidence of previous maintenance. Open space areas had more trees with no evidence of previous maintenance than any other land use class.
80. London had more regularly maintained trees than towns in the small, medium or large size groups. Medium-sized towns had the highest numbers of trees with no evidence of previous maintenance.

Contribution to the urban environment

81. Only 4% of all trees and shrubs were judged to make a neutral or negative contribution to the urban environment. Approximately 82% were regarded as making either 'some' or a 'considerable' contribution, and 14% as 'outstanding'.
82. Assessments of the contribution of trees to the urban environment were largely subjective. For this reason, apparent regional differences, in particular, must be interpreted with caution.
83. Yorkshire and The Humber (50%) and the NW (42%) each had a relatively high proportion of trees of outstanding value. More than 70% of trees in these two regions and in London made either an outstanding or considerable contribution to the local environment.
84. The West Midlands and NE regions had the lowest proportions of trees adjudged to have either outstanding or considerable value and the highest proportions with either neutral or negative impact.
85. Trees in open space areas were most likely to make either an outstanding or considerable contribution to the urban environment. The lowest proportions in the outstanding or considerable categories were in medium and high density residential areas.
86. The highest proportion and density of trees making an outstanding contribution was recorded in open space plots (26%) and the lowest proportion in medium density residential areas (8%).

87. The proportion of trees regarded as having a neutral effect, or detracting from the local environment, was very small in all land use classes.
88. Although numbers were still very small, London had more trees (1.3 ha^{-1}) that were thought to detract from the urban environment than any other town size group.

Strand 2 – Policies and Practice in Local Authority Urban Tree Management

89. The main aim of the [Strand 2](#) research was to provide an insight to and identify good and innovative practice in urban tree management by local authorities (LAs) in England. The specific objectives were:
 - To identify and analyse the financial and other resources available to support tree management and other tree activity.
 - To evaluate existing frameworks for urban tree management.
 - To identify and evaluate existing urban tree strategies.
 - To identify and evaluate different types of partnerships/organisation structures involved in tree management and the development of tree strategies.
 - To develop innovative evidence-based approaches and models for the management and maintenance of urban trees.

Methodology

90. The main survey instrument for the Strand 2 research was a detailed [questionnaire](#) sent to all local authorities in England (389 in total). The questionnaire was sent initially to the officer in the LA who was most directly responsible for the management of the LA's publicly-owned tree resource. However, this individual was asked to consult closely with colleagues, particularly when responding to those questions that were not part of their own job responsibilities. The content of the questionnaire was developed in consultation with the Project Advisory Group. It included seven sections:
 - A. Resources and budgets.
 - B. Surveys, strategies, and planned management.
 - C. Systematic management.
 - D. Tree preservation orders (TPOs), conservation areas and development.
 - E. Integrated management and social aspects.
 - F. Urban tree programme SWOT analysis.
 - G. Tree Officer information.

91. In order to establish trends in urban tree management, the results of the main survey were compared with the results from the previous *Trees in Towns* survey and the research undertaken at the University of Ulster in 1997, entitled *A Survey of Urban Forestry in Britain*.
92. A number of the results from the main survey were correlated with the population size and urban weighting of the LAs. The population size of each LA was obtained from the 2001 National Census. An urban weighting for each LA was determined by calculating the urban population as a percentage of the total population of each LA using data from the 2001 National Census.
93. The overall response rate for the main survey was 66%, with returned questionnaires received from 258 local authorities.
94. Strand 2 questionnaires were returned by local authorities responsible for 99 of the 147 Strand 1 survey towns.
95. Because of the limited space available in the main survey questionnaire, two additional surveys were undertaken to supplement this information:
 - The *Tree Officer Recruitment Survey* comprised a tracking exercise over a six-month period on LA tree-related officer posts advertised in the trade magazine *Horticulture Week*. The main aims of this survey were to examine the diversity of job titles appearing for similar posts, and the qualifications and experience required for these posts.
 - The *Partnership Working Survey* involved a randomly selected sample of 20% of the LAs that responded to the main survey. This survey sought to identify the extent to which LAs had developed partnerships with other organisations in the public, private and voluntary/community sectors in the operation of their tree programmes.
96. Lastly, 12 case studies were produced looking at good and innovative practice in various aspects of urban tree management. Each case study focused on one or two LAs that were particularly good examples of specific topics.

Principal results from the main LA survey

(In each case, the relevant section/question in the full report is given)

A. Resources and Budgets

97. The LAs employed nearly 700 full-time equivalents (FTEs) on tree-related work, averaging at 2.98 FTEs per LA ([Question A2](#)).
98. Nearly 63% of individual officer staff engaged on tree-related work were in full-time posts that were devoted to this type of work. Over 45% of these officers had spent more than five years in their current post ([Question A3](#)).

99. On average, the LAs allocated just over one-third of the total time for their tree-related officer staff for work on TPOs, conservation areas and development ([Question A4](#)).
100. The average total annual tree budget for the LAs for the financial year 2003/04 was a little over £271,000, including staffing costs. Extrapolating this figure across all the LAs in England produces an estimated value of nearly £106 million for LA arboriculture. Comparison with the 1997 survey suggests a relatively small decrease to the LAs' annual tree budgets during the intervening period ([Question A6](#)).
101. On average, the LAs spent £1.38 on trees per head of population during the financial year 2003/04. The range of this spending among the LAs varied considerably from £0.08 to £4.93 per head of population. This was similar to the level of spending identified in the 1997 survey ([Question A6a](#)).
102. 54% of the LAs reported there had been no real change in their total tree budget over the past five years, taking account of inflation ([Question A8](#)).
103. 58% of the LAs employed consultants on tree-related work during the financial year 2003/04. The average amount spent on this was £5,700 ([Question A9](#)).
104. Over the previous five years, 58% of the LAs had preferred to let all their tree work contracts separately rather than combine these with other services such as grounds maintenance. Some 55% of the LAs specified that over 90% of their tree work contracts let during the past five years were undertaken by external contractors ([Question A10](#)).
105. 75% of the respondents stated that the LA determined the level of their Directorate's tree budget for 2003/04 entirely on previous levels of funding without any reference to the actual demand for the service ([Question A11](#)).
106. 45% of the LAs had received some external funding for tree-related work over the past five years. For these LAs, the average amount received over that period was £72,610. When compared to the 1997 survey, there appears to have been a reduction in external funding received by the LA tree programmes. There has also been a shift in the way this funding is spent, from planting new trees to managing existing trees ([Question A12](#)).
107. Only 7 LAs had undertaken any form of cost-benefit analysis of either the whole or part of the urban forest in their district ([Question A13](#)).

B. Surveys, Strategies and Planned Management

108. There was considerable variation among the LAs with regard to the extent of tree surveys that had been conducted within the previous five years in different categories of their tree resource. Only 16% of LAs had conducted a full survey of their highway trees, while 30% had not conducted any type of survey of these trees. It was surprising that the extent of partial surveys among the LAs was greater than sample surveys in all categories. Sample surveys can give an indication of the overall tree population in a particular category, whereas partial surveys cannot provide this information ([Question B1](#)).

109. Only 19% of the LAs had an accurate record of the percentage of their district covered by trees and woodlands ([Question B4](#)).
110. Only 8% of the LAs had an accurate record of the percentage of the total area of trees and woodland in their district that was either publicly or privately owned ([Question B5](#)).
111. Some 52% of the LAs had some type of existing strategy that was relevant to trees and woodland and embraced the entire LA district. Only 28% had an existing and specific tree strategy while 36% of LAs were preparing a specific tree strategy ([Question B6](#)). However, the extent of existing tree strategies had increased significantly since the 1997 survey.
112. A detailed examination of the LAs' most relevant district-wide strategy, where at least one existed, revealed a considerable variation in the scope and content of these strategies. Nearly 43% of these strategies covered all trees and woodlands, both public and privately owned, thus making them relevant to all aspects of the LA's tree programme. Where external organisations and groups were consulted in the development of these strategies, the extent of that consultation was quite widespread. Some 58% of these strategies included some provision for the revision of the strategy, on average approximately every five years. Only 25% of these strategies included any specific targets for tree planting and management, as opposed to just broad policy objectives ([Questions B7-15](#)).
113. Nearly 25% of the LAs' tree programmes had been involved, or were planned to be involved, in a Best Value Review. Some 80% of these Best Value Reviews involving the tree programme were undertaken as part of a wider review of LA service provision. Very few of the LAs involved in these reviews listed any tree-related Best Value Performance Indicators ([Questions B16-18](#)).

C. Systematic Management

114. Some 56% of LAs had a computerised tree management or inventory system. Those LAs with larger populations and higher urban weighting were more likely to have these systems. 66% of these LAs had purchased specialist tree management software rather than developing their own in-house systems using non-specialist software. The categories of trees covered by these systems, and the different types of usage of these systems, varied considerably among the LAs ([Questions C1-3](#)).
115. There was also considerable variation among the LAs in the extent of systematic inspections of individual trees within the various categories of the tree resource. This also applied to the frequency of these inspections. Nearly 33% of the LAs involved in the main survey did not respond to the question on the systematic inspection of trees ([Question C4](#)).
116. The average percentage of scheduled tree maintenance work undertaken by the LAs was 29%. This was in contrast to work that was done 'on demand' in response to requests, complaints or hazardous situations. 19% of the LAs were undertaking no scheduled work at all. Those LAs with some strategy that was relevant to the tree programme were likely to schedule a higher percentage of this work. This was also the case with those LAs that had a higher urban weighting ([Question C5](#)).

117. The performance of the LAs in utilising timber and brash from tree work, or disposing of this in an environmentally sound manner, was generally very encouraging ([Question C6](#)).
118. The majority of LAs indicated that there had been no change in their total spending on trees for tree planting over the previous five years. The majority of this spending was on various categories of standard trees ([Question C7](#)).
119. Only 23% of the LAs had a formal policy to ensure the purchase of native trees from British seed. However, a small majority of the LAs actually purchased native trees produced from British seed, regardless of whether they had a formal policy on this issue ([Question C8](#)).
120. Respondents were asked to allocate a priority rating to a range of factors that they may consider when selecting trees for a planting scheme. The ultimate mature size of the tree emerged as the most important factor by a fairly substantial margin. The cost of supply was the second most important factor ([Question C9](#)).
121. On average, 65% of the LAs' newly planted trees, excluding woodland plantings, received systematic post-planting maintenance until they were established. 22% of the LAs were only able to systematically maintain less than 20% of these newly planted trees ([Question C10](#)).
122. The average mortality rate for the LAs' newly planted trees in various categories was as follows: Highways: 23.05%; Public Open Spaces: 24.41%; LA woodland: 15.30% ([Question C11](#)).
123. Only 35% of the LAs kept accurate records of enquiries from the public in any of a given range of categories of enquiries. On average, those LAs with accurate records received nearly 2,000 such enquiries in the financial year 2003/04 ([Question C12](#)).
124. Some 28% of the LAs had a formal policy for managing trees in relation to liability for tree-related structural damage. Proactive remedial tree-works formed part of the policy for 56% of these LAs, while 61% of these LAs resorted to some action following a claim ([Question C13](#)).
125. In the event of a claim for tree-related structural damage, respondents were asked to indicate which of a range of reports are routinely requested from the claimant. The two most frequently requested reports were from structural engineers (some 93%) and from arboriculturists (some 91%) ([Question C14](#)).

D. Tree Preservation Orders, Conservation Areas and Development

126. A total of 96,342 individual TPOs were identified as currently being administered by those LAs that stated they administered some TPOs. This gave an average of 423 TPOs per LA. However, some 7% of the LAs had more than 1,000 TPOs each. The average number of new TPOs made by these LAs in the financial year 2003/04 was nearly 17 ([Question D1-2](#)).
127. LAs were asked to specify if they automatically considered making new TPOs under a range of circumstances. By far the most common circumstance was following the

submission of a development proposal, with nearly 98% of the LAs responding citing this as a potential source of new TPOs. Some 56%, cited the sale of LA land as another potentially major source of new TPOs ([Question D3](#)).

128. 13% of LAs did not refuse any of the TPO applications they received during 2003/4. On average, the LAs granted full consent to over 80% of TPO applications ([Question D4](#)).
129. The average number of conservation area notifications received by the LAs during 2003/04 was nearly 122. However, a few LAs with very high numbers raised this mean significantly. There was an average of 3.3 new TPOs in this period resulting from these notifications ([Question D5](#)).
130. The LAs were asked to state the percentage of TPO replacement trees, required as a condition, which had a significantly smaller mature size than those they were replacing. Some 8% of LAs conditioned a like-for-like replacement in maturity for every tree, whereas 13% of the LAs stated that every replacement TPO tree required by a condition of consent to fell was significantly smaller than the felled tree ([Question D6](#)).
131. Most LAs used a range of communication methods to assist applicants with TPO applications. The two most commonly employed methods involved some form of personal contact with the applicant, either over the telephone or as a result of on-site meetings (96% and nearly 90% respectively). Leaflets were used by 72% of the LAs, while use of the LA website was employed by 50% of them ([Question D7](#)).
132. The most common type of infringement of TPOs, leading to a prosecution by the LA, was that of wilful damage. This accounted for 50% of all prosecutions undertaken during the financial year 2003/04. Wilful destruction was the only other major reason for prosecution, accounting for 35% of the total number of prosecutions. Exceeding consent accounted for only 8% and non-compliance of conditions accounted for only 6% ([Question D9](#)).
133. Some 70% of the LAs did not serve any tree replacement notices (TRNs) during the financial year 2003/04. Of those that did, the number varied between 1 to 70 notices per LA ([Question D10](#)).
134. Some 48% of LAs had undertaken, or were currently undertaking, a review of their TPOs to update area order classifications. Nearly 28% of these LAs indicated that no additional resources had been provided to undertake this review ([Question D11](#)).
135. Only 27% of the LAs had produced any Supplementary Planning Guidance (SPG) relating to trees and development ([Question D12](#)).

E. Integrated Management and Social Aspects

136. Some 30% of the LAs had transferred some housing management to Registered Social Landlords (RSL), formerly known as Housing Associations. Of these LAs, some 48% indicated that no provision had been agreed between the LA and the RSL for the management of trees on these properties ([Question E3](#)).

137. Some 18% of the LAs were involved in some form of district-wide forum made up of representatives of other public and/or voluntary sector organisations that acted as a body for discussion and action about local trees and woodland. Some 45% of these forums had been established from the year 2000 onwards ([Question E4](#)).
138. The LAs were asked to indicate in what aspects of community involvement with trees they were routinely involved. Eight specific categories of community involvement were listed covering a wide range of activities. Community tree planting schemes were the most frequent event or activity undertaken by the LAs, with nearly 66% of the LAs involved in this. This was followed by two types of educational activity that were primarily directed at increasing the public's awareness and appreciation of trees and the tree programme. These were guided 'tree walks' at 58% and talks about trees at nearly 57%. Over 20% of the LAs were involved with six or more activities. However, some 26% of the LAs were only routinely engaged in one or two activities. The results were quite similar to those in the 1997 survey ([Question E6](#)).
139. Nearly 24% of the LAs had organised at least one large-scale tree-related event, involving more than 100 people, over the past five years. The most common type of event organised by these LAs was a fair, festival, show or open day focusing on trees ([Question E8](#)).
140. Nearly 92% of the LAs reported no monitoring of the level of involvement of people from minority groups in their community events and activities related to trees. Very few LAs organised any tree-related events and activities specifically designed for minority groups ([Questions E9-10](#)).
141. Nearly 33% of the LAs had a tree warden scheme in operation in their district. Some 70% of these schemes were administered by the LA itself ([Question E11](#)).
142. If a member of the public contacted the LA asking for details of tree surgery companies they can employ, the LAs were asked to indicate how they responded to these enquiries. There was a wide range of responses to these enquiries, indicating no consistent approach by the LAs. Nearly 50% of the LAs indicated they gave between 2-3 different types of responses. The most frequent cited response was to refer enquirers to the Arboricultural Association's list of approved contractors, given by 54% of the LAs. Nearly 41% of the LAs cited referring enquirers to the Yellow Pages or similar directory, while 39% cited the provision of a list of LA 'vetted' contractors ([Question E12](#)).
143. LAs sometimes receive requests for tree pruning or removal on the grounds of community safety, to help reduce security risks or anti-social behaviour. Nearly 55% indicated this was either an important or very important issue in their district. This was also a more significant issue for the more urban LAs. On average, the LAs received some 51 requests during the financial year 2003/04. On average, 61% of these requests resulted in work being carried out ([Question E13-14](#)).
144. LAs were asked to specify if nearby residents were routinely notified in advance when tree felling or major maintenance or planting programmes were undertaken in or near residential areas. Of those responding, nearly 85% gave notification regarding felling, 74% for major maintenance work and 60% for major planting schemes ([Question E16](#)).

145. LAs were asked to specify how frequently their LA's trees and tree programme were featured in the local media, and indicate in what image this was usually portrayed. Only 4% had frequent coverage of their trees or tree programme in the local media. The remainder was fairly evenly split between those that received moderate cover and those that received little or no coverage. Only 12% of the LAs indicated that the media coverage was usually negative. The majority, nearly 56%, reported that the media coverage was usually mixed ([Question E17](#)).

F. Urban Tree Programme SWOT Analysis

146. In the [SWOT analysis](#), the respondents were asked to list the five most significant strengths, weaknesses, opportunities and threats affecting their LA's urban tree programme, and list these in order of significance. The Guidance Notes asked respondents to seek the views of their colleagues in answering this section and other parts of the questionnaire that related to the overall operation of the tree programme. The LA's urban tree programme was defined to include all its services and activities related to trees and woodlands in urban and urban fringe areas.
147. Staff skills emerged as the most significant strength of the LAs' urban tree programmes. This included qualifications and experience as well as commitment and dedication to the work. This indicates a high level of confidence among the tree officers of their own abilities and commitment and those of other tree-related staff. After staff skills, a proactive or planned tree programme emerged as the second most significant strength of the urban tree programme. This referred specifically to the systematic operation of tree planting, maintenance and management activities; it did not include tree strategies or wider aspects of planned management.
148. Factors relating to resources, both financial and human, featured to a major extent as significant weaknesses of the urban tree programmes. Concern about a lack of data, records and surveys was also prominent. Another major weakness of many of the LAs' urban tree programmes was the lack of integrated management.
149. An increase in funding was viewed as the most significant opportunity to improve the LA urban tree programmes. However, little mention was given to the opportunities to secure external funding. The second most significant opportunity to improve the urban tree programme focused on the need to produce a tree strategy. Issues relating to organisational factors affecting the LA urban tree programme also featured prominently. These included more integrated management within the LA and partnership working with outside organisations and groups.
150. A lack or loss of general funding and resources was cited most frequently as the most significant threat to the LA urban tree programmes. The second most significant threat to emerge was related to trees and the built environment. Linked to this, there was also widespread concern about the threat posed by a rising number of insurance claims against the LA for matters related to trees. Threats from development also included quite frequent mention of the conflict between trees and CCTV. Problems relating to CCTV also featured extensively in the many responses citing poor public support, awareness and attitudes. Another major concern was the threat posed by a lack of support for trees and the tree programme from within the LA.

G. Tree Officer Information

151. The aim of this section of the main survey was to obtain information about the LA officer who initially received the questionnaire. This was the officer most directly responsible for the day-to-day management of the LA's publicly owned trees.
152. Some 67% of the officers' job titles were tree-specific i.e. the job title made some reference to trees or arboriculture. This included 39% that made some reference to arboriculture. Other tree-specific titles that did not make any reference to arboriculture, such as Tree Officer, Trees and Woodlands Officer or Urban Forester, accounted for the remaining 28%. Comparisons with data from the 1997 survey, suggest that there has been a trend towards more tree-specific job titles that do not make any reference to arboriculture, a word that is not readily understood by the public ([Question G1](#)).
153. With nearly 90% of the officers being male, there was clearly a major gender imbalance in this area of LA work. There had only been a very small increase in the percentage of female officers since the 1997 survey, suggesting that rather slow progress was being made towards recruiting more females into the LA tree management industry ([Question G1a](#)).
154. The average number of years' experience for these officers for tree-related work in a managerial or technical role was nearly 14.5 years. On average, female officers had about eighteen month's less experience in tree-related work than male officers ([Question G3](#)).
155. Nearly 44% of the officers responding had some qualification in arboriculture. This indicates the predominance of arboriculture as the most appropriate subject area for qualifications for these tree-related posts. The second most significant subject area was horticulture, parks or landscape management, with 23% of officers having some qualification in this area. This was followed by forestry, at nearly 13%. Some 61% of the officers were qualified to NQF level 5 or above. At NQF level 5, most of these qualifications were in arboriculture. At NQF level 6 and above, subjects other than arboriculture were more frequent. Some 47% of the officers' highest level qualification was in arboriculture. This was followed by horticulture, parks or landscape management at nearly 21% and forestry at 14% ([Question G4](#)).
156. The majority of officers, some 60%, stated that arboriculture was their main professional background. The next most common professional background was parks and landscape management with nearly 13% of the officers ([Question G6](#)).

Tree Officer Recruitment Survey

157. The [Tree Officer Recruitment Survey](#) comprised a tracking exercise over a six-month period on LA tree-related officer posts advertised in the trade magazine *Horticulture Week*. The main aims of this survey were to examine the diversity of job titles appearing for similar posts and the qualifications and experience required for these posts.
158. Selection was on the basis of whether the main duties of the post, as stated in the advertisement, focused on trees. Essentially manual posts, such as climbing arborist

or driver/arborist, were not included. This gave a total of 58 posts over the period. Telephone calls were then made to the relevant LAs requesting job and person specifications to be supplied for each advertisement. These job details were then examined to screen out any essentially manual posts that had not been eliminated from the initial scrutiny of the advertisements. The details of all the relevant tree officer vacancies, and their corresponding job and person specifications, were placed on an Excel database for analysis.

159. The categories where data was recorded for each post was as follows:
- Authority type
 - Job title
 - Department or directorate
 - Qualifications – National Qualifications Framework (NQF) level
 - Qualifications – subject area
 - Experience
 - Involvement with TPOs and general planning matters
 - Salaries – recorded as NJC Spinal Column Point (SCP)
 - Benefits
 - Contract and hours of work.
160. Some 67% of the posts made some reference to arboriculture in their title. This was a substantially higher proportion of these posts than the results for all tree officers responding to the main survey. There does not appear to be any particular reason for this.
161. There was little variation in the SCP average for the posts at the different NQF levels. This suggests that little distinction was made regarding what were acceptable levels of qualifications for these specialist posts. Some 22% of posts did not stipulate that any particular level of qualification was required. In most cases these used phrases such as ‘suitably qualified’ candidates or those with a ‘recognised qualification’.
162. Some 62% of the advertisements mentioned qualifications in arboriculture. This clearly indicates widespread recognition of this subject area as particularly appropriate to tree officer posts. In some 10% of the advertisements, arboriculture was not mentioned and only one other subject was mentioned. These subjects included horticulture, parks management or planning. Nearly 28% of the advertisements did not mention any subject by name, but just stated a qualification in a ‘relevant subject’.
163. Some 53% of the advertisements stated that some type of experience was essential for the posts. Most of these just stated ‘relevant experience’ without specifying this. Some 31% of the advertisements stated that some IT experience was essential, although 48% of the person specifications stated this. Nearly 78% of the advertisements stated that a driving licence was essential, while 92% of the person specifications stated this.

164. Some 38% of the posts had no involvement with TPOs, and nearly 52% had no involvement with general planning matters.
165. Nearly 90% of the posts stipulated full-time hours, while only one post was available as a 'job share'. Some 81% of the posts were available on a permanent basis.
166. Following the results of this survey, some general conclusions could be drawn:
- It was encouraging that a substantial majority of the posts recognised the importance of arboricultural qualifications for tree-related work.
 - There needs to be far more awareness of the range of higher education qualifications now available in tree-related studies, particularly arboriculture.
 - When drafting advertisements, LAs should review the level of qualifications currently available, to ensure that the appropriate level is selected for the post being advertised.
 - There was very little relationship between the level of salary on offer (SCP range and average) and the level of qualifications and/or experience required.
 - Most of the person specifications for the posts went into considerable detail about the different aspects of work experience required. This was in contrast to the often rather vague specifications for qualifications required. This does reflect an industry that for many years has placed a particularly high premium on work experience in the absence of higher level qualifications.
 - The quality of the advertisements being placed for these professional roles was generally poor and did little to enhance the reputation or importance of the tree management industry.
 - The majority of advertisements had a good selection of response mechanism options, including on-line enquiries and applications.

Partnership Working Survey

167. The *Partnership Working Survey* involved a randomly selected sample of 20% of the LAs that responded to the main survey. This gave a sample size of 52 LAs.
168. There were three specific aims for this survey. Firstly, it aimed to identify the range of partner organisations and groups working with LAs on their tree programme, embracing both public and privately owned trees and woodlands. Secondly, it aimed to identify the main purposes of these partnerships. Thirdly, it aimed to identify how long these partnerships have been established.
169. The respondents were asked to list all relevant partnership organisations, both large and small, and indicate if partnership working existed in any of a group of ten given categories covering a range of services.
170. Of the 52 LAs selected to participate in the survey, six did not complete the questionnaire. This gave a response rate of 88.5%.

171. The organisations and groups involved in these partnerships were classified according to *type*, as belonging to either the public, private or voluntary/community sectors. They were also classified according to the *scale* at which they operated. This could be at the national, regional, local or neighbourhood scale. In the context of this survey, the local scale was the scale of the LA district.
172. The mean of 6.35 partnership organisations per LA tree programme seemed quite low, although there were no previous data for any comparisons. Given the opportunities available for the LA tree programme to form partnerships with a wide range of public, private and voluntary/community sector organisations and groups, it was expected this figure would be higher. This suggests there is considerable scope for LA tree programmes to expand the range and scale of their partnership working to the mutual benefit of both the tree programme and the partner organisations.
173. The percentage involvement of national organisations in different services varied considerably. As may be expected, national organisations had low levels of percentage involvement in ‘community involvement’ and ‘volunteers’ and much higher levels for ‘funding’, ‘consultation’ and ‘specialist advice’.
174. Neighbourhood organisations, by contrast, had very high levels of percentage involvement in ‘community involvement’ services and ‘volunteers’ and comparatively low levels of involvement in ‘funding’ and ‘specialist advice’.
175. National organisations tended to be involved in a narrower range of these partnership working services than neighbourhood organisations.
176. National and private sector organisations had been in partnership with LAs for longer periods than neighbourhood and voluntary organisations respectively. This is probably a reflection of the greater stability of national and private sector organisations over neighbourhood and voluntary organisations.
177. The most important finding of this survey was the need for the LA tree programme to embrace a variety of partner organisations and groups of varying types and scales. It is only in this way that it will ensure the provision and receipt of a sufficient and appropriate range of services.

Integration of the Strands

178. The final stage of the project involved the [integration of the two strands](#). The main aims of this integration were:
 - To set the field survey results in context.
 - To highlight examples of best case practices and problem solving in urban tree management.
 - To build a picture of the relationship between tree characteristic and condition as seen on the ground, and local authority practice.
 - To look for any relationship between Strand 1 tree data and deprivation indices.

179. The results of 12 case studies were published on the Internet and presented at two seminars.
180. An input-output analysis of relationships between local authority practice and tree outcomes was undertaken.

It was not possible, within this analysis, to define distinct relationships between the Strand 1 and Strand 2 variables. However, several important points need to be made in relation to this.

- The lack of concrete relationships identified within this analysis is likely to be the result of the sources of error and degree of geographic mismatch between the two datasets, rather than a real lack of relationship.
 - Tree characteristics and condition are undoubtedly controlled by a much wider set of variables than present day local authority spending and strategy, so very strong relationships may not be present – even in datasets that are unaffected by the issues we have here. Additional controlling variables may include, for example, historic tree strategies and planting and climatic influences.
 - There will undoubtedly be considerable variation in tree characteristics and condition *within* a local authority area. In order to conduct this sort of analysis, a stratified sample of trees from areas within the entire local authority area would be needed.
181. An analysis was undertaken to look for relationships between Strand 1 data, specifically numbers of trees, species mix and tree condition and Indices of Deprivation.
 182. The key finding of this analysis is the establishment of broad relationships between tree data and Indices of Deprivation. Similar results were found in almost all cases between use of the ID 2004 Average and Extent data. Although considerable ‘noise’ has been found within relationships, this was largely to be expected, as a result of the sources of error resulting from the combination of data from *individual* towns with ID data from *entire* local authority areas.

The analyses conducted here suggest that it is the tree characteristics within town centres, medium density and high density residential areas that are most in line with the level of deprivation experienced by the local authority as a whole. Trees are often cited as being indicative of prosperity or deprivation within communities and this result indicates that there is a link between tree characteristics within town spaces and other measures of deprivation.

The 12 Case Studies

183. One of the objectives of the research involved the identification of innovative evidence-based approaches and models for the maintenance and management of urban trees. To help achieve this, it was proposed to develop a series of 12 [case studies](#) looking at good and innovative practice in various aspects of urban tree management. Each case study would focus on one or two LAs that provided particularly good examples of this.

184. After discussions between the researchers, the Project Advisory Group and the ODPM, a list of twelve topics was agreed:
1. [Establishing and operating a local authority-wide tree forum.](#)
 2. [Green waste utilisation.](#)
 3. [Community involvement.](#)
 4. [Tree strategies.](#)
 5. [Integrated tree management within the local authority.](#)
 6. [Sourcing and using external funding.](#)
 7. [Surveying, monitoring and risk assessment.](#)
 8. [Use of trees and woodlands in urban regeneration.](#)
 9. [Establishing and justifying the tree budget.](#)
 10. [Trees and development control.](#)
 11. [Best Value Review and Local Performance Indicators.](#)
 12. [e-Government and the local authority tree programme.](#)
185. The initial analysis of the data from the main survey identified a number of LAs that were performing particularly well in the aspects of urban tree management that had been selected as the topics for the case studies. These were investigated further to identify which LAs would serve as the best examples for each of the case studies. The research team then produced the 12 draft case studies.
186. To gain industry feedback on the first six of the 12 draft case studies, two one-day workshops were held. The southern workshop was held at the offices of ODPM, in central London, on 7 December 2004. The northern workshop was held at Myerscough College, Preston, on 9 December 2004.
187. The invitees to these workshops were individuals and representatives of organisations with a professional interest and involvement in urban tree management. The workshops generated a considerable amount of debate about the case studies and many positive and constructive comments were made, both verbally on the day and later in written submissions. These comments were taken into account when the draft cases were revised.
188. Following the production of all 12 draft case studies, these were displayed on a dedicated website for much wider industry consultation. A press release about the case studies and the website was issued and news items appeared in the trade and professional press. Furthermore, all English LAs were contacted by email with this information. Each case study could be downloaded from the website and there was a facility to email any comments directly to the research team. The case studies were displayed on the website for approximately six weeks and then revised in the light of all comments received.

The Future Development of Local Authority Tree Management – Some Conclusions from the Strand 2 Research

189. [This section of the report](#) explores the prospects for the future development of local authority (LA) tree management in England, in the light of some of the more significant findings of the Strand 2 research. It highlights some encouraging aspects of the results and also identifies some of the challenges that many LA tree programmes currently face, or are likely to face, in the immediate future. Furthermore, it focuses on some of the opportunities for LAs to make improvements to both their policies and practice in relation to tree management, with particular reference to examples from some of the case studies.
190. The LAs involved in the main Strand 2 survey had wide-ranging responsibilities for the urban forest in their district, indicating that urban forest management in England is essentially a local government function. The LAs were directly responsible for the planting, maintenance and management of their publicly owned trees and woodlands, often a very substantial proportion of the total tree cover within their district. The LAs also had powers to exert a considerable degree of influence over the development of the privately owned urban forest, mainly through the implementation of planning legislation.
191. The results of the survey gave an indication of the substantial scale of the LA tree management industry in England, in financial terms. This was estimated at nearly £106 million, including staffing costs, for the financial year 2003/04.

Planned Management

192. One of the most significant findings of the research was that many LAs lacked some basic information about the nature and extent of the trees and woodlands in their district. Without this information, it is impossible to develop a meaningful tree strategy that can drive the tree programme forward.
193. It was encouraging that a substantial number of LAs had recently produced a specific tree strategy. However, the research results raised questions about the content and detail of those strategies, suggesting that many may be seriously deficient. A comprehensive tree strategy is the starting point for a modern, planned approach to tree management. That tree strategy must also be integrated and embedded into the LA's Local Plan and other relevant policies.
194. Most LA tree budgets were not developed to reflect a planned level of service for the tree programme, but were simply formulated on the basis of previous funding.
195. LAs should produce a fully costed tree strategy where any variation in funding for this can be translated into measurable changes in the level of service provided by the tree programme.

196. The level of the LA's annual tree budget should also be related to the value of the urban forest in its district. Then, any increase or decrease in funding for the tree programme can be translated into measurable changes in the value of that asset.
197. The report recognises that LAs are operating with finite resources and have to grapple with many competing (and sometimes conflicting) demands for services. Any increase in funding for the tree programme has to be viewed in the context of its contribution to a range of service areas. This not only requires a strategic approach to budgeting and planning, it also requires recognition that the urban forest has a key contribution to make in achieving a range of strategic policy objectives.
198. When trying to convince their LA to give additional funding for the tree programme, it helps if the tree officers themselves are seen to be actively pursuing and securing external funding from outside sources.

Systematic management

199. The research revealed that the performance of the LAs in systematic management varied considerably. It was encouraging that a small majority of the LAs had installed computerised tree management systems. The performance of many LAs in utilising brash and timber from their trees was also encouraging.
200. Despite these encouraging results, the overall performance of many LAs in developing a systematic approach to tree work was often quite poor. For example, the extent and frequency for any systematic inspections of trees was often very poor. Furthermore, many thousands of trees were being planted without any provision for systematic post-planting maintenance.
201. Tree officers with under-funded tree programmes are often in a difficult dilemma. They could divert more of their limited resources into undertaking surveys and systematic inspections of trees but this is likely to leave even less money to actually undertake the work once it has been identified. The only real solution to this dilemma is to develop a comprehensive and costed tree strategy, that will establish clear priorities and targets for the work of the tree programme.

Integrated Management

202. While the management of the urban forest is essentially a local government function, the LA should undertake this work in partnership with a wide range of organisations and groups from the local community. There are major benefits in this for both the LA and the community.
203. An integrated approach to management is also important within the LA itself. Responsibilities for trees are often divided between different LA directorates, departments and sections. As far as possible, the LA should develop an integrated approach to management that embraces all aspects of its tree-related activities in a coherent and coordinated tree programme.

204. The research revealed that the general level of integrated management and partnership working among the LAs varied considerably. Despite the poor performance of some LAs, many others had made substantial progress in this direction. Many LA tree programmes routinely organised an extensive range of community involvement events and activities. This was often supported by a volunteer network such as a tree warden scheme. When officer time and financial resources are limited, various types of support structures are not only vital in providing the personnel to deliver community involvement programmes, they can also be used to attract substantial funding for this.
205. With other more urgent demands on the tree programme, some tree officers may be reluctant to devote time and resources to building partnership working and community involvement. Although understandable, this would be a significant missed opportunity. In the long-term, outside organisations and groups can make a substantial contribution to the resources of the tree programme. However, it usually requires some initial investment of time and resources to realise these benefits.
206. It was encouraging that the SWOT analysis indicated that a substantial number of tree officers viewed increasing community involvement and partnership working as a major opportunity to improve their tree programme in the future.

Privately owned trees and planning matters

207. There appeared to be a lack of consistency in the LAs' approach to much of the work relating to privately owned trees and planning matters. There were also concerns that many LAs may not be undertaking sufficient and consistent monitoring and enforcement of some of the relevant legislation.
208. LAs must be more proactive in this respect, if trees are to be adequately protected. In order to ensure this happens, all planning and development matters in relation to trees should feature prominently in a tree strategy, with clearly defined policies and targets.
209. Many LAs need to give more attention to producing and making more readily available the relevant information, guidance and necessary documentation regarding trees and planning matters. Much of this could be made available on-line. It could greatly reduce the demands on the tree officers' time and improve working relationships between the relevant parties. Some LAs had already made significant advances in this respect and it is hoped that many more will soon follow their example.
210. One of the most significant threats to the LAs' tree programmes to emerge from the SWOT Analysis was that posed by built development. This indicated a lack of confidence on the part of many tree officers about their ability to resist development pressures on trees in the future.

Urban trees – asset or liability?

211. The environmental, economic and social benefits of urban trees play a vital role in the sustainability of England's towns and cities. However, the SWOT Analysis

revealed that many tree officers are concerned that urban trees are now being viewed increasingly as a liability by the general public.

212. Public concern about urban trees focuses on a variety of issues. Apart from fears about direct damage and injury, other concerns about urban trees relate to wider issues of community safety. This issue of the public's perception of urban trees as either 'asset or liability' is possibly the greatest challenge that now faces many LA tree programmes.
213. Many of England's finest urban trees are a living legacy from the Victorian era. As they decline they require increasingly intensive maintenance to keep them in a safe condition. It is many of these trees that are causing concern, not only to the public, but also to the tree officers themselves. What is required is a programme of large-scale replacement planting that will provide the trees of the future. However, the LA should ensure that these replacement planting programmes are seen by the public as a phased and necessary response to the problem, that will not lead to a permanent loss of tree cover in their neighbourhood for future generations.
214. Ensuring that sufficient funding is provided to adequately maintain and manage the urban forest in a planned and proactive manner is the most effective way of countering any negative public perceptions about urban trees. Tree officers must also become far more proactive in promoting the benefits of urban trees and the work of their tree programmes.

Urban green space and the wider agenda

215. In building support for their tree programme, tree officers need to think increasingly beyond just trees and consider the work they do in the wider context of urban green space and the environment.
216. To have much long-term impact on improving the performance of the LA's tree programme, tree officers need to exert an influence on a wide range of fellow professionals, such as planners, landscape architects and conservationists. They also need to link the benefits of trees and the tree strategy to other LA services and policy objectives, such as urban regeneration, public health and tourism.
217. Professionals involved in the management of urban green space need to recognise that the management of urban trees requires specialist expertise. They also need to recognise that LA tree officers are not just experts in the practical maintenance and management of urban trees. They also have a vital role to play in developing and implement plans and policies regarding trees and green space.

Raising national standards in LA tree management

218. The ultimate aim of the *Trees in Towns II* research is to encourage LAs to develop higher standards of management, in order to deliver a more efficient and effective tree programme for their communities. In many respects, the research represents the first stage in developing a strategy for the future development of LA tree management in England. Just like the first stage in formulating any strategy,

a wealth of information has to be gathered before an assessment can be made that will lead to planned objectives.

219. One of the most immediate outcomes of this research is that LAs can now measure their performance in many different aspects of tree management, against the performance of other LAs. Where a Best Value Review of the entire tree programme has not already happened, the LAs are encouraged to undertake an assessment of their performance as part of this review process. Where their performance is substantially below the national average, it is hoped that they will take immediate steps to improve this.
220. The case studies should also have a valuable role in encouraging an improvement in performance. They focus on examples of good and innovative practice in twelve different aspects of LA tree management. It is hoped that the achievements of the featured LAs will be widely recognised and will encourage other LAs to raise their own standards in these areas.
221. The enormous variation in the LAs' performance in many different aspects of tree management highlights the need to promote and secure a more consistent approach to standards of performance right across the LA tree management industry. To encourage this, the research team has proposed ten basic targets for performance that all English LAs could try to achieve within the next five years.
222. In the final selection of the targets, the research team was conscious of not appearing to be too prescriptive. While trying to encourage all LAs to achieve these targets, consideration was also given to the fact that individual circumstances, priorities and constraints among some LAs may make the achievement of some targets difficult or inappropriate within the timescale suggested.
223. The ten targets selected are listed briefly below. However, for a more detailed description and explanation of these targets, readers should consult the full report. The ten targets are as follows:
 1. To have at least one specialist tree officer.
 2. To obtain at least £15,000 in external funding for the LA tree programme over the next five years.
 3. To develop and implement a comprehensive tree strategy.
 4. To undertake a Best Value Review of the LA's tree programme.
 5. To install a computerised tree management system.
 6. To ensure that at least 40% of the LA's tree maintenance work is done on a systematic, regularly scheduled cycle.
 7. To ensure that at least 90% of all the LA's newly planted trees, excluding woodland plantings, receive systematic post-planting maintenance until they are established.

8. To establish a programme, within the next five years, that will ensure every TPO is reviewed on a specified cycle.
9. Every LA that has a planning function to have a comprehensive Supplementary Planning Guidance document relating to trees and development.
10. Every consent to work on protected trees to be monitored regularly and enforcement action take where necessary.

In conclusion

224. As with any research project of this scale and scope, there will inevitably be some questions raised by the results that require more detailed examination before a more definitive explanation can be given. This study identified a number of areas where further research could throw more light on the findings of both Strands 1 and 2.
225. There are many aspects of this research that give cause for optimism. Although operating under frequently difficult conditions and often within severe financial constraints, many LAs have already succeeded in developing new and imaginative approaches to different aspects of their tree management programmes.
226. It is hoped that this report will encourage those LAs with severely under-funded tree programmes to take some immediate action to rectify this. The urban forest in these towns and cities, a multi-million pound asset, could be in danger of being steadily eroded and devalued.
227. There must be concern that an increasingly neglected tree population will inevitably lead to a growing number of expensive insurance claims. Short-term savings in the level of expenditure on tree management could be very counter-productive in the long-term. With a relatively small increase in funding for these tree programmes, substantial progress could be achieved that will facilitate a truly planned and proactive approach to urban tree management.
228. In the long term, LA tree programmes have a vital role to play in promoting the government's agenda for cleaner, greener, safer cities and the development of sustainable communities. With sufficient support and encouragement, the LAs and their tree officers can undoubtedly play an important part in helping to deliver that.



Trees and woodlands in urban areas have great aesthetic and environmental value and make a significant contribution to promoting sustainable communities.

Trees in Towns II reports on a study carried out for Communities and Local Government by ADAS and Myercough College. It assesses the quality and quantity of trees in urban areas in England and how this has changed since the original Trees in Towns report was published in 1993. It also provides an analysis of local authorities' resources and policies for the planting and management of trees, and includes 12 case studies demonstrating good and innovative practice.

The report and the wealth of data behind it should be a valuable resource for those engaged in planning, creating or managing tree populations in urban areas.



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