



STREETS AHEAD



TREE MANAGEMENT SYSTEM

Streets Ahead is a tree inventory and a tree management system for trees in streets, or park-like settings. As well as recording a full inventory of trees, it enables the continual updating of tree data by recording changes as part of normal day to day maintenance tasks.

Streets Ahead is a fully integrated GIS (Geographic Information System) which clearly shows the positions of all trees on a map – enabling easy access to information about individual trees, while also showing the relationship of trees with other surrounding features. Any number of additional map layers [showing suburbs, wards, work precincts, property boundaries and park infrastructure etc.] as well as aerial photographs can be added to the map display.

MAIN MAP VIEW

Usually the display would show a section of the map base and include street centrelines, road names, property boundaries and house numbers, and both current and future trees perhaps with an aerial photograph as a background.

The screenshot shows the main map view of the Streets Ahead software. The interface includes a 'Tool Bar' at the top left with various navigation and editing tools. An 'Overview Map' is located in the top left corner, showing a small-scale map of the area. The main map area displays a street grid with labels such as 'THOMAS ST', 'SERVICE ST', 'CRISP ST', 'GILLIES ST', and 'KERFERD ST'. A specific tree or site is highlighted in blue. On the left side, there is a 'Site/Inspection summary' dialog box showing details for a tree at '33 CRISP STREET, HAMPTON', including its species, age, health, and structure. At the bottom, there are 'Tabs to switch map views' labeled 'Map Red' and 'Map Blue'. On the right side, there are 'Action Tabs' for 'Locate', 'Detail', 'GPS', and 'Editor'. A 'Highlighted Tree/Site' is indicated by a blue arrow pointing to a tree on the map.

The map layer control allows individual map layers to be turned on or off so that different features can be emphasised.

The dialog box lists commonly used and system layers such as street centrelines, property boundaries, council wards and overhead services at the left.

Any additional layers which have been added to the Streets Ahead data folder will be listed in the box on the right. This list would include any aerial photos which had been added.

The 'Map Control Centre' dialog box is shown, allowing users to manage map layers. It features several sections of checkboxes: 'Property Duplicates', 'House Numbers', 'Road Centres', 'Road Names', 'Park Infrastructure', 'Work Precincts', 'Suburbs', 'Wards', and 'Map Grids'. There are also checkboxes for 'Street/Park Trees', 'OverHead Services', 'No Plant Zones', and 'Work Schedules'. On the right side, there is a list of map layers including 'PARKS', 'STREET PLANTINGS_MIF', 'ROADSECTIONS', 'TREECANOPY_MIF', 'ROADS_MIF', and 'PARKS_MIF'. At the bottom, there are 'Move Up' and 'Move Down' buttons, and a 'Map Red' / 'Map Blue' selector. The dialog box has 'OK', 'Cancel', and 'Close' buttons at the bottom right.

TREE / SITE DISPLAY

Streets Ahead allows the user to distinguish three types of sites:

- Current Trees** - sites where there is already a tree. [Shown by a green tree symbol]
- Vacant Sites** - where a tree could be planted or where one has been removed. [blue dot]
- Planned Sites** - where a tree is to be planted and a particular species has been assigned. [red dot]
These aid in determining the likely planting budget for coming years.

Any site for which the system has a history is retained on the map view. This allows access to the history of sites in the area – even after trees have been removed.

No-planting Zones mark areas where no tree planting is possible - along with the reason for this decision,

Other information including species ID, sites with outstanding works orders etc. can be displayed beside the tree symbols on the map.

DATA CAPTURE

Data about the trees can be captured in the field by a variety of methods by your own staff or by contractors. It is essential that the details of the trees are determined by competent arboriculturalists who are able to make accurate species identifications and informed assessments about the health of the trees and any works required. The full value of *Streets Ahead* is dependent upon the accuracy of this basic data.

Notebook Computers:

Streets Ahead can be run on a number of notebook computers with the data added on each notebook later being synchronised back to the master copy in the office. Where notebooks have GPS units connected, plotting of trees can be done with a high degree of accuracy in the field – avoiding the later office processing necessary for other data capture methods.

Hand-held dataloggers:

These data loggers have sufficient memory to hold the details of several hundred trees - equivalent to about 2 days full time data capture by experienced field staff. The robust construction of the units makes them ideal for use in the field.

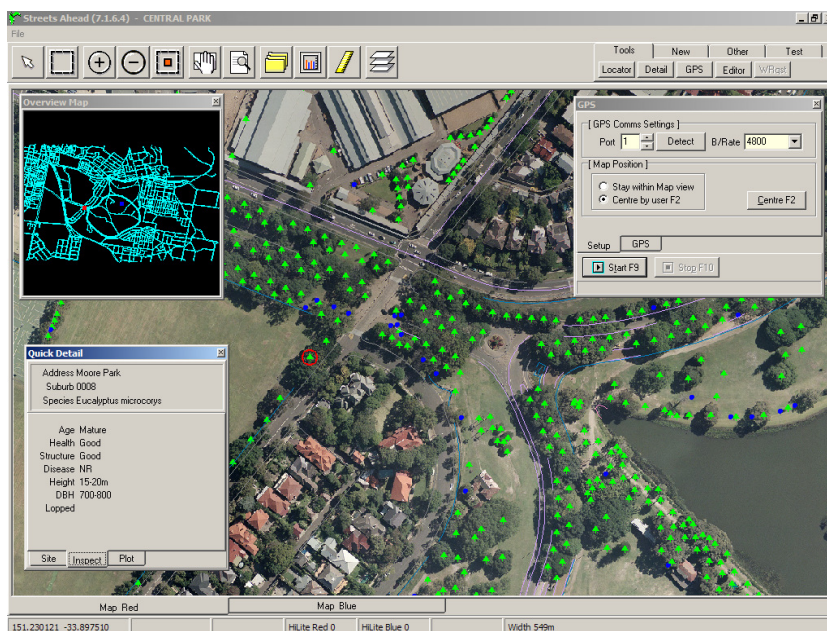
This method uses a paper map system which has proven simple and cost effective. This data capture method consistently achieves an accuracy level of 1 to 2 metres which is usually more than adequate for tree management needs.

Entry from paper or other electronic records:

If you already have access to surveyed tree data with GIS based plot points or GPS data, Osprey can load this data into *Streets Ahead* at the time of the initial setup.

MOBILE VERSION

Streets Ahead's mobile version for tablet or notebook computers is GPS enabled so that the current position is shown and the map display automatically moved. New trees can be plotted, inspections recorded and works orders initiated or signed off in the field. Data entered onto each mobile version is synchronised back to the office master data copy when next in the office [eg. at the end of day or week.]



TREE / SITE ATTRIBUTES

Each site is identified by a unique site number - in two parts – a map grid number and a local site number.

Location information and additional site information is recorded where appropriate –

- Street name and house number [or Park name]
- Planting area [ie nature strip, side median etc.]
- Whether the tree is in front or at the side of the property. [Recorded so that trees which relate to a property fronting another street can be identified.]
- Overhead or other services that may impact on the tree.
- Any special site values [eg a memorial avenue.]

The key information recorded for each tree is based on groupings for Age, Health, Structure, Height, and Disease and DBH. Actual age can also be tracked if a planting date is known.

The species is also recorded by selecting from a locally defined species list.

Descriptions are used for the key inspection groupings:

| | | | | |
|------------------|-----------|-------------|--------|---------|
| Age | Young | Semi-mature | Mature | Decline |
| Health | Very Good | Good | Fair | Poor |
| Structure | Very Good | Good | Fair | Poor |

The ranges for **Height** and **DBH** are user definable.

Where necessary a broader range of attribute information including landscape features, special significance values such as habitat value, crown class, crown shape, spread, root zone, and hazard assessment can be recorded.

The entry of many of these attributes is made from drop down lists – however most of these lists are able to be customised for your particular situation.

TREE / SITE NOTES

Each site can have extensive notes linked to it.

These notes can be stored directly within **Streets Ahead** or can be links to existing documents [letters from residents, reports by arborists etc.] or other files in a wide range of file types. [including DOC, RTF, TXT, XLS, CSV, PDF, MDI, AVI, JPG]

Data View - Tree Information

Address 15 Hargreaves St Suburb Paddington Species Ficus rubiginosa

Future Planting Current Tree

Species
Ficus rubiginosa

Lopped NO

Original Planted Date

Extra ID
318

Notes associated with tree

Dear Sir,
I am writing to point out that the tree outside my house has some broken limbs jutting across the footpath.
I am concerned that a pedestrian may be injured if these are not removed as a matter of urgency.
.....
C:\OSprey\SAhead\Ltr24092005

Link Existing File Create New Link Remove Link

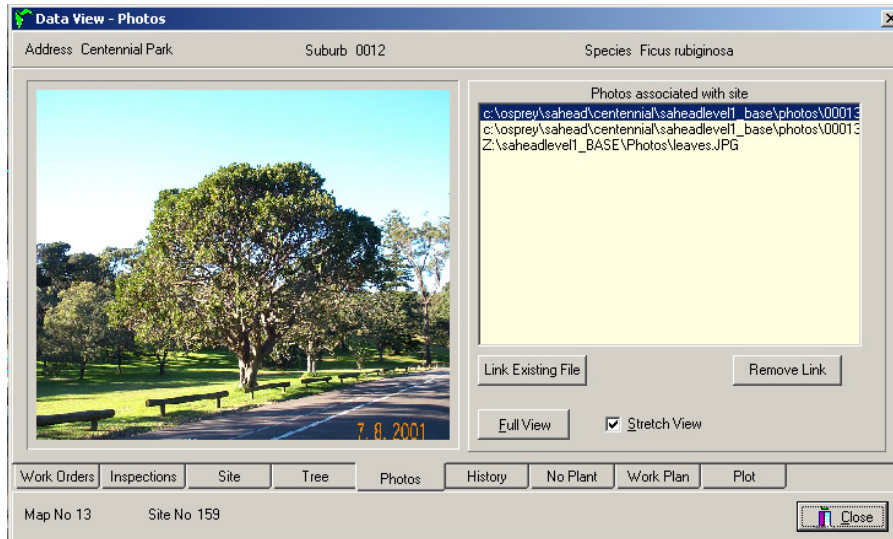
New Edit Delete Save Cancel

Work Orders Inspections Site Tree Photos History No Plant Work Plan Plot

Map No 13 Site No 159 Close

PHOTOGRAPHS.

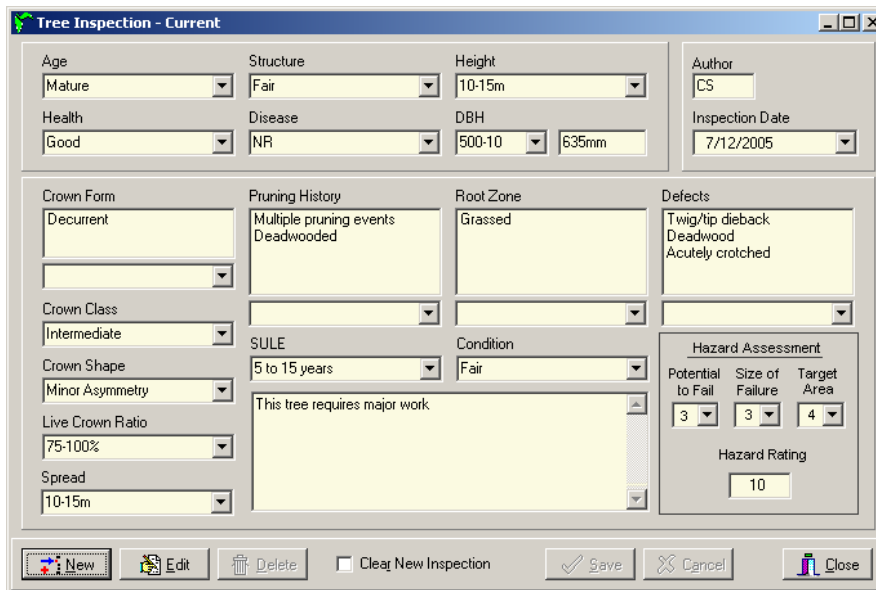
Any number of images can be linked to trees or vacant sites. This allows you to take digital photos at various stages in a tree's growth or of particular problem trees – eg root damage, storm damage, pests etc.



INSPECTIONS

Details of the condition of trees can be recorded during on-site inspections on the mobile version, by using hand-held dataloggers and then downloading information into the computer, or by adding inspection reports from paper notes via the keyboard.

All inspections carried out for a tree are listed and include the inspection date and the author. Inspections can be locked against later edits.



HISTORY

Streets Ahead retains the history of every site. The History tab shows whether there has only been the one planting there or if multiple plantings have taken place, the date of planting and removal and details of each inspection carried out.

If no tree is currently planted at a site, but one has previously been in that position, the site cannot be deleted from the system it will remain indicated by a gold symbol and its history will still be accessible.

Orders can be printed with or without a map. For parks and other locations where sites are not easily addressed a map may be vital in identifying the correct tree for particular work.

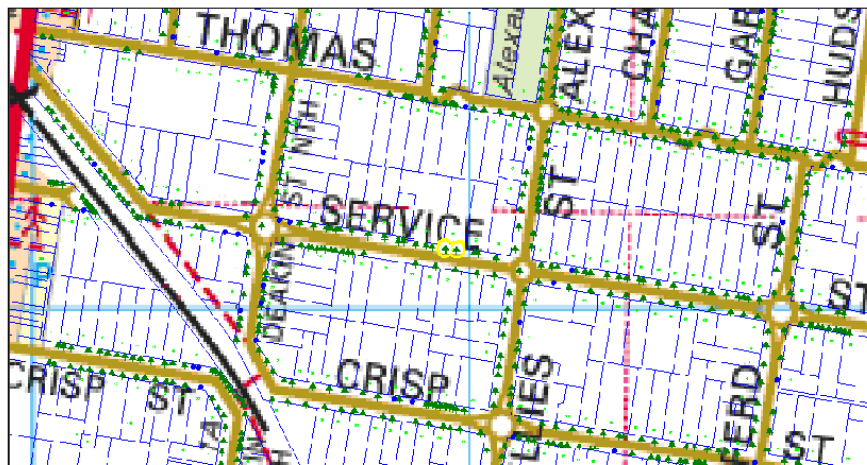
Work Order Number 1019555

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WORK ORDER

City of Osprey

| | |
|--|---------------------------------|
| Order Number 1019555 | Work Task TREE REMOVAL |
| W/O Date 2/05/2006 | Work Crew CH |
| Authorised by DTO | Priority 4 |
| Reference No 0697596 | Source R |
| Printed Date 24/10/2007 | Schedule Date 23/05/2006 |
| No. of Trees 2 | Est Hours 1.00 |
| Requested by Frank Spencer | Status Completed |
| Address 35 SERVICE STREET FOUNTAIN GATE | Hours Done 1.00 |
| Phone No 9876 5432 | |

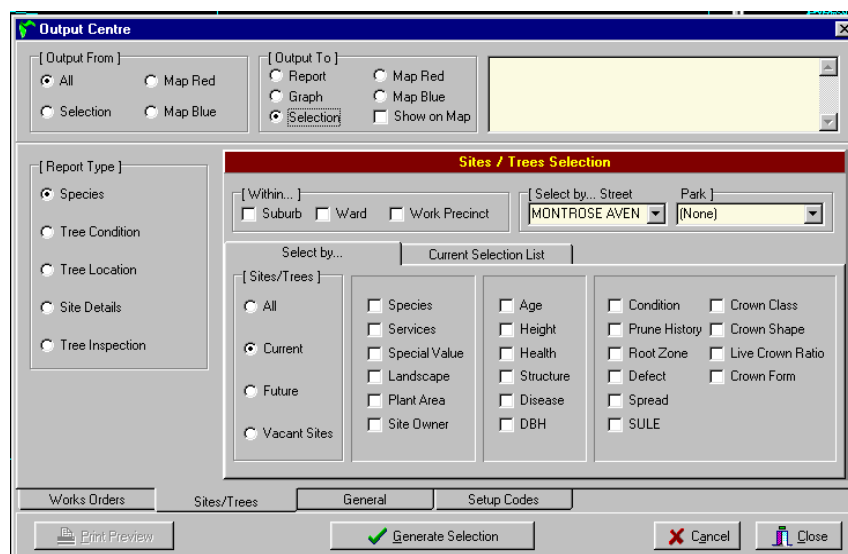


PLEASE PRUNE N/S TREE AS SOME BRANCHES ARE DEAD.
REMOVED ONE SMALL SUGAR GUM BY 'SS' WILL REPLACE WITH CORYMBIA FICIFOLIA

| Site Number | Prop No | Street | Suburb | Species |
|--------------|---------|-----------------|---------------|----------------------------|
| 00148 - 0213 | 35 | SERVICE STREET, | FOUNTAIN GATE | EUCALYPTUS FICIFOLIA |
| 00148 - 0214 | 35 | SERVICE STREET, | FOUNTAIN GATE | EUCALYPTUS CLADOCALYX NANA |

OUTPUT [Reports, Screen, Export]

A wide range of user definable reports is available on street and park trees as well as on work orders. These can be based upon trees selected by any combination of criteria. For example you may wish to select all the Elm trees in a suburb which are of a poor health. Once the trees are selected you can produce a range of reports, display the selected trees on the map or export the details to a csv file for use within Excel. Tree selections along with their current inspection details can also be exported to MIF format files for import into other GIS systems such as MapInfo.



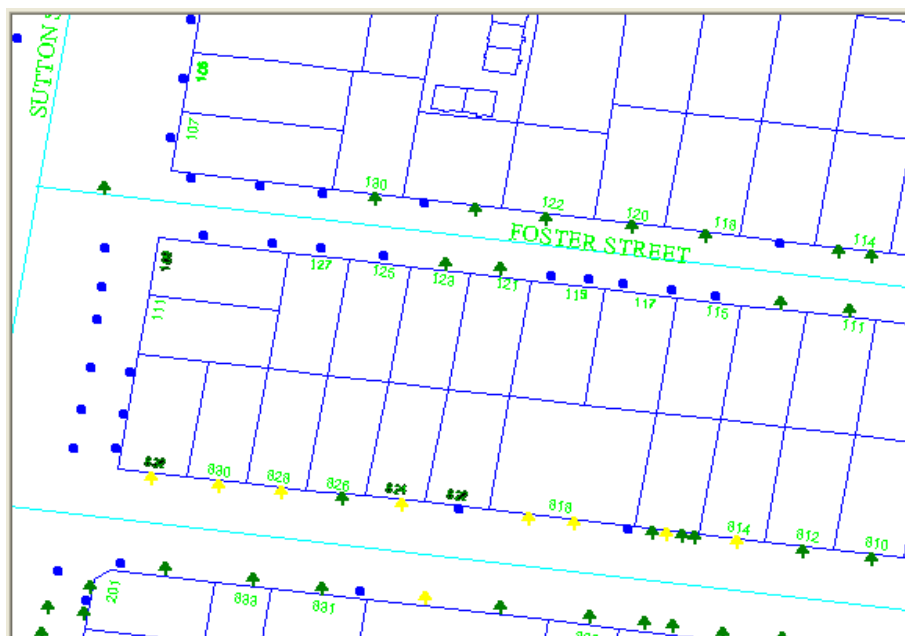
All reports may cover all trees within the system or only those in a previously defined selection and can be displayed on screen, printed or sent to a text or rich text format file [so that they may be incorporated into a document.]

- Tree Type Reports show the number of trees of each different species. The reports list the tree types in alphabetic order, grouped by genus, or in order of the number of trees of each type.
- Tree Location Reports list the locations of trees, or sites selected.
- Tree Condition Reports analyse the trees by Age, DBH, Disease, Health, Height or Structure.
- Tree Inspection Reports show the details of the latest inspection of the selected trees. A report is also available for all inspections carried out for selected trees showing the history successive inspections.

Streets Ahead allows you to analyse your tree stock for the purpose of identifying the predominance, location and species of ageing trees, which species are underperforming, which areas appear subject to disease and many other such queries.

The data becomes very powerful information when it can be broken down and analysed in this way. This form of analysis can apply to street and park trees, as well as to works orders.

In the figure below the trees forming the selection are displayed as yellow coloured trees. The selection criteria used in this case was for all Elms in the street.



Print Preview

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Date 15/06/00

Time 1:56 PM

City of Osprey

Tree Detail Report

| Site Number | Prop No | Street | Suburb | Height | DBH | Species |
|--------------|----------|---------------|-----------|--------|-----|------------------------|
| 00327 - 0204 | 12 | AGNES STREET | BEAUMARIS | 6-9 | NR | ALLOCASUARINA TORULOSA |
| 00327 - 0210 | 6 | AGNES STREET | BEAUMARIS | 10-15 | NR | ALLOCASUARINA TORULOSA |
| 00327 - 0214 | RES | AGNES STREET | BEAUMARIS | 6-9 | NR | ALLOCASUARINA TORULOSA |
| 00304 - 0011 | 20 | ALFRED STREET | BEAUMARIS | <3 | NR | EUCALYPTUS OVATA |
| 00304 - 0012 | 20 | ALFRED STREET | BEAUMARIS | <3 | NR | EUCALYPTUS PULCHELLA |
| 00304 - 0021 | 1 | ALFRED STREET | BEAUMARIS | 6-9 | NR | FRAXINUS OXYCARPA |
| 00304 - 0044 | 39 | ALFRED STREET | BEAUMARIS | 3-5 | NR | MELALEUCA STYPHELOIDES |
| 00304 - 0047 | (ADJ) 25 | ALFRED STREET | BEAUMARIS | <3 | NR | ACACIA |
| 00304 - 0048 | (ADJ) 25 | ALFRED STREET | BEAUMARIS | <3 | NR | EUCALYPTUS |

Work Order Reports allow the listing of Unprinted, Printed, Incomplete and Cancelled Works Orders - sorted by Priority, Work Task, Work Crew, Order Number, Order Date or Works Date.

- Work Progress report shows the status of works completed during any month, by work task.

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City of Osprey

Date : 10/03/2005
Time : 2:02 PM

Year beginning 01/03/2004 Month beginning 01/03/2005

| Work Task | Received this month | Completed this month | Received this year | Completed this year | Completed Within Schedule | Outstanding |
|----------------------|---------------------|----------------------|--------------------|---------------------|---------------------------|-------------|
| 66KV Clearance | 0 | 0 | 0 | 0 | 0 0% | 0 |
| Cabling/bracing | 0 | 0 | 2 | 2 | 2 100% | 0 |
| Canopy Restructure | 1 | 0 | 1 | 0 | 0 0% | 1 |
| Crown Pruning | 0 | 0 | 0 | 0 | 0 0% | 0 |
| Crown pruning 0 - 3 | 0 | 0 | 35 | 35 | 35 100% | 0 |
| Crown pruning 3 - 6 | 0 | 0 | 238 | 238 | 238 100% | 0 |
| Crown pruning 6 - 10 | 0 | 0 | 162 | 162 | 162 100% | 0 |
| Crown pruning > 10 | 0 | 0 | 122 | 122 | 122 100% | 0 |
| Crown reduction | 0 | 0 | 1 | 1 | 1 100% | 0 |

For further details contact:



Osprey Computing

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