

Executive Summary

The Royal Tasmanian Botanical Gardens (RTBG) has produced an audit of the historical landscape of the Willow Court Precinct, New Norfolk under contract to the Derwent Valley Renewal Group, *Valley Vision*.

The audit has been undertaken by the Botanical Resources team of the RTBG Botanical Resources Officer, Dr Alan Macfadyen and Horticultural Botanist, Natalie Papworth.

The landscape audit of the Willow Court Precinct aims to:

- identify and map the major trees
- identify any issues in relation to the health of the trees
- assess their impact on the built landscape
- consider the significance of the plantings
- feed into the development of a maintenance plan for the Precinct

The interim report was requested by *Valley Vision* to assess the impact of trees on lighting fixtures at the site and this information together with the maintenance plan will provide a basis for the future planning and development of the landscape of the Precinct.

Overall very few of the trees are likely to be from the original plantings of the nineteenth century. There are three areas in which an underlying theme has been employed: the Elm Avenue, the Robinia Avenue and the Ash Grove. Of these the Elms and Robinia are of significant maturity and may represent early plantings. From a heritage point of view the most significant area is that of Frescatti and its Hawthorn-enclosed terraced garden. These elements are the most important horticultural features and warrant separate heritage assessment.

The remainder of the Precinct's trees are a collection of a wide range of species, from fruit trees to Conifers, Wattles and Eucalypts, and most of these date from a much more recent period. There appears to be no cohesive theme in these later plantings. The rockeries built in the grounds of the Nurse's Home and near the Wooden Hall appear incongruous in the landscape. However, the background to their development should be researched as they may form part of a memorial garden and could have significance within the cultural landscape of the Precinct.

A relatively small number of the nearly 200 trees assessed require removal. The vast majority whilst not in optimal condition are viable specimens. This condition is likely to persist with continued lack of horticultural care but the general health and longevity of the trees could be improved by a coordinated maintenance program.

Background

The RTBG were engaged by the Derwent Valley Economic Renewal Group Inc, *Valley Vision*, to undertake an audit of the historical landscape at the Willow Court Asylum Precinct, New Norfolk, and to produce a maintenance plan that will enable the ongoing care of the plantings at the site.

The Willow Court Asylum Precinct dates from 1830 and is historically significant as the first purpose built asylum in Australia. Willow Court (1830), the oldest building at the site, is on the Register of the National Estate and the Precinct currently occupies 18 ha and comprises 24 buildings of varying ages including Frescatti House (1834), which was originally built for the Colonial Secretary of the time, to more recent additions to the complex in the early 1970s.

The landscape of the Precinct occupies 18 ha comprising exotic plantings of mainly specimen trees and shrubs set in lawn, as well as native plantings, mostly on the Lachlan River flats. The garden of Frescatti House is more densely planted and may reflect the availability and popularity of plant specimens in the 1830s. Two important elements of the Garden are the double driveway edged by dual Hawthorn hedges and an old grape vine at the rear of the house. Within the Precinct are a number of large specimen trees and rows of trees line the main avenue. The RTBG has an historic association with Willow Court, and records show that the RTBG provided plants for the Precinct in the late 1860's and early 1870's.

Scope

The RTBG has been asked to:

1. conduct an audit of the plants and trees located in the Willow Court Precinct;
2. produce a detailed map of the plants and trees;
3. produce a plant and tree maintenance program, particularly for the dual hawthorn hedges and vine at the entrance to Frescatti.

Deliverables

1. Conduct an audit of the plants and trees located in the Willow Court Precinct
 - compile a herbarium of all major trees and shrubs
 - identify major trees and shrubs to species level where possible
2. Produce a detailed map of the plants and trees
 - map all major trees and shrubs in the Precinct with a catalogue of named specimens
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3. Produce a plant and tree maintenance program, particularly for the dual Hawthorn hedges and vine at the entrance to Frescatti
 - assess the health of all major trees and recommend remedial works by an arboriculturist if required (arboricultural work will need to be contracted out and will be additional to the consultancy fee)
 - provide a maintenance plan for all major trees and shrubs
 - provide a maintenance plan for the Hawthorn hedge in Frescatti
 - provide a maintenance plan for the grape vine in Frescatti

Outcomes

At the completion of the project the RTBG will provide *Valley Vision* with:

- an inventory of trees and shrubs in the Willow Court Precinct
- a herbarium record of major trees and shrubs
- a map of the location of major trees and shrubs
- a list of trees requiring arboricultural work
- maintenance plans for the care of major trees and shrubs and the dual Hawthorn hedges and grape vine at Frescatti.

Overview

This survey of the 18 Ha Willow Court site was carried out with six objectives:

1. To identify all of the mature trees.
2. To assess their state of health and their dimensions, particularly height.
3. To prepare a map of the site indicating tree locations.
4. To identify any trees or plantings of historical interest or value.
5. To outline any tree disease or structural problems and recommend arboricultural assessment.
6. To prepare a site maintenance plan.

In order to facilitate the survey, the site was broken up into 15 areas of differing sizes. The divisions were largely self-evident, e.g. Frescatti and the Elm avenue have an obvious common theme, but some of the other areas were selected on a geographical basis.

Within each area all of the mature trees were identified to species level where possible, allocated an identification number and mapped: a total of 190 were recorded. A number of the smaller trees and shrubs were noted, but not in detail. Each tree was assessed individually as to its overall state of health, height and need of further attention, recorded in Appendix 3.

The next step was to examine the individual areas and comment on the plantings in relation to their particular settings, identify any issues and recommendations following. It is a little difficult to provide definitive recommendations for some of these areas, as at this stage it is not clear as to their final function. For instance, some of the more recently built rockeries and ponds have only recent historical interest so there are options both for restoration or removal. This assessment forms the bulk of the report.

As an overall picture, the condition of the mature trees is variable: a small number are either too diseased to remain, and should be removed due to public risk, whilst others are basically large weeds and will spread unless brought under control. The remainder of the trees are in fair health: it is clear that for the majority there has only been minimal care provided and if funding was available many would benefit from cosmetic removal of dead or broken branches. One result of the lack of care is that (apart from the terminally affected trees) those remaining have clearly proved to be hardy specimens. One implication of this is that it would be possible to construct a maintenance program with few modifications which would maintain the *status quo* but would not improve the health or longevity of the trees. This has an advantage of a reduction in cost but in the long term the well being of the trees would suffer.

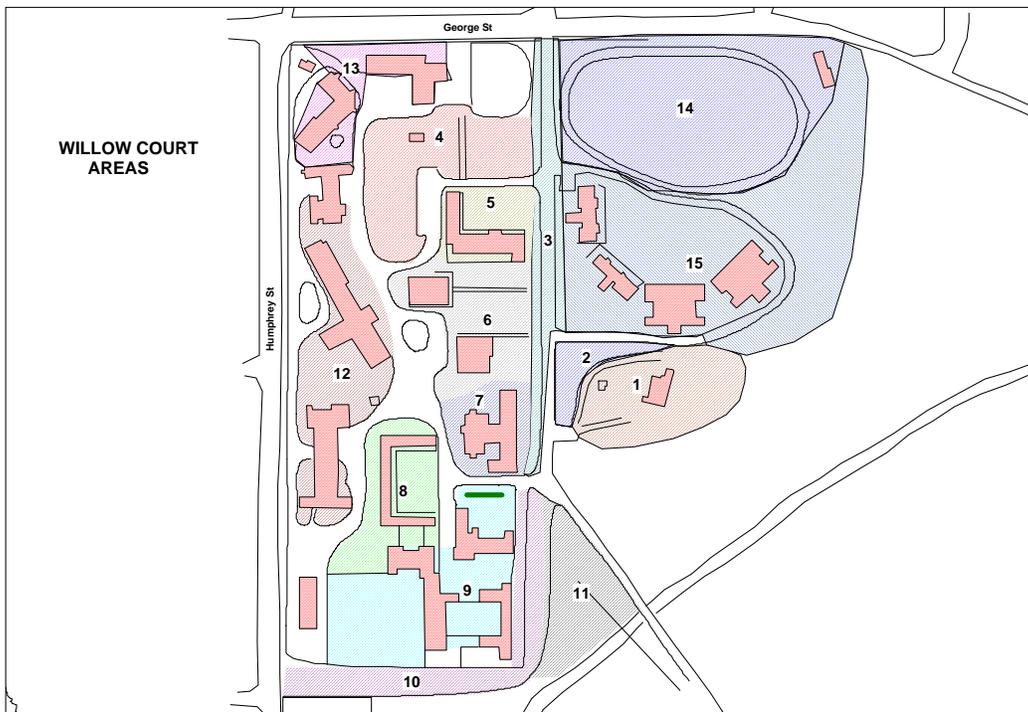
As far as we have been able to discover there has never been any form of regular watering or supplementary feeding on the site. One of the consequences of this has

been to affect the rate of tree growth, and this in turn has made it difficult to accurately age many of the larger trees. From an historical perspective, it is likely that the Yew in the Barracks, the Frescatti vine and most of the Elms are quite old, but could still date from the early to middle 20th century rather than original (i.e. Victorian) vintage.

The entire Frescatti setting is very interesting: the double hawthorn hedge (possibly quite old) and the overgrown terraced garden, surrounded by an extended single Hawthorn hedge indicate that this was originally a formally landscaped garden, though again, the large remaining trees may not be part of the early planting.

The Robinia avenue dates from a relatively early period: the fact that the avenue effect has been lost by the intrusion of a private fence is unfortunate, but the structure of the avenue can be clearly seen from Humphrey Street. The indications from the study point to there being few of the trees originally planted in the 1800's still remaining. The pattern and distribution of the various species reflect a small number of thematic plantings (Elms, Ashes, Robinias, Birches) but the remainder probably represent replacement of trees which have progressively died with unrelated and unconnected species.

Maintenance Areas 1-15



Area 1

Site description:

Frescatti is a small weatherboard cottage built in 1834 for the Colonial Secretary. Currently it is in poor condition with a small outbuilding to the west. Enveloping this structure is a large sprawling Grapevine that may well be of great age.



Frescatti built 1834 viewed from the front.

The house has been surrounded by a security fence that separates it from the garden, and a number of suckering weeds inside the fence threaten the building's structural integrity. These include Tree of Heaven suckers, Laurel, Plum, Elderberry and the lesser threat of Blackberry and Periwinkle.

The dual driveway into Frescatti is lined by an English Hawthorn Hedge. This comprises four rows of plants, the outer two running along the perimeter of the property. The hedge possibly dates from the construction of the house in 1834. About 30 m along the northern boundary is a 2 m wide flagged step with a corresponding opening in the hedge opposite that may have been a gateway through the hedge. The hedge itself probably originally delineated the total property (about 5,700sq m) and remnants run down either side of the house and among the undergrowth at the base of the hill bordering the lucerne paddock.



Part of Frescatti English Hawthorn hedge viewed from The Avenue entrance.

The flat lawn on the eastern boundary has a small number of significant trees on its edge including an unusual Hawthorn species, Common Maple, Hornbeam and two Flowering Cherries. The garden falls away steeply on the eastern side and has a double bluestone terrace at its upper limit as well as a terrace at the lower end of the slope inside the remains of the hawthorn hedge. A further, incomplete terrace also

remains at about the mid-point of the slope. Access to this terraced garden is via an edged set of sandstone flag steps. A smaller set of steps transects the upper terrace further to the south. On the bank some original plants also remain including three Lombardy Poplars, a Horse Chestnut and possibly an early Plum. All these elements indicate that these are the remnants of a landscaped formal garden.

It should also be noted that about halfway down the embankment on the northern side there has been extensive excavation and some damage to the original Hawthorn hedge following the repair of a sewage main.



Stairway uncovered leading from Frescatti to terraces.



Pathway below lower terrace.

Points of interest:

- Double Hawthorn hedge driveway and boundary hedge
- Grapevine
- Mature trees
- Two sets of steps leading to terraced garden
- Bluestone terraces

Maintenance issues and recommendations:

- The hedges forming the driveway are generally in good health. A major maintenance problem here in the double Hawthorn hedge driveway is the infiltration of weeds throughout its length including Ivy, Elm, Plum, Robinia and Periwinkle.
- The boundary hedge remains in a fragmentary state, is overtopped and in poor health due to competition and lack of light.
- The major problem throughout the bank is a dense overgrowth of self-seeded Plum, suckering Tree of Heaven, Elderberry and Blackberry.
- Of the three Lombardy Poplars the southern most is in poor condition. Of the remaining two one has a substantial hole at its base which needs investigation and the other currently supports a colony of bees.
- The Common Maple and 2 Flowering Cherries are mature but in poor health.

- The stump of a large Tree of Heaven remains near the top of the terrace and is a source of extensive suckering which has spread through out the garden into the structure of the cottage itself.



Tree of Heaven suckers growing through the verandah of Frescatti.

Area 2

Site description:

This comprises a flat triangular lawn covering some 1,500 m², with dispersed semi-mature trees including Cypresses, Tamarisk, Arbutus and a Cedar. None of the trees is either rare or significant, two of the Himalayan Cypresses are close to 14 m tall, the third just over 7 m, whilst the Cedar is less than 10 m. The two remaining trees are a Poplar and a Variegated Elm, both standing about 10 m tall. The similarity in height and maturity suggests that most of these trees were planted at about the same time.

Points of interest:

- Apart from providing a screen between the main roadway and the structures behind them, this area has no outstanding points of interest.

Maintenance issues and recommendations:

- The Arbutus is in poor condition, small (3m) and too close to the Tamarisk and should be removed.
- The remaining trees are in good health and have no overt signs of disease.

Area 3

Site description:

The avenue of Elms is 120 m long and occupies 4600 m². The trees are planted either side of the main entrance along a north-south axis extending from the entrance to the Administration building. Twenty-three elms have been inter-planted with Laurel, Fire Bush and a single Holm Oak. It is probable the original planting was of Elms, in pairs, on either side of the road but subsequent deaths have produced gaps that have been filled by the other species. The trees range in height from about 5 m to 15 m with an average of 9.5 m.

Points of interest:

- Elm avenues are uncommon in southern Tasmania and the creation of an avenue of mature trees growing over the road would have been part of the original design intent.
- Seven matched pairs still stand.

Maintenance issues and recommendations:

- In the past there appears to have been little routine tree care carried out.
- Several of the Elms are in poor condition and at least two have large hollows damaged and substantial brown rot in the heartwood. These are likely to be irretrievably unsafe.
- One Laurel is dead and requires removal.

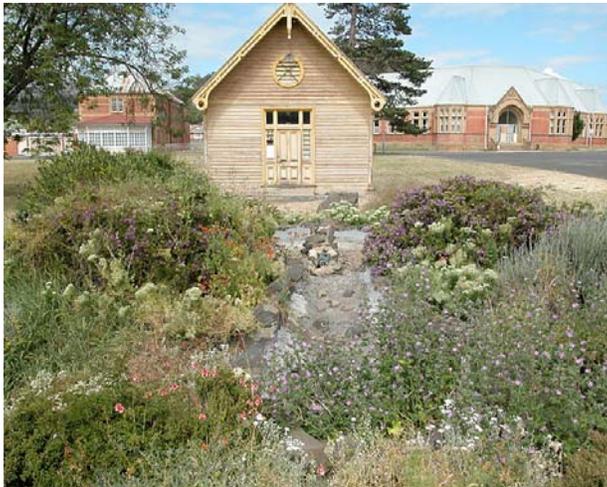
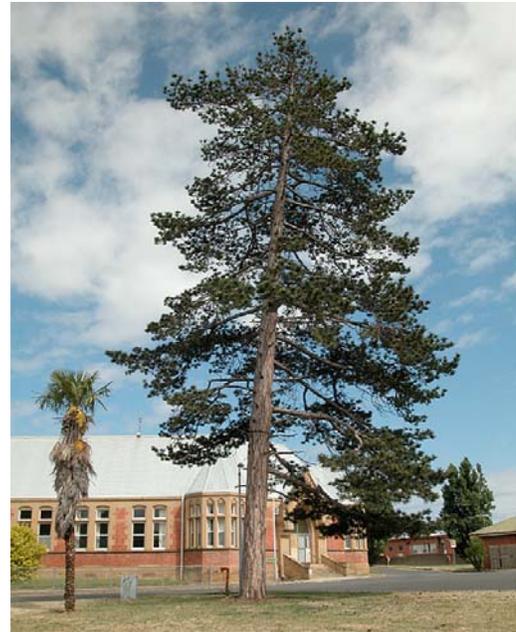


Elm trees lining The Avenue of which only seven (opposite matched) planted pairs remain.

Area 4**Site description:**

This flat, mainly grassed L-shaped area covers some 6,300m² and contains two built structures, one a raised stone and concrete garden, of comparatively recent construction, and a small weatherboard building (Wooden Hall) which is considerably older. The most obvious plantings on the main part of the lawn are three Canary Island Date Palms, the tallest of which is 8 m, and the other two 4 m and 4.5 m respectively, set in an east-west line. A solitary Elm (12.7 m) lies to the north-east whilst in front of the garden are three small trees, a Contorted Willow, an Alder and an Oak. Further to the east, in front of the Wooden Hall is a mature Ash tree of 12.5 m, and east of this is a small circular raised stone rockery. Beyond that, in the north-east corner of the lawn, is a 4 m Hemp Palm and a 19 m tall Black Pine. Two more trees are growing, widely separated, in the southern part of this area, both Poplars and each about 18 m tall.

The raised garden is in the form of a circular shallow pond adjacent to a similarly shaped rockery, the two bisected by a wooden, railed bridge. Lilac, Hebe, Bottlebrush, Clematis, Diosma, Roses, Jasmine, Mintbush, Cotton Lavender and Rockrose are still present in the garden: the pond however is empty apart from a thick layer of algae.



Pond and rockery in front of the Wooden Hall left and Black Pine and Hemp Palm right.

Points of interest :

- The Canary Date Palms are small (can attain 18 –20m) but in good health.
- The Black Pine is the only pine in Willow court, and is probably quite old.
- The two Poplars are also healthy.

Maintenance issues and recommendations:

- Many of the plants in the rockery are healthy but the area requires weeding.
- The ponds remain empty and a decision should be made whether to repair this and the rockery area or remove them altogether.
- The Black Pine is ring-barked by a cable at about 5 m. It is probable that the removal of the cable will increase damage to the trunk and instead it should be left *in-situ* and the general health of the tree should be monitored.
- The Elm is hollow for much of the lower 5 m and requires arborist assessment and probable removal. It is in dangerous condition.

Area 5

Site description:

A flat area of about 3000 m² surrounding the old Nurse's Home, delineated on the north and east sides by raised freestone beds. An enclosed courtyard on the south side contains a medium-sized Wisteria on the wall, with a Laurel growing through the fire escape. On the outside of this southern wall are 3 Plum suckers, quite large and undermining the structure.

The main garden to the north is dominated by a healthy, 9 m tall spreading Scarlet Oak, diagonally opposite is an Ash about the same height and close to it a smaller Silver Birch, on the corner behind this is a substantial Jasmine. Along the north-facing wall of the building is a collection of small trees in generally poor condition – these include a Lemon, Quince, Wattle, a Forsythia and a Grape Vine. Near the avenue, at the corner of the building is a healthy 15 m tall Elm. Within the grassed area is a small wooden gazebo in the south-west corner, while in the south-eastern area is a stone-and-concrete raised bed, incorporating a shallow, currently empty, pond. All of the raised beds, which are of comparatively recent construction, are overgrown with weeds, but still contain some viable original plantings, including Diosma, Rosemary, Catmint, Snow-in-Summer and Chrysanthemum.



Nurse's Home garden showing part of the rockery set in front of the Scarlet Oak.

Points of interest:

- Both the Oak and the Elm are fine healthy specimens.
- The Ash and the Birch, though smaller, are also worth retaining.
- The remnants of the plantings in the raised beds could probably be salvaged.
- The infrastructure of the beds and the pond appear sound and could be restored with a minimum of work.
- The remainder of the trees are small, in indifferent condition and it would probably be better to remove most of them, depending on the eventual use of the land.
- All the Plums and Laurels close to the walls are unsightly and may well be causing damage to the structures themselves: they should be removed.

Maintenance issues and recommendations:

- One Wattle is dying and requires removal.
- Suckering Laurels against the verandah need removal.
- Depending on whether they are to be retained, the stone structures require weeding and repair, or removal.
- The small fruit trees are viable and could be retained with adequate care.

Area 6**Site description:**

This flat part of the site is nearly 5,500 m² and contains two brick buildings, the Ladies Cottage and the School. At the rear of the Ladies Cottage is a problematic large (14.5 m) Tree of Heaven. In front are two Funeral Cypresses about 12 m in height, both in good condition. A 7 m Plum stands by the southwest corner, and further out are two Boobyallas, both in a sorry state.

To the rear of the School is a very large Poplar standing 18.5 m tall, and close beside it is a nice 10 m Claret Ash. In front of the building, flanking the path are two tall Blue Gums (26.9 m and 22.6m respectively). Both of these have been pollarded in the past at about 4 m height, so the bulk of both trees is made up of multiple leaders growing upward parallel to one another. There is no evidence of disease or structural weakness in these trees. Some distance to the rear of the buildings is a small grassed traffic island, containing an even smaller circular rock-enclosed bed: the only plant surviving here is a Veronica.



Blue Gums in front of the School building.

Points of interest:

- The two Funeral Cypresses are unusual in cultivation and in good condition.
- The remaining two mature trees, the Poplar and the Claret Ash are attractive, though the Poplar has the potential to cause suckering problems.

Maintenance issues and recommendations:

- The Tree of Heaven has a large hole at 3m with extensive rot extending in the heartwood towards the base. In addition, it has produced substantial suckering, evident close to the adjoining building
- The Blue Gums have accumulated a large amount of flammable bark at the level of the pollarding – this should be removed, together with a climbing inspection at the 4 m level.

- Both Boobyallas are in a state of senescence, one in particular is almost entirely hollow and need removal.

Area 7

Site description:

Covering about 3,000 m² this area is the site of the former Administration block. In front of this building is the southern end of the Elm avenue, while at regular intervals, hard against the wall, are four small (~3 to 4 m) Italian Cypresses that are symmetrical and quite healthy. Also along the base of this wall are several raised brick beds, still containing some of the original plantings, including Cotoneaster, Broom and Lavender with Roses to the north of the entrance steps. To the south are more Lavender, Monbretia and Roses. All of these beds are weedy and neglected, but a large percentage of the original plants could be preserved.

At the north-west corner are two fairly large Broom, and at the opposite corner is a mature, healthy English Oak, 17.8 m tall. A small courtyard is also present here that has a concrete circular bed enclosing a medium-sized Beech tree, behind this is another small bed containing Rhododendron, Man Fern and Elephant Ears, none of which is in very good condition.



Garden beds with Beech tree and English Oak set in asphalt behind the Administration block.

Points of interest:

- Of the trees present in this area, the Oak and the Beech are good, healthy specimens.
- The Cypresses against the East wall are quite young, also healthy.
- The contents of the raised beds, though weedy, could largely be resurrected.

Maintenance issues and recommendations:

- The Broom is a potential weed source and should be removed.

Area 8

Site description:

Covering some 4,500m² this area contains the original Willow Court Barracks, a Besser paving and brick courtyard, surrounded on three sides by the building. There are but three trees in the courtyard, in the northeast corner a Silver Birch of 8.8 m, in reasonable health, while in the opposite corner is a very good specimen of English Yew that is 7 metres tall with very dense and full foliage. Not far from this is a Red Cedar of about the same height, also in fair condition.



View of the barracks showing cobbled paving the Yew and Silver Birch.



Yew and Red Cedar set on the southern end of the Barracks

Points of interest:

- The Yew is an excellent specimen, probably quite old though unlikely to be an original planting.
- The nature of the trees' enclosure by paving coupled with lack of water has almost certainly reduced the rate of growth and affected their overall health.

Maintenance issues and recommendations:

- Removal of some of the adjacent paving would result in improvement to tree health.

Area 9

Site description:

This part of the site, about 9,500 m², contains several buildings including the maximum security ward with a high wall-enclosed grassed exercise area. There is a small lawn area to the north edged by a privet hedge that contains suckering Robinia. The western edge of the hedge is flanked by another 8 m tall Robinia and south of the hedge are 3 trees, a Virgilia and two Cherry Laurels.

Behind Bronte is another small grassed area dominated by a mature Horse Chestnut, its base surrounded by a bench, as well as 2 Cherry Laurels and a Fire Bush. Within the exercise yard is a small Ash and a stunted Holly.



Horse Chestnut showing canopy to the ground.

Points of interest:

- The Horse Chestnut is a mature attractive example of the species with a full shady canopy reaching close to the ground.

Maintenance issues and recommendations:

- The Robinia is in poor condition and requires corrective or cosmetic treatment.

- Suckering weeds need to be removed from the privet hedge.

Area 10

Site description:

This L- shaped area of about 5,000 m² occupies the perimeter of the south-east corner of the site. Basically this is a roadway/pathway lined by trees. At the beginning of the strip running north-south stands a large (22 m) Himalayan Cypress. The 120 m of this roadway passes through a collection of firstly deciduous trees then through a native planting, perhaps 20 years old, mainly of Wattles.

At the corner the planting changes and includes Fire Bushes and an Ash, but is dominated by an avenue (~100 m) of mature Robinia with a Holm Oak and a Horse Chestnut, possibly added where trees from the original planting were lost in the past. The avenue effect has been lost because the southern row is now part of a private garden, bisected by a fence.

Points of interest:

- The Himalayan Cypress is the best specimen of this species on site.
- The Robinia avenue is an unusual feature and suggests this may have incorporated another formal entrance in the past.



Avenue with deciduous trees and Australian native plants.



Robinia avenue left and avenue from Humphrey Street showing separation of paired trees by private garden right.

Maintenance issues and recommendations:

- The Wattles are reaching a state of senescence and will need to be in the near future.
- The Robinia are in reasonable health but 3 towards the end of the avenue were coppiced at ground level some time ago and have regrown.

Area 11**Site description:**

This is a triangle of 4,500m², gently sloping with an easterly aspect. There are 10 mature trees scattered throughout this area all of which are Ashes apart from an isolated Willow. The trees range in height from 9 m to 15 m and are all in good health. A large pipe from the old heating system runs above ground through part of this site and close to several of the trees.



Ash lawn specimens.

Points of interest:

- Collection of Ash with a single double-trunked Willow.

Maintenance issues and recommendations:

- An Ash sapling is growing through the pipeline and needs to be removed.
- The Willow has a large hollow for 3 m to its base and one trunk has a 20° lean towards the south, a patchy canopy and needs to be assessed. A large dead overhanging branch poses a public risk.

Area 12**Site description:**

An area of 6,000m² contains Leprenny which is a linear brick building that is fronted by a row of 15 semi-mature Birches, ranging from 6 m to 11 m in height. Close to the east wall is an old Tree of Heaven stump that has suckered extensively along the building. At the southern extremity are 2 good specimens of Himalayan Cypress, each 18 m tall. The opposite end of this area contains 2 purple leaved Plums and a small Italian Cypress.



Birches in front of Leprenny.



Suckering Tree of Heaven in front of Leprenny.

Points of interest:

- The line of semi-mature Birches will form an attractive feature in front of the building.

Maintenance issues and recommendations:

- The Tree of Heaven stump will continue to sucker and probably damage the infrastructure unless it is properly treated.

Area 13

Site description:

Excluding the mortuary, this area of about 4,000 m² contains 2 other buildings, Olga and Myrtle. The older sandstone building has 2 Italian Cypresses close to the wall at the front and rear, which are small (~4 m). The building parallel to George Street is separated from it by a row of young Eucalypts, comprised of a number of mainland species, generally in poor condition and around 5 m tall. Two tall Lombardy Poplars

between the buildings have produced a dense thicket of suckers penetrating the bitumen, particularly around the old mortuary.



Poplar suckering around old mortuary.

Points of interest:

- There are no outstanding horticultural features.

Maintenance issues and recommendations:

- The Poplars and suckers should be removed.
- The row of Eucalypts is in poor health and removal is recommended before they become too large.

Area 14

Site description:

The old Lachlan Football Club oval occupies most of this 16,000m² area, with the only trees of note being a 10 m Monterey Cypress near the entrance and 2 Poplars of about 17 m close to George Street. Below the changing sheds are 2 large native Eucalypts, *Eucalyptus viminalis* and an *E. globulus* hybrid of some botanical significance. The eastern bank is heavily overgrown with blackberries and thickets of large and suckering Poplars.



Oval with Poplars and Eucalypts in the background.

Area 15**Site description:**

This area contains 4 large brick buildings in an area of 21,000m² in which there are very few significant trees. The buildings are fronted by a mixed planting, mostly of shrubs such as Hydrangeas, Brooms and Tea Trees. A few Blackwood and Cypress are planted too closely to the walls. The shrubs generally are in good condition. The rear has a scattered planting of mainly native trees with a large Red Oak.



Beds around Esperance House.

NB. Areas 14 and 15 were not included in the analysis of the core area and have only been superficially surveyed.