



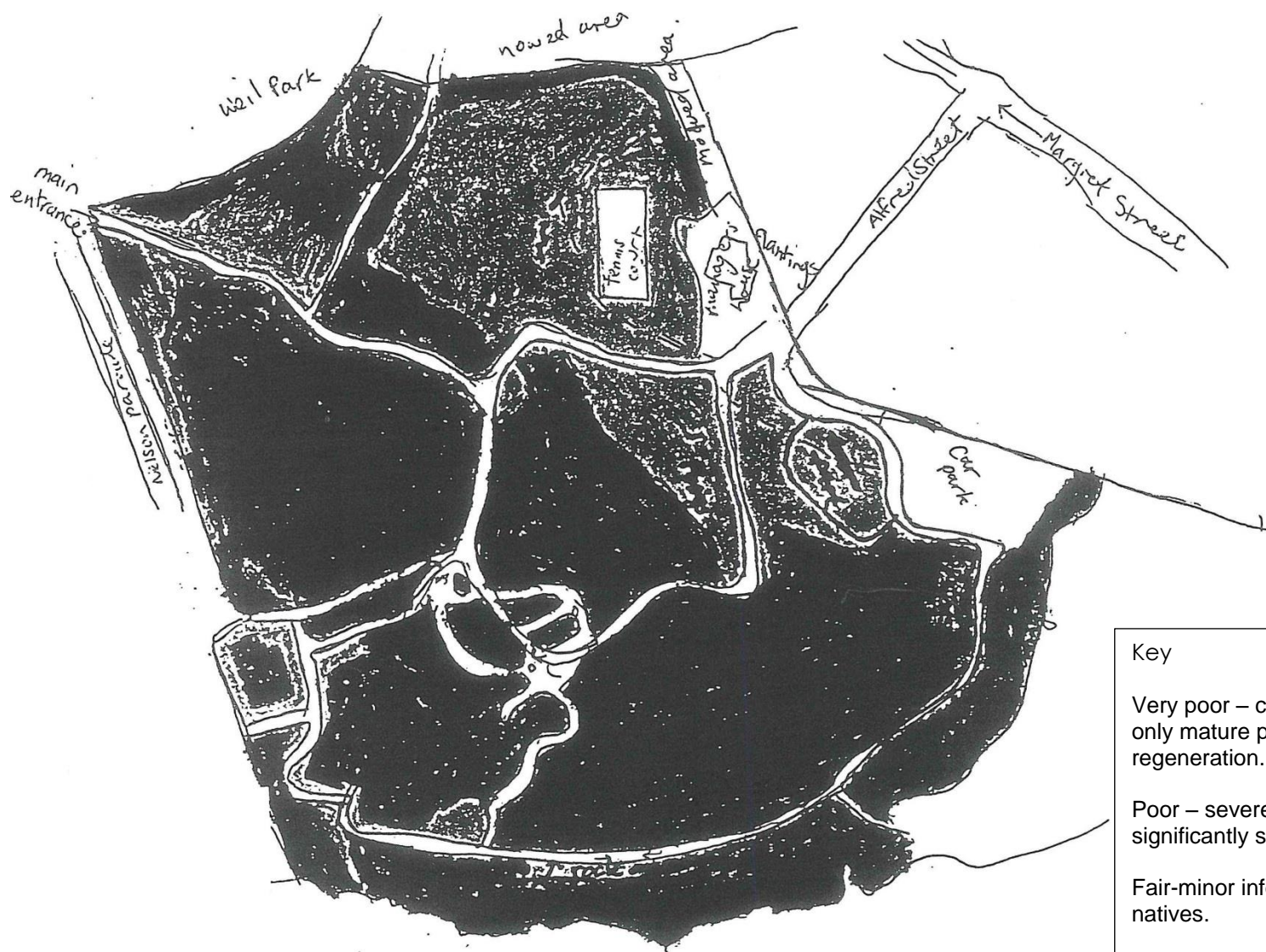
KELLY'S BUSH RESERVE

PLAN OF MANAGEMENT 1997



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Key

- Very poor – completely replaced by weeds or only mature pre-urban plants remain, no regeneration.
- Poor – severely infested, regeneration significantly suppressed.
- Fair-minor infestations of exotic or invading natives.
- Good – virtually free of exotic plants, high

Weed Infestations (November 96)

1. Preamble

1.1 What is Kelly's Bush?

This report deals specifically with Kelly's Bush, but it should be noted that it is only one of several pieces of remnant bushland in the Hunters Hill Municipality (Boronia park, Tarban Creek Reserve, Buffalo Creek Foreshore Reserve, Gladesville Park, Betts Park, Mornington Reserve and Ferdinand Street Reserve), and ideally should be considered in conjunction with them in any management scheme.

Kelly's Bush (3.85 ha), is situated on the Parramatta River, just before it merges into Sydney Harbour. It contains a number of plant communities that are associated with Sydney sand stone:

- OPEN WOODLAND dominated by Sydney peppermint (*Eucalyptus piperita*), Blookwood (*Eucalyptus gummifera*) and Old Man Banksia (*Banksia serrata*).
- CLOSED SHRUBLAND dominated by Tick Bush (*Kunzea ambigua*).
- OPEN SHRUB WITH TALL HEATH containing Dagger Hakea (*Hakea teretifolia*), Hairpin Banksia (*Banksia spinulosa*), Spider-flower (*Grevillea sericea*), Epacris spp.
- CLOSED FORECT dominated by Blueberry Ash (*Eleocharis reticulatus*), Coastal Banksia (*Banksia integrifolia*) and Christmas Bush (*Ceratopetalum gummiferum*).

Since the development of housing, the smelting works and the oval, the condition of Kelly's Bush has deteriorated.

The introduction of nutrient rich run-off water has resulted in weed invasion, erosion and water logged soil.

Some weeds have been introduced from nearby exotic gardens and from dumping of garden waste

It appears that some indigenous plant species have declined dramatically in number. Some common Sydney sandstone species occur as single isolated populations or as a single individual plant. Some examples of these plants are:

Mountain Devils (*Lambertia Formosa*); Grey Spider Flower (*Grevillea buxifolia*) and Grass Trees (*Xanthorrhoea* spp.). This decline is probably predominantly a result of the absence of fire and an excess amount of moisture.

The smelting works obtained wood by logging some species of Eucalypts but also caused regular burns (pers com. 1997, R. Hunt, son of former manager of smelting works). There is no evidence there has been major fire through the area since its closure in the 1960s

Other forms of disturbance include small areas of quarrying and filling.

Exotic grasses from the oval and bordering edges are encroaching into the bushland, as are the lawn mowers which destroy any seedlings of native plants that are growing on edges.

The contract landscaping carried out from 1987 by Travis Partners dealt with the severely disturbed sites but also resulted in the planting of many non-indigenous

natives that are not characteristic of Kelly's bush.

Despite all of the above, Kelly's Bush still contains a large number and variety of indigenous plant species. The areas in the centre have low levels of weed invasion and disturbance. Even where there is a high level of weeds, the seed banks in the ground make it very likely that species will regenerate when the correct methods are used.

1.2 Why Preserve Kelly's Bush?

Kelly's Bush is probably most remembered as the site of the first green ban, but there are several other reasons for its significance as urban remnant bushland:

- ITS LOCATION Kelly's Bush is the most western area of bushland on Sydney Harbour, it is situated on the Parramatta River side of the Woolwich peninsula while other bushland areas are on the Lane Cove River side, it is one of the few pieces of remnant bushland close to the Central Business District, its close proximity to Boronia Park and other bushland, making it a possible corridor for wildlife, and its pathways form part of the Great North Walk.
- DIVERSITY OF PLANT SPECIES AND GENETIC VARIATION. Its location means that Kelly's Bush contains genetic variation in plant species that may not occur elsewhere, in addition, there are a number of uncommon plant species occurring in Kelly's Bush including *Allocasuarina paludosa*, which is normally associated with the northern beaches.
- ABORIGINAL SITES. There are several sites including axe grinding grooves and middens.

2. Bush Care

2.1 Re-establishing indigenous plant species in degraded areas:

In areas that are greatly degraded the natural seed bank is often destroyed, therefore regeneration will not take place. This is when revegetation is required. The following stages are involved in revegetation:

- The collection of seeds from remnant plants;
- Propagation of the seed;
- Planting.

Another method involves direct sowing of treated seed into the area after the removal of weeds.

2.2. Reducing conditions favourable to Weed Species:

- Weeds favour nutrient-rich moist conditions caused by run off and poor drainage. In areas suffering these conditions, indigenous species suited to poor drainage will be established, replacing weeds and reducing excess moisture;
- Small scale engineering will also be required to control flow of water and erosion. This could include swales, re-orientation of tracks, sink holes and other simple devices. We will seek further advice before putting plans of these forward.
- Community education can prevent garden rubbish dumping and other behaviour that is damaging the natural conditions of the bush.

2.3 Weed reduction

- (i) Condition of bush when presently constituted Friends of Kelly's Bush began work (See map of infestation levels.)

Kelly's Bush has varying degrees of weed infestations, the most severe being in damp areas behind the oval and along the edges. The healthiest areas are in the centre where there are virtually no weeds; further from the centre, the infestations increase.

The species of weeds of most concern are those that change the soil conditions, either making them unsuitable for natives, or destroying seed banks by helping retain soil moisture. Such species include Privet (*Ligustrum* spp.), Camphor Laurel (*Cinnamomum camphora*), Indian Hawthorn (*Rhapholepis indica*) and Ochna (*Ochna serrulata*). All of these grow into small or large trees that have dense foliage, blocking out light so that understorey plants cannot survive.

These plants bear fruit which is a favourite food source of magpies and currawongs.

This results in the spread of seed and an increase in the population of these larger birds. The populations of small birds such as silver eyes and blue wrens are suffering as their young are killed by the currawongs and magpies.

Sweet Pittosporum (*Pittosporum undulatum*), although a native and indigenous to Kelly's Bush has increased dramatically for the same reasons as the exotic weed species (excess moisture and nutrients). While the exotic species occur in patches, Sweet Pittosporum is found throughout Kelly's Bush. Growing into a large tree it blocks out light and warmth. The leaves contain a chemical that inhibits plant growth and is suspected of soil contamination in immediately surrounding areas.

Other problem weeds are those that smother natives and have complex root systems. These include Japanese Honeysuckle (*Lonicera japonica*), Morning Glory (*Ipomoea indica*) and Blackberry (*Rubus* spp.).

These are also very difficult to eradicate because of their root systems.

- (ii) Bush regeneration accomplished by this group to date (See map August 1995-August 1996)

1. Weeding began in August 1995, towards the centre. This area contained a range of natives associated with tall heath and shrubland but also contained an equal number of Sweet Pittosporum saplings.

The methods of removal were by hand when small enough, and by cutting and painting larger plants with herbicide. The cut branches were placed at the sides of the track to act as a barrier against people or dogs entering the newly exposed areas.

2. (See corresponding photographs).The weeding continued up the slope on the western side of the north-south track, with the removal of larger stands of Pittosporum and of Buffalo Grass (*Stenotaphrum secundatum*). We have been cautious about opening up large areas, but instead have worked in patches, returning regularly for follow-up weeding.

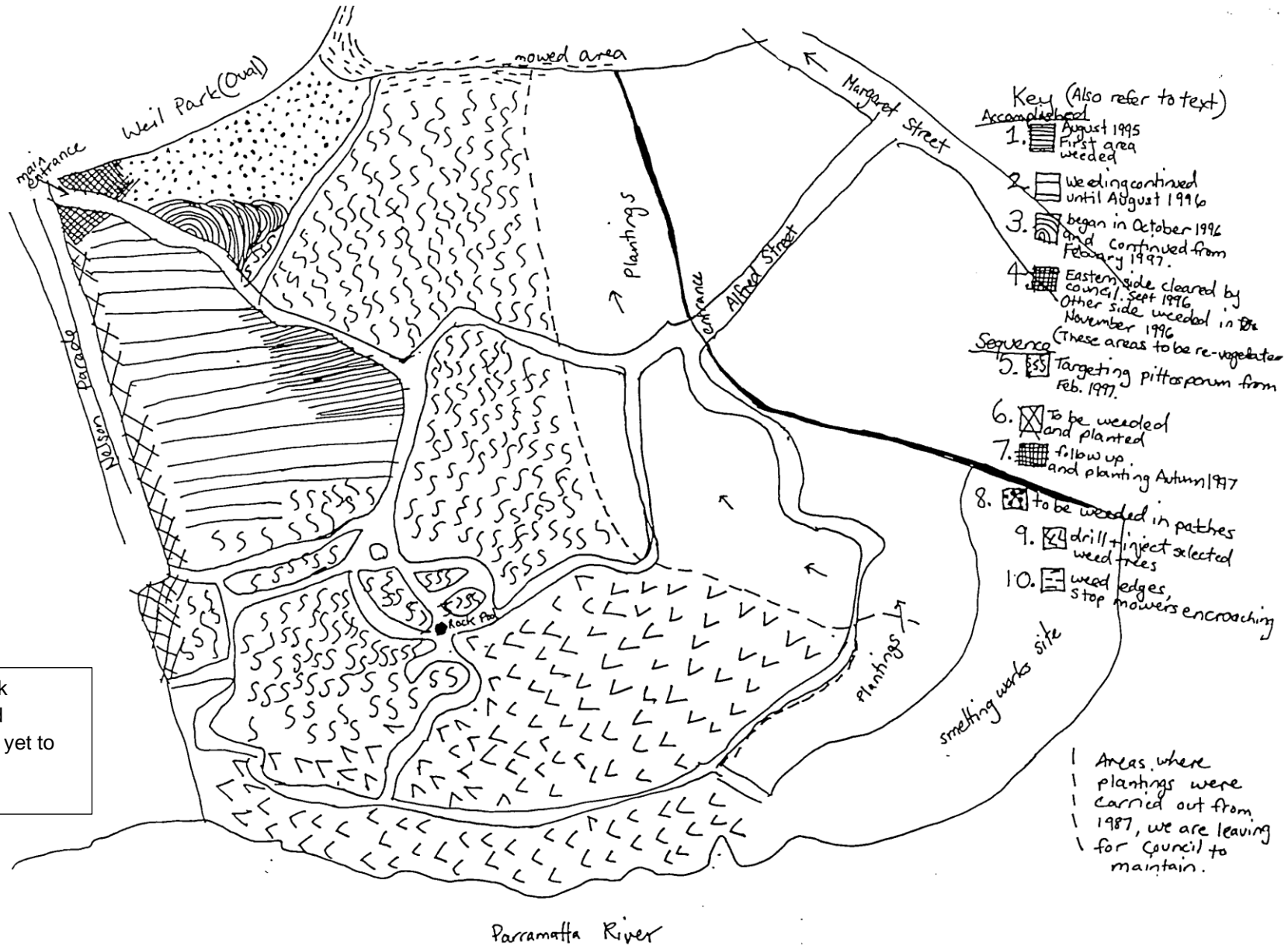
Regeneration in areas worked has since been occurring at a steady rate. Indigenous grasses, including *Echinopogon caespitosus*, *Themeda australis*, *Danthonia* sp. and *Entolasia* spp., have come back in force and have seeded abundantly. Many other plant species have been germinating well, including Laurel-leaved Geebungs (*Persoonialaurina*), Spider Flowers (*Grevillea sericea*), Mat Rushes (*Lomandra longifolia*) and Hop Bushes (*Dodaonea triquetra*).

October -December 1996

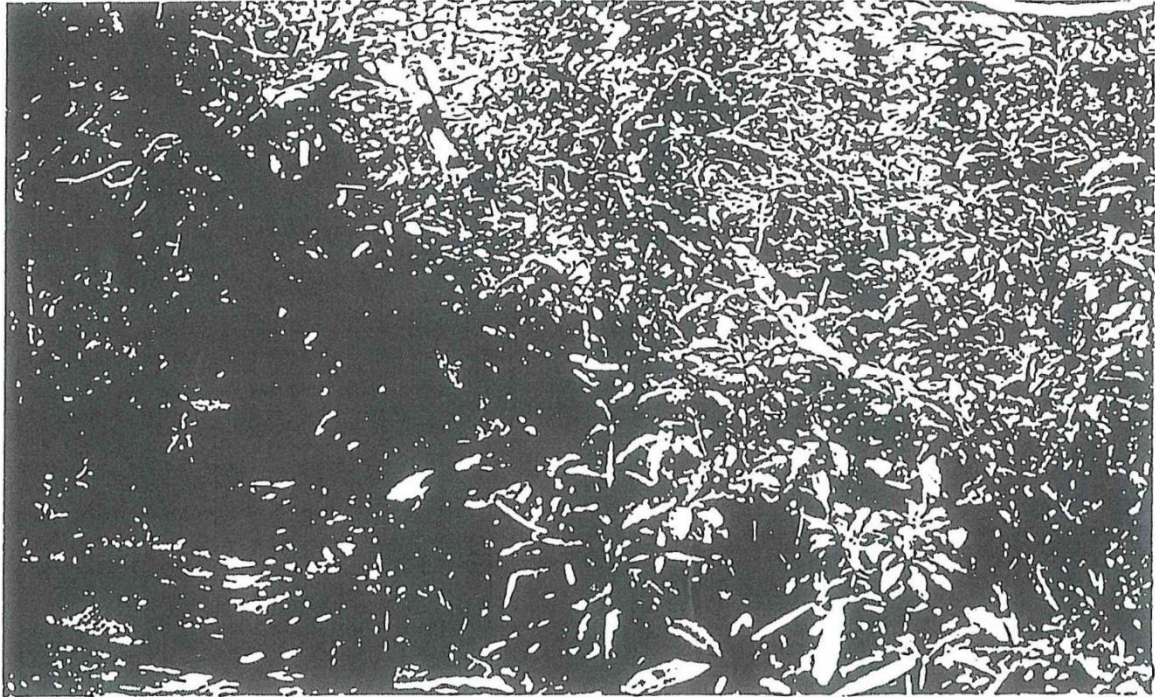
3. (See corresponding photographs). The next area worked in seems to be an area that collects most of the run-off water from the oval. It is very wet and contains *Watsonia* (*Watsonia mariana*), Blackberry (*Rubus* spp), Honey Suckle (*Lonicera japonica*), Sweet Pittosporum (*Pittosporum undulatum*) and Crofton Weed (*Ageratina adenophora*). It also contains a large number of natives that are healthy apart from being smothered by the weeds. So we feel it is a priority to save the existing plants and are confident of regeneration.

Again, because of the density of the weeds, we have worked in a small area which was then left to recover, administering follow-up before continuing on. Blackberry is very difficult to get rid of and has had to be poisoned several times. We firstly cut into the branchlets to gain access to the base which was then cut and painted. The other weeds were removed by hand.

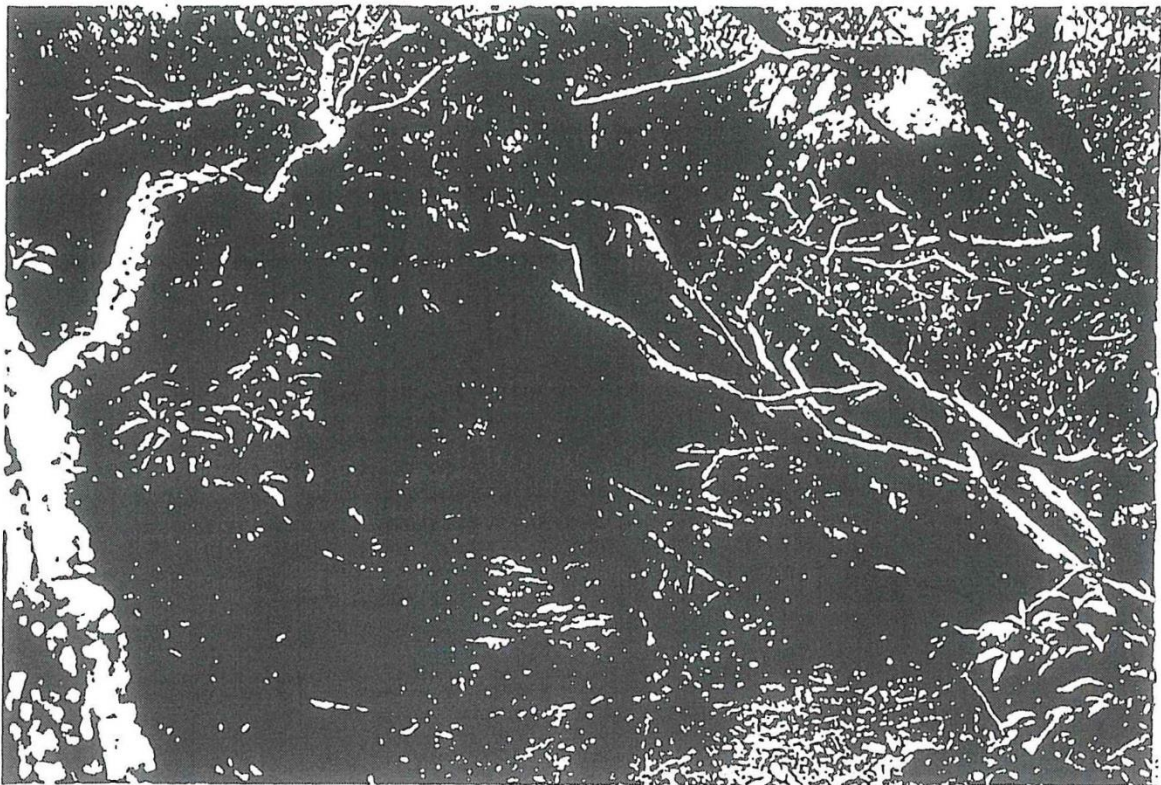
After weed removal we have discovered Mat Rushes (*Lomandra* spp), Flax Lilies (*Dianella revoluta*), Common Rush (*Juncus usitatus*), Sundews (*Drosera* sp.), Hakea (*Hakea sericea*), Epacris (*Epacris* spp.), and many other species. Scurvy Creeper (*Commelina cyanea*), native grasses and Common Rush (*Juncus usitatus*) have regenerated, covering the ground effectively.



Work accomplished March 1996 (also refer to map 2.)



Before

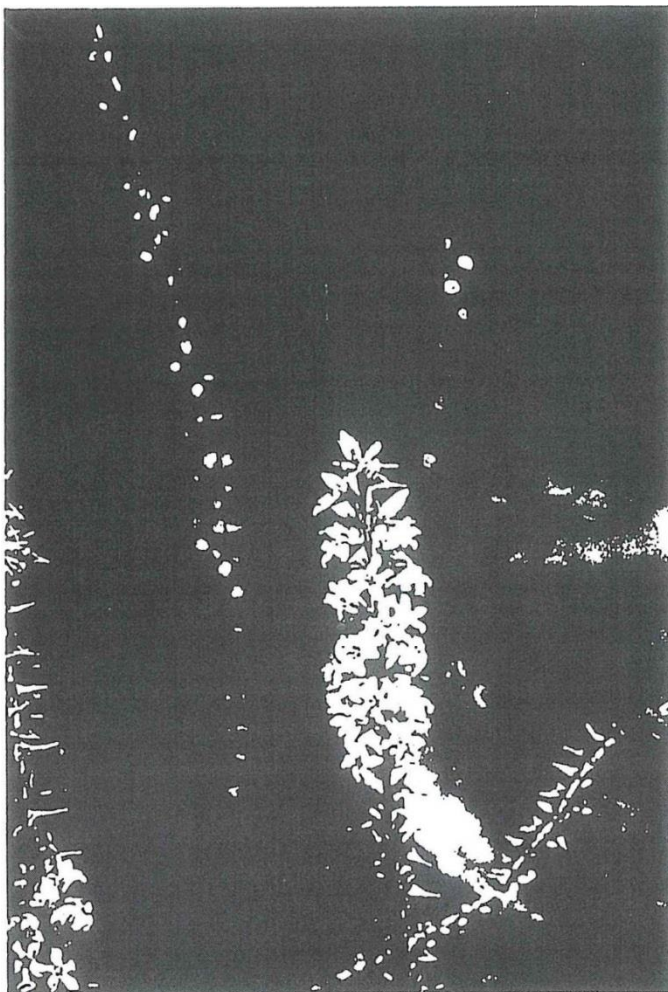


After

|



Track Before



Track After

Epacris pulchella is one of the native species present in this area.

4. Other areas worked in include the north-south track entrance at the oval and Nelson Parade. The Council cleared the severely degraded eastern side of the track which the group has since been trying to maintain. The western side was also highly degraded with some parts containing fill and many garden dumpings. In the interest of public relations it was important to improve the entrance, although an area in such a condition would otherwise have low priority.

Both these areas will be revegetated with plants grown from Kelly's Bush seed by members of the group. (See section 2.2. for details)

(iii) Bush regeneration: sequence planned

This is a flexible plan that may be changed depending on the responses of the bush, volunteer numbers and weather conditions. Details of areas yet to be worked are given in provisional sequence, as follows.

Firstly we will continue in February 1997 in the area on the eastern side of the north- south track (Area 3. on map and previous page). The infestation is contained in a patch, with some of the surrounding area in reasonable condition.

5. The next priority is to contain *Pittosporum* in the healthier areas. We will have target days to get it under control. This will be an on-going practice.
6. The edges along Nelson Parade contain many weeds as a result of garden dumping. There are some areas containing Fish Bone Fern (*Nephrolepis cordifolia*) that may need to be planted after weeding. Large Camphor Laurel (*Cinnamomum camphora*) trees will be drilled and injected. Once dead the trees will need to be cut up and removed.
7. The track entrance will need thorough follow-up before planting takes place. This will be done when the plants are ready and conditions suitable for planting.
8. The area behind oval has some patches that are severely degraded due to past use of phosphates and excess run off water. There are thick stands of Camphor Laurel (*Cinnamomum camphora*), Privet (*Ligustrum* spp.), Sweet Pittosporum (*Pittosporum undulatum*) and Ochna (*Ochna serrulata*). Within these stands there is virtually no understorey, but there are some of the largest, possibly oldest native trees, in Kelly's Bush. These trees include Old Man Banksia (*Banksia serrata*), Coastal Banksia (*Banksia integrifolia*), She Oaks (*Allocasuarina* spp.) and Sydney Peppermint (*Eucalyptus piperita*). Although we will not be working intensively in this area for some time, we will in the near future, selectively drill and inject weed trees that are in direct competition with native trees. There are some good patches in this area which we will work from.

This area needs some form of engineering or planting of appropriate species to reduce the level of moisture, but doesn't require large scale landscaping which would result in the loss of many natives.

9. The fairly healthy area of closed forest on the south western slope contains small numbers of weed trees that will also be selectively drilled and injected throughout.

10. The mowed area that run parallel to Margaret Street, contain a number of weeds and lawn is encroaching into the bush. Mowing needs to be limited in these areas, so that seedlings can survive. These areas will be weeded and regeneration is likely.

Follow-up is an on-going practice that will take place as needed

The group will not be maintaining lawns or the smelting area, or areas where previous planting has taken place (See map.2).

2.2 Propagation and revegetation

The main reasons for growing Kelly's Bush plants is to revegetate seriously degraded areas, create barriers and improve the appearance of edges and entrances, with plants that are characteristic of Kelly's Bush. Using indigenous seed means that plants are suited to local conditions while maintaining genetic integrity and variation. There are a number of plant species that occur in single populations or as an individual. These plants can be conserved and increased by collecting seed and propagating, helping to maintain diversity of species (See corresponding photographs).

Seed was collected in November 1996 from the following species: *Aflocasuarina distyla*, *Allocasuarina littoralis*, *Acacia longifolia*, *Acacia suaveolens*, *Acacia tenninalis*, *Acacia ulicifolia*, *Bossiaea heterophylla*, *Hardenbergia violacea*, *Kennedia rubicuna*, *Lomandra longifolia*, *Banksia serrata*, *Grevillea sericea*, *Hakea sericea* and *Hakes teretifolia*. Seed of additional plants, including *Eucalyptus* spp., will be collected as it becomes available.

Seed of one or more species was then distributed to ten volunteers who have been growing plants from their homes. Growing equipment including tubes, trays, sand and coco peat have been supplied by Council. All volunteers have had success in propagating their plants, which should result in approximately 200 individual seedlings. The first lot of plants will re-vegetate the entrance (See corresponding photographs). From the oval and Nelson Parade in the badly degraded areas. Planting out will take place this April-May when it is cooler, wetter and seedlings more mature. Propagating will continue until it gets too cold or enthusiasm from volunteers runs out.

We aim to include as many plant types as possible eg ground cover, understorey and tree cover.

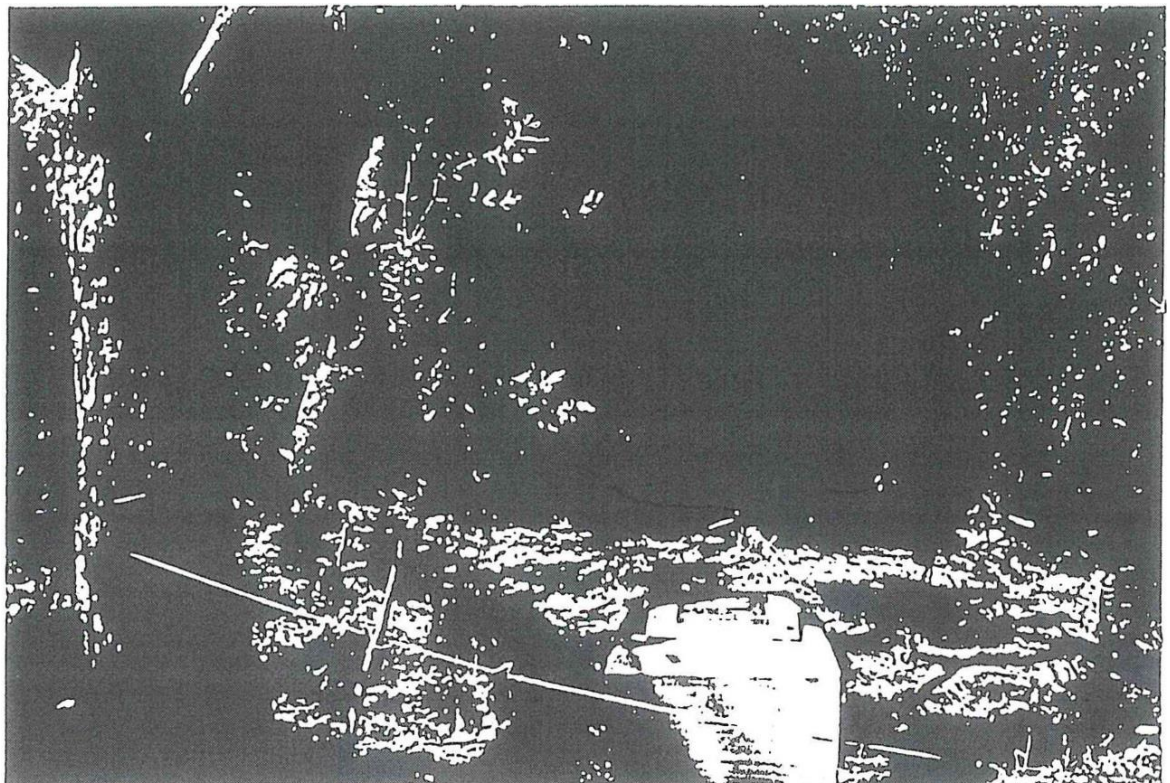
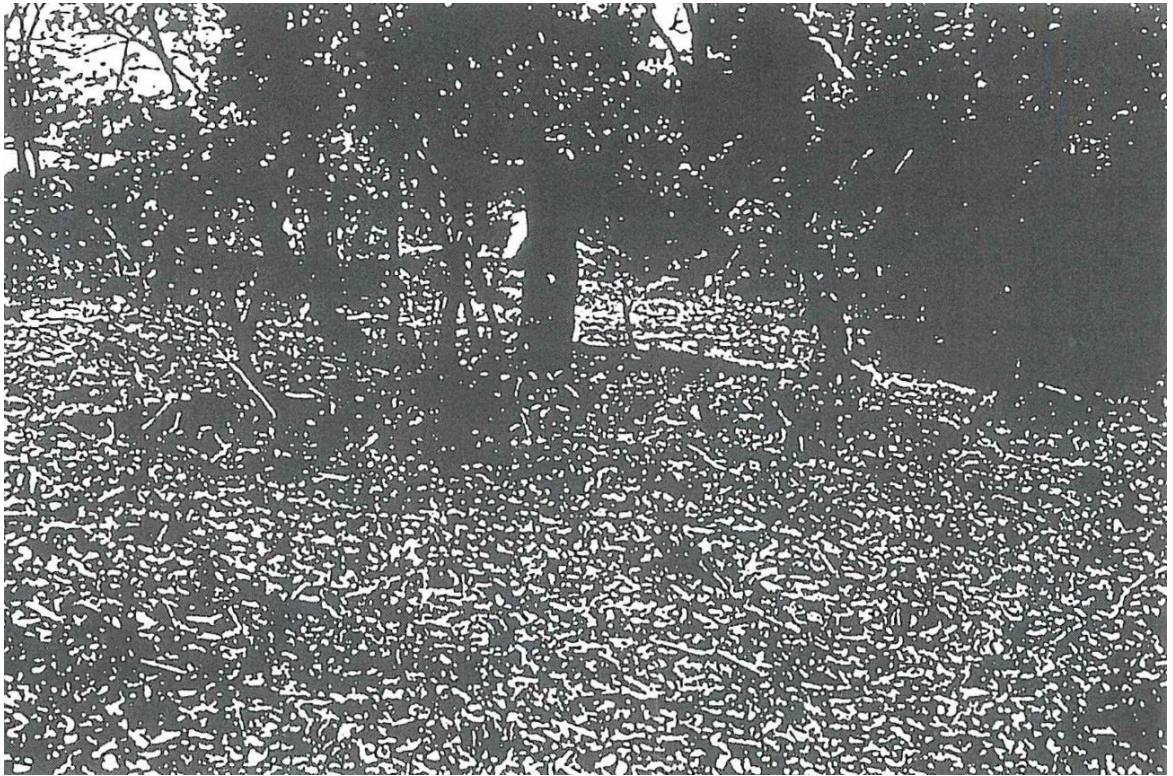
Plants will be chosen to suit the conditions into which they will be planted. Some areas will need to be planted with species that require moist conditions, to soak up excess water.

Some experimentation with direct seed sowing will take place in suitable weather conditions.

It would also be desirable for some of the tree species such as *Banksia serrata*, to be planted in areas on the edges of the oval where existing trees are unhealthy.

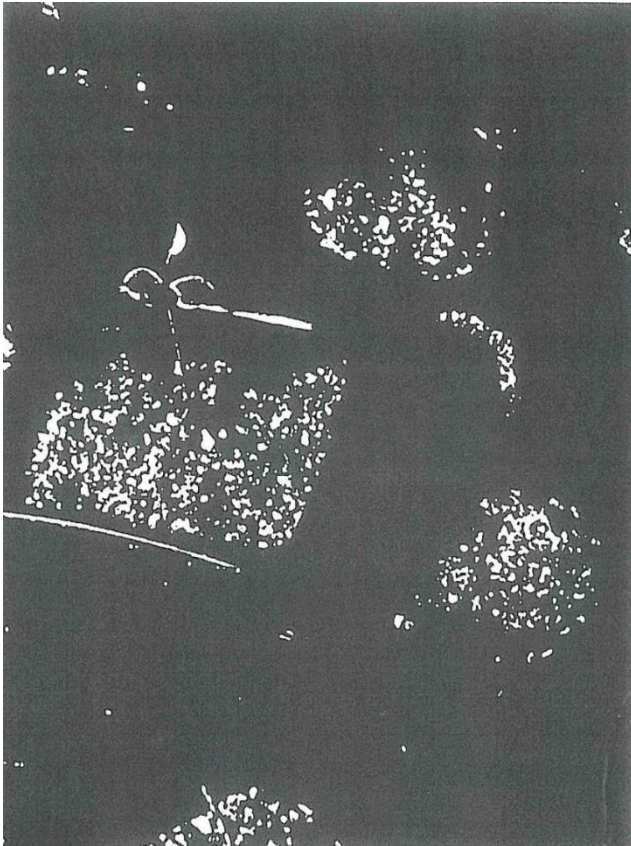
Fire is an issue that needs to be addressed by an expert. Certain native species need fire to germinate. Fire makes conditions less favourable for weeds and may be needed in areas where Sweet Pittosporum has dominated for long periods, to de-contaminate soil.

Council weeded the area located at the entrance from the Oval and Nelson Parade in October 1996 (refer to map 2).



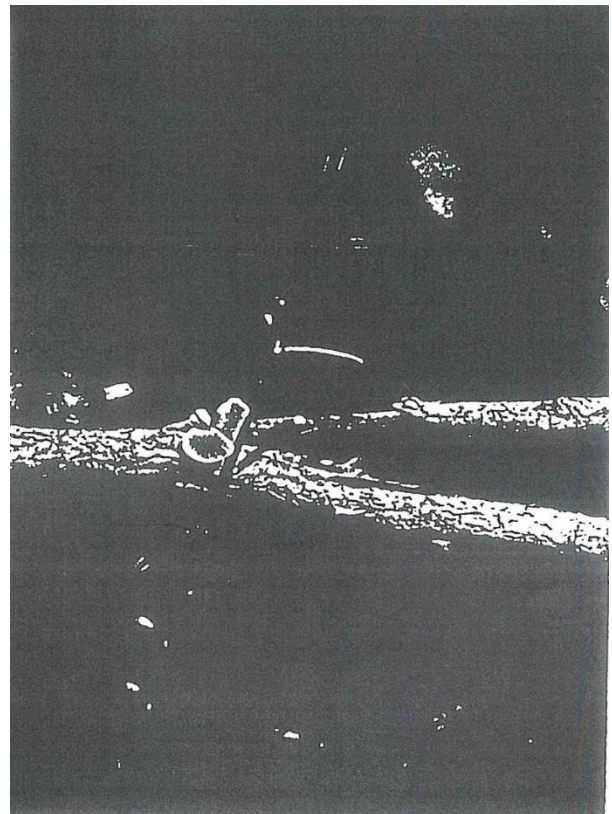
Track entrance first weeded in November 1996

Propagation of Species of Significance



Juvenile

There has been successful germination (January 1997) of Variable Bossiasea (*Bossiaea heterophylla*), which occurs in one small population very close to the track



Adult

3. Community and Local Government Responsibility for Urban Bushland

In the last decade, a number of initiatives at the international, national, state and local government levels have combined to encourage local communities working with their municipal authorities to assume responsibility for the environment, including the preservation of biodiversity (and hence bushland).

International Measures

One of the outcomes of the UN Conference on Environment and Development,

1992 (the Rio Earth Summit) was the development of Agenda 21, of which Chapter 28 deals with the important role of local authorities in addressing environmental problems. Each signatory to this charter, including Australia, agreed to encourage and assist local councils to work with local communities to devise programs of ecologically sustainable development.

In Australia, the Municipal Conservation Association was formed in 1990, before the Earth Summit, to assist councils to pursue environmental best practice. After Rio, the MCA also undertook the promotion of Local Agenda 21. In 1996, the MCA became Environs Australia - the Local Government Environment Network, which continues to provide information, advice, training and referral services to local councils and local communities on matters pertaining to environment.

The UN Convention on Biological Diversity, also developed at the Rio Conference, and signed by Australia, came into force in 1993.

Commonwealth Measures

Commonwealth initiatives which may impact on local communities and their municipal authorities with regard to bushland preservation include:

- *The National Strategy on Ecologically Sustainable Development, 1992*
- *The Intergovernmental Agreement on the Environment, 1992*, signed by Commonwealth Government, the six States, the Northern Territory, the ACT and the Australian Local Government Association.
- *An Accord between the Commonwealth of Australia and Local Government, 1995 (esp Schedule 4)*
- *The National Strategy for the Conservation of Australia's Biological Diversity, 1996*
- *Natural Heritage Legislation* (dependent on the partial sale of Telstra), is still before the Parliament. However, applications for funding under its terms will be invited in February 1997, largely through existing programs such as the National Landcare Program.

None of these directly compels local government action, but the Commonwealth can influence it by offering funding to local government or community groups through the NLP and other programs.

State Measures

National Parks and Wildlife Act, 1974

Sections 68, 69, and 91 allow the Minister for the Environment to, respectively, declare an area a Wildlife Refuge, to enter into a Conservation Agreement with the owner of the land, or to make an interim protection order on land with natural, scientific or cultural significance. Sections 98-100 make it an offence to harm protected fauna.

The Environmental Planning and Assessment Act, 1979 has placed notable pressures on councils to address issues of natural environment. Its instruments are: State environmental planning policies (SEPPs), State regional environmental plans (SREPs) and local environmental plans (LEPs). Most of these are activated by development applications, but SEPP 19 (Urban Bushland) specifically provides for the protection of bushland zoned or reserved as Public Open Space in Local Government Areas in Sydney Metropolitan Region and Lake Macquarie Local Government Area.

It includes provisions and guidelines for the preparation of detailed plans of management for public open space bushland if the Council considers it necessary or desirable. While SEPP 19 does not compel the preparation of management plans, nor their implementation, Section 36 of the Local Government Act requires Council to prepare draw up plans of management for community land (including natural areas/bushland), and these were due to be completed by June 30, 1986.

The perceived deficiencies of SEPP 19, and the continued incremental loss of urban bushland, led to DUAP's funding of a study reported in *Urban Bushland Under Threat* (TEC and NCC, February 1996), which recommended that the management plans required under Sect. 36 of the L.G.A. should, in the case of urban bushland, be prepared in accordance with SEPP 19, and their implementation become mandatory. SEPP 19 is now under review.

Crown Lands Act, 1989

Many bushland reserves are not community land under the LG Act, but are owned by the Minister for Land and Water Conservation and may be administered by a Trust or by a local council. Draft plans of Management may be prepared and adopted, as well as altered and cancelled, for such lands under the CL Act.

The principles of Crown Land Management include environmental Protection, the conservation of natural resources; encouragement of public use and enjoyment of the land; management such that the land and its resources are sustained in perpetuity.

Section 30 requires assessment of Crown land, an inventory, an assessment of the capabilities of the land (which may be for community/public purposes, environmental protection or nature conservation, etc) and identification of suitable uses.

Section 35 requires the land to be assessed before being sold or leased, but this need not apply if the Minister is satisfied that it is in the public interest to sell or lease the land and the Minister has considered the principles of Crown land management.

Part 5 provides for dedication of Crown land for a public purpose (as declared by the Minister) and for reservation of Crown land for any future public requirements.

The Protection of the Environment (Administration) Act, 1991 enunciates the following: the precautionary principle; intergenerational equity; conservation of biodiversity and ecological integrity; improved valuation and pricing of environmental resources.

The Local Government Act, 1993 (NSW) requires (Sect 35 & 36) that councils prepare Plans of Management for all community land including Public Open Space, by June, 1996. Section 428 requires that they also prepare annual reports of the state of the environment in that area, including:

- Areas of environmental sensitivity
- Important wildlife and habitat corridors
- Any unique landscape and vegetation
- Vegetation cover and any instruments practices relating to it

The Threatened Species Conservation Act 1995 repeals the Endangered Fauna (Interim Protection) Act 1991 and aims to protect threatened species, populations and ecological communities of animals and plants through amendments to the EPA Act and NPW Act. It is expected to have considerable impact on the management of remnant bushland.

The Biological Diversity Strategy for NSW (draft released for public comment February 1997) will, once in place, fulfil the requirements of the National Strategy for the Conservation of Australia's Biodiversity

4. Assistance requested from Hunter's Hill Council

4.1. Continuation of assistance already being provided.

- i. General co-operation via Bushland Reserve Committee.
- ii. Assistance with public relations and community education as required, including through the Mayor's Column.
- iii. Transport of some plant material to Council's green waste system as required, e.g. heavily seeded weeds.
- iv. Loan of tools as required by working bees or for special operations.
- v. Provision of incidental materials, e.g. Glyphosate, materials for propagation of seeds, stakes, light fencing.
- vi. Occasional assistance with photocopying, e.g. items ii & vii.'

4.2. Matters needing clarification

- vii. Clear map of areas for which Council is responsible for weed management, with negotiation of methods and timetables as required, e.g. weeds encroaching on oval- who controls, how and when, with possible transfer of responsibilities as bushcare group becomes stronger.
- viii. Consultation with Kelly's Bushcarers prior to major Council actions on the borders of the region for which Kelly's Bushcarers are responsible.

- ix. Definition of border on eastern edge of Kelly's Bush, behind houses facing onto Margaret Street, and on western edge near entrance.
- x. Clarification of legal responsibilities and group insurance. e.g.

Council should provide the insurance needed as a minimum condition in applications for Landcare grants. Kelly's Bushcarers, acting responsibly, should be covered against claims by members of the public.

4.3. Requests for extra assistance for Kelly's Bush and other public bushland in the municipality

- xi. General: Council to make the fullest possible allowance for funding to care for the municipality's 25 hectares of urban bushland.
- xii. Assistance from Council in preparing applications for grants from other government or public sources.
- xiii. Extended employment of a Bushcare Co-ordinator, at least part-time.
- xiv. Assistance with programs for minimum training of volunteers.
- xv. Co-operation, consultation and assistance in seeking advice about the effects of controlled burns for bushland management and hazard reduction.
- xvi. Help with seeking advice on, and solutions to problems of run-off and path erosion.

5. Community commitment

5.1 Membership of Friends of Kelly's Bush

There are over 20 members of the Friends of Kelly's Bush. The cost of membership is \$2 concession/pensioner, \$5 individual and \$10 for a family. The money from membership has gone toward basic costs including: postage; photocopying; the purchase of film and the cost of getting photographs developed.

5.2 Kelly's Bush Carers volunteers

There are a number of advantages to using volunteers and a range of duties involved, but it is essential that there is adequate support and training provided. The Kelly's Bush Carers are all volunteers, but five members have trained in bush regeneration and we are seeking further education.

While contractors are more skilled and get the job done efficiently, there is a much greater use of herbicide in order to meet dead-lines, and long term follow-up is often not funded. Volunteers are able to carry out follow-up work, use a minimum amount of herbicide and work at a slower pace, having less impact on habitat.

Simply through being "on the ground" regularly, volunteers are monitoring changes to the bush. It is also a valuable educational experience that can be extended to other parts of the community through publicity.

Since August 1995 volunteers have weeded on Monday mornings from 8.30am to 10.30 am. On occasion, some have spent additional time collecting seed, monitoring areas (including photographing and record keeping), and others are propagating indigenous plants.

The following indicates an approximate cost of volunteer labour to date. It does not include the extra time all the members spend writing, planning, photographing, conducting meetings, telephoning, travelling etc as required for the group to work effectively.

August 1995-August 1996

Average amount of volunteers per week	3	
Total hours worked per week	6	
Total wages costed at \$12.50/person/hour	\$	\$2,953.55

September 1996-February 1997

Average amount of volunteers per week	5	
Total hours worked per week	12	
Total wages costed at \$12.50/person/hour		\$2,550.00
Cost of plants, 200 at \$1.50 per plant		\$300.00
Total		\$5,803.55

With the increase of volunteer and membership numbers, the approximate cost of volunteer labour from January 1997 to December 1997 is estimated as follows:

Average amount of volunteers per week	5	
Total hours worked per week	12	
Number of weeks worked in a year	44	
Total		\$6,600.00

Appendix 1.

Kelly's Bush Indigenous Species List

(Provisional integrates National Trust 1985 list with Nicholas Covey's 1991 list, and additional species dated 1995 on list, found since by Kelly's Bushcarers.)

PTERIDOPHYTA (FERNS)

Aspleniaceae

Asplenium flabellifolium - Necklace Fern

Blechnaceae

Blechnum ambiguum

Dennstaedtiaceae

Histiopteris incisa - Bat's Wing Fern

Pteridium esculentum - Common Bracken

Dicksoniaceae

Calochaena dubia - False Bracken Fern

Gleicheniaceae

Gleichenia microphylla - Coral Fern

Gleichenia rupestris - Blue Coral Fern

Lindsaeaceae

Lindsaelinearum - Screw Fern

Osmyndaceae

Todea Barbara - King Fern

ANGIOSPERMAE

Alzooaceae

Tetragonia tetragonioides - Warrigal Cabbage, New Zealand Spinach

Aploceae

Platysace lanceolata - Lance-leaf Platysace

Xanthosia pilosa - Woolly Xanthosia

Xanthosia tridentata - Rock Xanthosia [1996]

Arallaceae

Polyscias sambucifolium - Ederberry panax

Bignoniaceae

Pandorea pandorana - Wonga vine

Cassythaceae

Cassytha pubescens [now includes former *paniculata*] - Devil's Twine

Casuarinaceae

Allocasuarina distyla [1996]

Allocasuarina paludosa

Allocasuarina littoralis - Black She-oak, Dahl-wah

Cunoniaceae

Ceratopetalum gummiferum - New South Wales Christmas Bush

Droseraceae

Drosera sp [*peftata*] - Sundew- [1996]

Elaeocarpaceae

Elaeocarpus reticulatus - Blueberry Ash

Epacridaceae

Brachyloma daphnoides - Daphne heath

Epacris longiflora - Fuchsia heath

Epacris microphylla - Coral heath

Epacris pulchella - N.S.W. Coal heath

Leucopogon ericoides - Bearded heath

Leucopogon juniperinus [1996]

Monotoca elliptica - Tree Broom heath, Pidgeon berry

Monotoca scorparia - Prickly broom heath

Woolsia pungens - Woolsia, Snow wreath

Eyphorbiaceae

Micranthemum ericoides - [Sept 1996]

Omalanthus populifolius - Bleeding Heart

Phyllanthus hirtellus - [previously *P. thymoides* - Sept 1996]

Fabaceae

Bossiaea obcordata - Spiny Bossiaea
Bossiaea heterophylla - Variable Bossiaea [1 1996]
Dyllwynia retorta - Eggs and Bacon
Glycine clandestina - Twining Glycine
Gompholobium [Jatifolium? - 1 individual so far. September, 1966]
Hardenbergia violaceae - Purple Twining Pea
Kennedia rubicunda - Dusky Coral Pea
Mirbelia rubifolia [1966)
Pultenaea daphnoides [1996)
Viminaria junca - Native Broom

Haloragaceae

Gonocarpus teucroides -Germander Raspwort
Gonocarpus micranthus- [Sept 1996]

Lobeliaceae

Lobelia dentata [misidentification for *gracilis*, probably. New ID, Peta Hinton, 1996]

Mimosaceae

Acacia linifolia - Flax-leaved Wattle
Acacia longifolia var. *longifolia* - Sydney Golden Wattle, Marrai-uo
Acacia ulicifolia - Prickly Moses [1996]
Acacia parramattensis - Sydney Green Wattle
Acacia suaveolens - Sweet Wattle
Acacia terminalis - Sunshine Wattle

Myrtaceae

Acmena smithii - Lillypilly, Tgerail
Callistemon rigidus - Stiff Bottlebrush
Eucalyptus luehmanniana - Yellow-top Ash
Eucalyptus capitellata - Brown Stringybark
Eucalyptus gummifera - Red Bloodwood
Eucalyptus piperita - Sydney Peppermint
Kunzea ambigua - Tick Bush
Leptospermum trinervium - Flaky-barked Tea-tree, Paper-bark Tea-tree
Leptospermum polygalifolium -Yellow Tea-tree, Lemon-scented Tea-tree
Melaleuca armillaris - Giant Honey Myrtle, Bracelet Honey Myrtle

Moraceae

Ficus rubiginosa- Port Jackson Fig, Rusty Fig, Dthaaman

MyrsInceae

Rapanea variabilis - Muttonwood

Oleaceae

Notelea sp. [? - 1996]
Notelea longifolia - Native Olive, Mock Olive
Notelea ovata - Native Olive, Mock Olive

Pittosporaceae

Billardiera scandens - Dumplings, Apple Berry
Pittosporum undulatum - Sweet Pittosporum, Wallundun-deyren

Proleacea

Banksia ericifolia - [1 individual behind Scout Hall, 1996]
Banksia integrifolia - Coast Banksia
Banksia oblongifolia -
Banksia serrata - Old Man Banksia
Banksia spinulosa - Hairpin Banksia
Grevillea buxifolia - Grey Spider Flower
Grevillea sericea - Pink Spider Flower
Hakea dactyloides - Broad-leaved Hakea, Finger Hakea
Hakea sericea - Bushy Needle Bush *Hakea*
teretifolia - Dagger Hakea *Lomatia*
fonnosa [1 individual, 1996] *Lomatia*
silaifolia - Crinkle Bush
Persoonia linearis -Narrow-leaf Geebung [1 individual, 1996)
Persoonia laurina - Laurel Geebung

Rosaceae

Rubus rosifolius - Forest Bramble

Rubiaceae

Opercularia aspera - Stink-weed

Rutaceae

Crowea saligna

Sapinaceae

Dodonea triquetra - Hop Bush

Scrophulariaceae

Veronica plebeia (1996]

Steruliaceae

Lasiopetalum ferrugineum var. *ferrugineum* - Rusty Petals

Thymelaceaceae

Pimelea linifolia - Slender rice flower

MONOCOTYLEDONS

Commelinaceae

Commelina cyanea - Scurvy Weed

Cyperaceae (sedges)

Cyperus sanguinolentus -

Lsolepis nodosus -Knobby Club Rush (formerly *Scirpus nodosus*. See Fairley & Moore)

Lepidosperma sp -

Juncaceae (rushes)

Juncus usitatus - Common Rush, Tussock-rush

Liliaceae

Dianella caerulea - Paroo Lily, Blue flax lily

Dianella revoluta - Black-anther Flax Lily

Orchidaceae

Caladenia carnea. - Pink Fingers

Calochelus campestris- Bearded orchid [1996]

Cryptostylus erecta - Tartans Tongue Orchid, Hooded orchid

Pterostylus sp. -

Restionaceae

Lepyrodia gracilis - Slender Scale-rush

Smilacaceae

Smilax glycyphylla - Sweet Sarsparilla

Xanthorrhoeaceae

Lomandra longifolia - Spiny-headed Mat-rush

Lomandra obliqua - Twisted Mat-rush *Lomandra gracilis* -[1996]

Lomandra multiflora - Many-flowered Mat-rush (1996]

Lomandra sp [possibly 2 more, to be positively identified]

Xanthorrhoea resinosa - Grass tree (1 individual) **Poaceae**

Anisopogon avenaceus - Oat Spear Grass

Aristida vagans - Wire Grass

Danthonia tenuior- Wallaby Grass

Dichelachne crinita - Long Hair Plume Grass

Dichelachne michrantha - Short Hair Plume Grass

Eragrostis brownii - Brown's Love Grass *Echinopogon*

caespitosus -Tufted Hedgehog Grass *Entolasia marginata* -

Entolasia stricta - Wiry Panic Grass

Imperata cylindrica - Blady Grass

Microlaena stipoides -

Oplismenus aemulus [1996]

Themeda australis - Kangaroo Grass

FUNGI

Clathraceae

Aseroe rubra

[Note: There are many mosses and lichens In Kelly's Bush which have not been identified.]

Appendix 2

Organisation of Friends of Kelly's Bush

Friends of Kelly's Bush is an association of volunteers, properly constituted at a meeting of prospective members on 11 August 1996.

In 1997, its office bearers were:

President- Joan Croll;
Vice President- Kath Lehany;
Secretary- Connie Ewald;
Treasurer- Alja Brown.

Peta Hinton was appointed leader of the volunteer bush-regenerator group, within Friends of Kelly's Bush, (FoKB) known as Kelly's Bushcarers.

Membership of FoKB is granted to any member of the public who applies on the official form, and pays an annual membership fee, presently set at \$5 for an individual; \$10 for a family; and \$2 for students, pensioners and unemployed.

Appendix 3

A Brief History of Kelly's Bush

As is well-known, this remnant of bushland was preserved from development quite fortuitously by the need for a buffer zone between an industrial site (T.H. Kelly's Sydney Smelting Works, established 1892) and a residential area. The whole site owned by Kelly, bushland and smelting works site, comprised about 19 acres.

When the County of Cumberland Scheme was introduced in 1951, about 4 acres of this was zoned Waterfront Industrial, 1 acre living area, the rest, about 14 acres, Reserved Open Space.

In 1956, Hunter's Hill Council, assisted by the then Cumberland County Council, purchased 7 acres of reserved land from the Sydney Smelting Company, and this became Weil Park.

In 1966, Council unsuccessfully petitioned the State Planning Authority to acquire the remainder of the 'reserved land' as open space.

In May 1968, A.V. Jennings Industries (Australia) Ltd, which held a conditional contract, applied to Council for a suspension of the County of Cumberland Planning Scheme Ordinance to allow development of 6.5 acres of the 12.1 acres still held in private ownership for home units. Council opposed this and renewed its appeal to the State Planning Authority to purchase the land. The Authority declared itself only interested in purchasing the waterfront land.

The valuation of the whole site was such that the Council was unable itself to consider purchase, and set about securing what it considered the best terms for development. It agreed in 1969 to a townhouse development. However, the Minister for Local Government refused to allow the suspension of the County Ordinance for anything but single dwelling development.

In 1971, the Council, the State Planning Authority and A.V. Jennings agreed that:

- 5.6 acres should be purchased by the State and placed under Council control.
- The developer should landscape the old smelting works site as a foreshore reserve
- 6.5 acres should be subdivided and developed as single dwellings [Lot 3]

Community protest immediately expressed itself in a Town Hall meeting, which resolved to "urge the Government to reopen the matter of Kelly's Bush and to negotiate with the developers to save the entire 12.1 acres and preserve it in its natural state". The first Green Ban was imposed.

For the next few years the issue remained undetermined, and the subject of dispute. In May 1976, a Labor Government was returned to power in NSW. The furor continued.

Finally, on 4 September 1983, Premier Neville Wran announced that Kelly's Bush would be set aside as public open space. The Government completed the purchase of the 7.7 ha reserve; Lot 3 DP 549711 (Middle Kelly's Bush) was rezoned from residential to open space. However, responsibility for the management of the bush was still undetermined.

On 6 February 1984, the Department of Planning requested that Council "undertake no work whatsoever in Kelly's Bush and in particular on that area which was placed under its care, control and management some years ago until a comprehensive plan of management has been prepared." However, the Department allowed the establishment of a Hunters Hill Kelly's Bush Management Committee which first met on May 24 1984, and made various recommendations.

Meanwhile, on 27 April the State Government had revoked the Council's control of Lots 1 and 2, DP 549711 (an area of 2.666 ha).

In 1985, the Department appointed Travis Partners, Landscape Architects, Planners, and Building Economists, to prepare a report on the restoration and development of Kelly's Bush. The draft report went on public exhibition on 20 June.

In November, 1986, the consultant's final report was submitted to the NSW Department of Environment and Planning. Under the heading "Management", was included the comment: "Possible options relate to establishing a management group with adequate knowledge of flora and fauna particular to Kelly's Bush that will enable the effectation, implementation and proper maintenance of the Management Plan. No commitments have yet been entered into for the future management of the bushland, but it is recommended that alternatives be examined by the DEP." A 3 Stage Program was proposed, a good deal of it concerned with decontamination, rubbish removal, landscaping, the provision of an access road and car park for council vehicles, signage and so on, but with at least a passing reference to bush regeneration.

In January 1987, Stage 1 began. Premier Bob Carr announced that the underlying principles are to conserve the natural vegetation with its wildlife heritage, to recognise the heritage significance of the smelter works, and at the same time provide for public recreation activities adjacent to and associated with the Parramatta River foreshores." Bush regeneration was to be undertaken by six volunteers under the direction of the Australian Trust for Conservation Volunteers.

By 23 January 1989, Stage 1, costing \$120,000, was nearing completion. Stage 2 was completed in September 1989 at a cost of \$100,000, and it was proposed to spend a further \$330,000 on Stage 3 landscaping, which continued through and was completed in 1990. Additional sums were needed for unexpected drainage works.

Meanwhile, various plans were proposed for a committee of management of the bushland to take over when the Department of Planning had done, and Kelly's Bush was maintained by the Department using contractors.

For some time, the DEP and HH Council debated the conditions on which the Council would accept responsibility for managing Kelly's Bush. (There was concern about liability for dangers arising from site contamination.)

In March 1992, HHC and the DEP agreed on a 99 year lease as the appropriate form.

On 21 September, 1992, the 99 year lease of Kelly's Bush from the DEP commenced. The bushland was formally placed in Council's care, control and management on 30th September, 1993.

Bush-regeneration and management - recent history

Various attempts since 1992 to form citizen's groups to care for the Bush seem to have foundered. However, in August 1995, Peta Hinton approached HHC, and with its approval began to regenerate in Kelly's Bush, and was gradually joined by a number of other volunteers.

16 June 1996, the celebration of the 25th anniversary of the Green Ban prompted a call for a more formal status for this volunteer effort.

29 July 1996. A public meeting called by Hunter's Hill Council suggested Council support for a Bush Management Committee to oversee volunteer bush regeneration in all Hunters Hill bushland.

August 11 1996. The Friends of Kelly's bush was constituted at a meeting of prospective members. Office bearers elected were:

Joan Croll, President;

Kath Lehany, Vice President,

Connie Ewald, Secretary,

Alja Brown, Treasurer;

Peta Hinton leader of the regeneration team known as Kelly's Bushcarers.

Since then, FOKB has established itself as a Landcare Group.

Hunter's Hill Council has provided the group with tools, propagating materials, plastic fencing and signage, and Council parks staff removes weed rubbish carried out of the bush on request.

Kelly's Bushcarers meet each Monday morning and work at bush regeneration from 8.30 to about 10.30. Members have collected seed from the bush and have begun to propagate plants with which to revegetate severely degraded areas and vulnerable edges.

Kelly's Bush is an Open Space Reserve owned by the Department of Urban Affairs and Planning, but Hunter's Hill Council has responsibility for its care, control and management under the terms of a 99-year lease.