

Bickleigh Vale

Roadside Vegetation Management Plan

December 2010

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Appendix B: Proposed list of replacement plants

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Bickleigh Vale Roadside Vegetation Management Plan

1. Introduction

This report has been commissioned by Heritage Victoria in association with the Yarra Ranges Council and Friends of Edna Walling.

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Ownership and Copyright

Ownership and copyright of the Management Plan including all reports, maps, plans, photographs and the like supplied to the Steering Committee by way of progress, draft, or final report or publication, (including the original of the final report) shall be vested in the Shire of Yarra Ranges and Heritage Victoria.

Acknowledgement

The production of the Bickleigh Vale Roadside Vegetation Management Plan was carried out with funds made available by the Heritage Council of Victoria and assistance from the Friends of Edna Walling, Shire of Yarra Ranges and Heritage Victoria.

Background and Aims of the Report

The vegetated road reservations in the Bickleigh Vale Estate are in need of programs for weed management and renewal of senescent trees and shrubs in order to preserve the country lane character as originally envisaged by Edna Walling. Some of the trees and shrubs were planted in the 1930s and are now coming to the end of their useful lives. The growth of large trees has caused overshadowing of gardens and changed conditions for understory plants. Some trees have died and require removal; others need deadwooding of dangerous branches. Smaller trees and shrubs have either been planted piecemeal by residents or have self-seeded from original plants. The cultural significance of the roadside vegetation is also under threat due to reduced rainfall or drought, changes in access to adjacent properties, and safety requirements of public authorities. This report is intended to provide a set of management guidelines, for both the Shire of Yarra Ranges and the Friends of Edna Walling, to maintain and renew the “Edna Walling landscape character” of the roadsides.

The aims of the report are as follows:

1. Prepare a management report for the roadside vegetation including plans, photographs and illustrations.

2. Provide a plant removal and planting list.
3. Meet on up to four occasions with the Friends of Edna Walling and Yarra Shire Council.
4. Prepare a draft budget for expenditure of \$20,000 in the 2010/2011 financial year to implement recommendations of the management report. A staged plan is to be provided for future works.

Study Area

The study area includes the road reservations of Bickleigh Vale Road and Edna Walling Lane in the centre of the Bickleigh Vale estate. The study also includes the adjoining land from the property boundaries to the sealed road edge in Cardigan, Pembroke and Pine Roads.



| | | |
|----------------------|-------------------|-------------------|
| B1 Hurst | B8 Bena Lodge | B15 Devon Cottage |
| B2 The Sheilan | B9 Winty | B16 The Barn |
| B3 Glencairn | B10 workshop | B17 shed |
| B4 garage | B11 guest cottage | B18 Lynton Lee |
| B5 Badgers Wood | B12 Braemark | B19 Cornerways |
| B6 Wimborne | B13 The Cabin | B20 Mistover |
| B7 112 Cardigan Road | B14 Sonning | B21 Downderry |

Site location plan from the Victorian Heritage Register

Methodology

Assessment of the road reserves and the preparation of a policy for the protection of cultural significance has been undertaken with reference to the processes and criteria outlined in the Australia ICOMOS Burra Charter, 1999 and its associated guidelines.

Two meetings have been held with Heritage Victoria, Shire of Yarra Ranges and representatives of the Friends of Edna Walling in Bickleigh Vale Road. Three site inspections have followed to assess vegetation and roadside conditions, to record species and to take photographs. It should be noted that the timing of these visits was not ideal: the loss of foliage from deciduous trees and shrubs has made identification difficult at this time. Two additional meetings on site were held to consider plants previously tagged by the Friends of Edna Walling for possible removal, and to view the results of clearing works by the Shire of Yarra Ranges.

The following reports have been consulted in the preparation of this management plan:

- Victorian Heritage Register (H2053) Bickleigh Vale
- Shire of Yarra Ranges Tree Management Plan 2009
- Shire of Yarra Ranges Weed Management Strategy
- Trevor Westmore, Shire of Yarra Ranges Heritage Advisory Service, *Bickleigh Vale Estate, Mooroolbark: Preliminary Guidelines*, August 2003
- Olsen, Wilkin & Associates, *Restoration and Maintenance Management Plan for Sonning Garden, prepared for Ann West in part fulfillment of Amendment L4, of the Shire of Yarra Ranges Planning Scheme*, September 1997
- National Trust of Australia (Victoria) History of Bickleigh Vale notes

Heritage Listings

1. **Heritage Victoria:**
Bickleigh Vale is included as a Heritage Place on the Victorian Heritage Register (H2053). Refer to Appendix A in this report. Pages 7 and 8 list Permit Policies and Exemptions.
2. **Australian Heritage Council:**
Bickleigh Vale Village, Houses and Garden Landscaping are included on the Australian Heritage Places Inventory (5700).
3. **National Trust of Australia (Victoria):**
Bickleigh Vale Village is classified as of State significance on the National Trust Register (File Number G13124).
4. **Shire of Yarra Ranges:**
Bickleigh Vale is listed on the Heritage Overlay Schedule (HO76) in the Yarra Ranges Planning Scheme. Under Clause 43.01-2 of the planning scheme, no permits are required to

develop a heritage place which is included on the Victorian Heritage Register. Works which are exempt include routine maintenance and tree lopping. The Heritage Overlay Schedule notes that tree controls do not apply to Bickleigh Vale: this includes tree works such as removal or lopping.

Bickleigh Vale Village is also covered by a Significant Landscape Overlay (SL01) in the Yarra Ranges Planning Scheme. The key elements of the significant landscape are described as follows:

This small area of low density housing in Mooroolbark was created by the noted landscape designer, the late Edna Walling.

The main feature of the landscape is the way in which the houses have been integrated with the natural environment. The appearance of the area is dominated by the large gardens comprising of a mixture of mature exotic species and indigenous vegetation.

Access into the centre of the “village” is via Bickleigh Vale Road which is a narrow unsealed road containing dense roadside vegetation that reinforces the predominantly rural character of the area.

The maintenance of the existing landscape values would be threatened by further subdivision and intensification of existing housing development and the failure to maintain the established garden landscape themes.

The Significant Landscape Overlay Table of exemptions 42.03-3 states that no permit is required to remove, destroy or lop vegetation in the following situations:

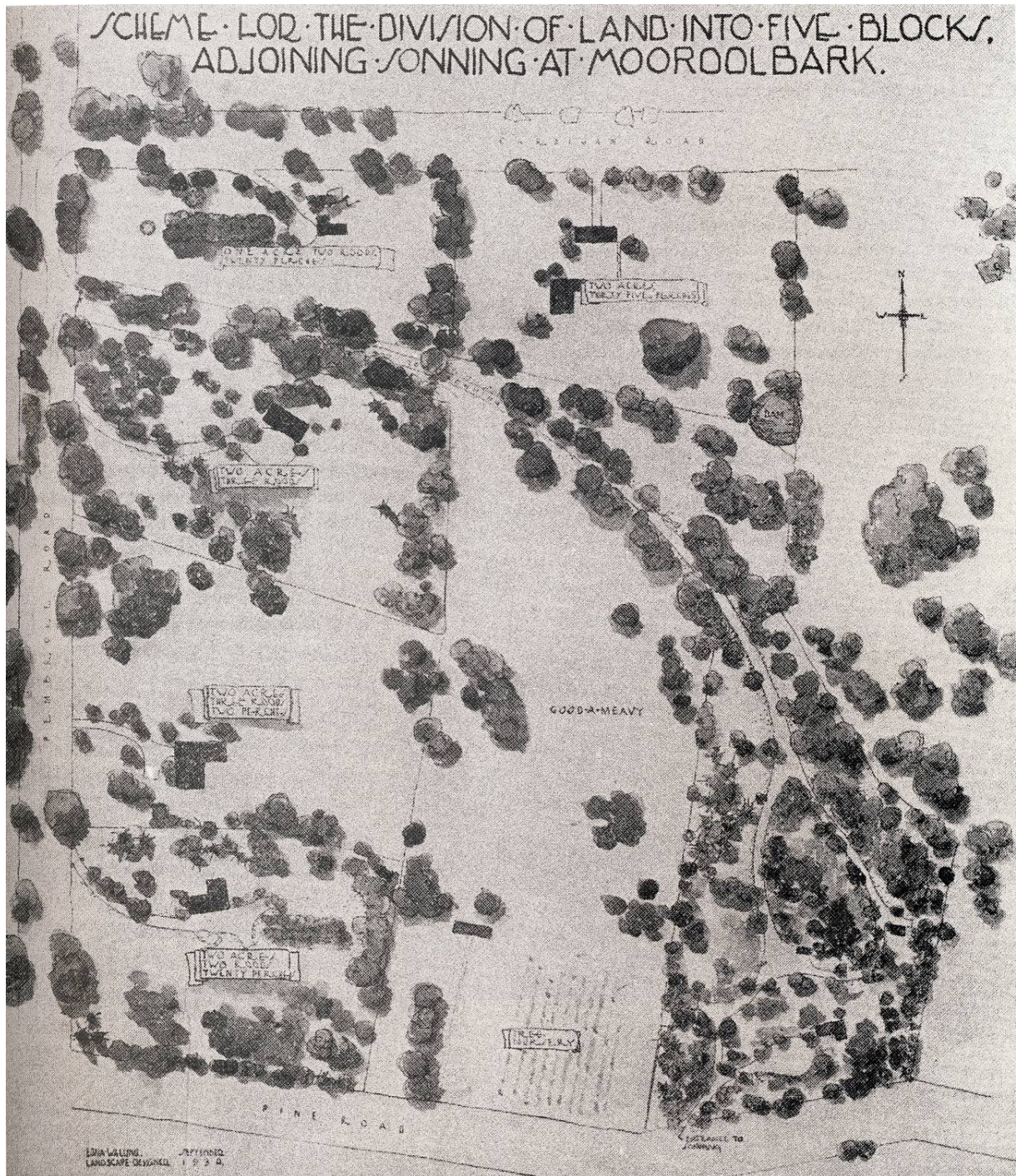
- Removal of noxious weeds;
- Clearance in emergency situations where vegetation presents an immediate risk of personal injury or damage to property;
- Maintenance of safe and efficient function of an existing public road.

The Schedule to Clause 53.01 lists works which do not require a permit, including works carried out by the Council, a public authority or a utility service provider:

- The establishment or maintenance of gardens, landscaping or plantations on public land.

2. Brief History of Bickleigh Vale Road Reserves

- 1894 James Hewish, crown grantee, Part CA23A2, Parish of Mooroolbark, County of Evelyn, 112a 3r 36p. Pembroke Road and Cardigan Road were created at this time to service local land selectors.
- 1916 Subdivision of the 112 acre site into 33 allotments including the creation of Pine Road.
- 1917 Taylor and Sharp are joint owners of Crown Allotment CA23A2, now 110 acres after creation of an easement for the O'Shannassy reservoir pipeline.
- 1921-27 Sale in separate allotments or groups of allotments of the Taylor and Sharp holding.
- 1921 Edna Walling purchase (unregistered?) of 3 acres.
- 1923 Walling builds first cottage – "Sonning".
- 1924 Transfer of 5 allotments from Taylor and Sharp to Emily Whisson and 1 allotment to Henry Whisson.
- 1928 Caveats placed over the Whisson allotments, when Walling is believed to have gained some form of tenure or interest.
- 1933 Survey prepared for 18 allotments as well as a 50 foot wide road reservation. Walling was unhappy with the Shire of Lillydale's insistence on inclusion of the reservation but took advantage of the allowance for planting of roadside vegetation. To avoid the appearance of a straight road in the centre of the reservation, clumps of trees and shrubs were designed to be placed so that the road would take on the appearance of a winding country lane.
- 1934 Planting of Bickleigh Vale Road on a July weekend carried out by Burnley students under Walling's direction. By 1934, Sonning, Mistover, Hurst, Donderry, The Barn, Lynton Lee and Corner Cottage had been constructed.
- 1935 Sonning destroyed by fire and re-built.
- 1938 *Gardens in Australia* published.
- 1947 *Cottage and Garden in Australia* published.
- 1948 *A Gardener's Log* published.
- 1950 Land excised for Devon Lane to serve the Barn.
- 1951 Walling moves into The Barn and sells Sonning.
- 1952 *The Australian Roadside* published.
- 1954 North-eastern extension of Bickleigh Vale Road.
- 1968 Walling moves to Buderim, Queensland.
- 1973 Walling dies 8 August.
- 1988 Devon Lane renamed Edna Walling Lane.
- 2008 Friends of Edna Walling formed by Bickleigh Vale residents. Residents were maintaining the roadside for 15 to 20 years prior to officially forming the friends group.



Edna Walling's first plan for the subdivision of Bickleigh Vale village was published in *Home Beautiful* in November 1930

(Image from Watts, P. (1991) *Edna Walling and Her Gardens*, 2nd edition Florilegium, page 27)



A glimpse of the land (18 acres) beyond Sonning in which such Anglo-Australian cottages as this are being built, surrounded by native trees, as a Devonshire village under the direction of Edna Walling, landscape designer.

The very early days of The Barn (Built 1928)

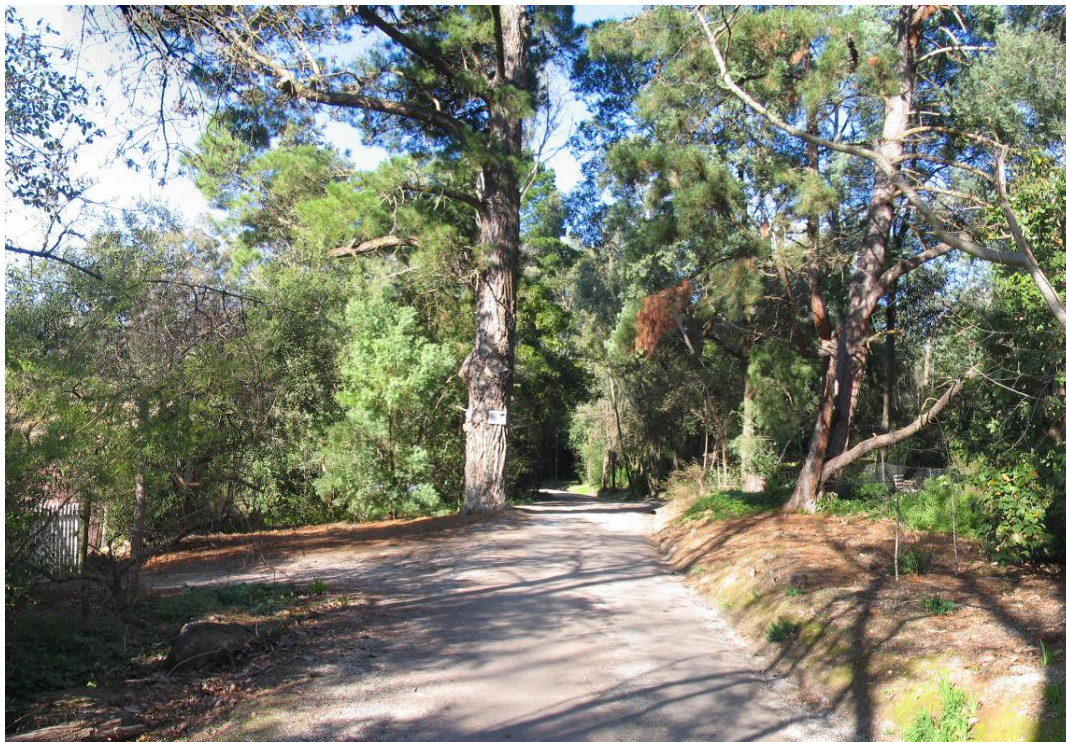
(Image from Hardy, Sarah (2005), between pages 176 to 177 – the image was featured in *Home Beautiful* November 1933)

Note the remnant eucalypts. The track in the foreground is possibly Pine Road.

3. Physical Analysis

Bickleigh Vale Road

The road reservation is 15.24m wide (50 feet) and contains a gently curving road with a Lilydale toppings surface. The southern side has an open drain which is bridged by pipe culverts and gravel crossings at driveway entries. The road width is around 4m wide but it varies in offset distance from the reservation boundaries due to its curving alignment. There is no footpath or allowance for pedestrians. The entry off Pembroke Road is partly-concealed by vegetation: a young white-barked Poplar and native shrubs on the southern side against a dark-painted high paling fence; a rambling rose and dense shrubbery of Abelia and Cotoneaster to the northern side. The north side is framed by a round timber strainer post and a short section of wire fencing. The intersection with Pembroke Road has an apron of bluestone pavers edged with low bluestone kerbing. There is a large basalt rock in the nature strip to either side of the entry to discourage vehicles from mounting the kerb at the corners.



Monterey Pine in the centre of the road reservation between Glencairn (left) and Downderry (right).

The alignment of Bickleigh Vale Road illustrates Edna Walling's road design philosophies: the narrow roadway has subtle curves around strategically-placed tree trunks and groups of shrubs. From the entry, the view to the east is through a tunnel of overhanging vegetation, but the

view is terminated where the road curves to the right past a large *Pinus radiata*. The tunnel may not have been intended by Edna Walling but it is formed by a happy combination of Cotoneaster, Pittosporum varieties and Coastal Tea-tree. The clearance height of 3.6m for emergency vehicles is maintained by the Friends of Edna Walling. Dense roadside vegetation opens up at driveway entries to give glimpses of adjoining properties on each side. A mix of tall trees includes conifers, remnant eucalypts, oaks and elms; some have grown to a considerable height and overshadow southern properties. Middle-storey trees and large shrubs include wattles, Cotoneaster species, Pittosporum species, Coastal Tea-tree, Privet, Laurustinus, Hawthorn and Smoke Bush. Understorey shrubs comprise Spiraea, Berberis, Jasmine, Honeysuckle, Rhododendron, Camellia, Native Mint Bush, Long-leaf Waxflower and a number of recently-planted native species (*Correa*, *Grevillea*, *Westringia*, *Prostanthera*, *Dodonaea*, *Philothea spp.*). Agapanthus, *Iris unguicularis*, Erigeron, Hellebore, bulbs, Geranium, Blue Periwinkle and English Ivy make up the ground layer.



Bickleigh Vale Road entry off Pembroke Road



The rose to the northern side of the entrance off Pembroke Road

The condition of the vegetation varies: some of the large pines show signs of senescence and carry large dead branches; up to four eucalypts on the northern side are dead, possibly due to drought conditions and competition for available moisture; one Arizona cypress (*Cupressus glabra*) has been recently removed by the Shire. Many of the plant species are weedy and have been self-sown, or are suckering; these include Hawthorn, Privet, Pittosporum, Cotoneaster and Berberis. Ivy and Periwinkle growth is rampant in places.

The road reserve is defined by a combination of different fencing types to properties. These include high paling fences, wire netting on post and rail, wire mesh on star pickets, brush fencing and low stone walls. Some properties have no fences. Power lines have been placed underground to avoid interference with vegetation.

Edna Walling Lane

The southern end of the lane intersects with a curve in Bickleigh Vale Road at the “Island”, effectively a small vegetated triangular roundabout. This small area includes at least fifteen species of plants: *Hakea*, Ash, Hawthorn, *Prunus cerasifera*, *Cotoneaster* species, Laurustinus, *Berberis*, Privet, rose suckers, Jasmine, *Erigeron*, *Spiraea* and *Plectranthus argentatus*. There is a small “Edna Walling Lane” sign plus some small basalt rocks on the northern side to deter vehicles from encroaching. South of the Island, the lane separates into two arms; the eastern arm leading to Devon Cottage; the western side to The Barn. A very large Manna Gum (*Eucalyptus viminalis*) is growing between the two arms of the lane. Vegetation to both sides is dense, but includes both planted trees and shrubs as well as self-sown weed species. A small break in the vegetation on the Devon Cottage side permits a glimpse of a low curving stone wall to The Barn. Bickleigh Vale Road continues beyond the Triangle for a short distance before bending in a shallow S-curve to the north-east, terminating at two bridges over a small creek or drainage line. The vegetation at this end is dominated by large-trunked tall trees with little understorey planting, allowing views into adjacent properties. Stumps of former Golden Rain Wattle (*Acacia prominens*) remain each side of the entry to number 28.



Edna Walling Lane leads to Devon Cottage on the left and The Barn on the right.



The Island with basalt rocks in the foreground to deter vehicles

Pine Road

Pine Road forms the southern boundary of Bickleigh Vale Village. The road surface has been concreted by the Shire and contains shallow spoon drains at the sides. The alignment has subtle curves around stands of pine trees interspersed with mature Stringybarks, Manna Gums and Peppermints. There is a row of mature *Pinus radiata* on the northern side of the road with a shrub understorey of self-sown Cotoneasters, Hawthorn, Laurustinus and Pittosporum. The shrubs screen a pathway to the rear of the pines. Ground covers include English Ivy, *Tradescantia fluminensis* and Angled Onion. Some planted species include Burgan (*Kunzea ericoides*), Dusty Miller (*Spyridium parvifolium*), Blackwood (*Acacia melanoxylon*) and Spiny-headed Mat-rush (*Lomandra longifolia*) – all plants indigenous to the area. Additional screening shrubs are planted, or self-sown, against property fences including *Cotoneaster spp.*, Rosemary Barberry, Privet, *Jasminum mesnyi* and Kohuhu (*Pittosporum tenuifolium*). The vegetation to each side of the pathway is less dense towards the eastern end. Property driveways along Pine Road are concealed by vegetation. The exception is the entry to Sonning which has low curved freestone walls to each side.



View to the west of the walkway between the pines and the screened boundary fences. Pine Road is to the left.

Pembroke Road

This road appears to be a normal suburban street, but with a grass nature strip lacking a footpath on the eastern side. Tall timber fences line properties between Pine Road and the Bickleigh Vale Road entry. Overhanging trees and shrubs spill out over the nature strip to the north of Bickleigh Vale Road; these mark the boundary of “Hurst” which has no fence. The drainage line from the northern side of the Bickleigh Vale Road properties exits at a low point in Pembroke Road north of the property beyond “Hurst”.



Northern view along Pembroke Road at Bickleigh Vale Road intersection

Cardigan Road

Another typical suburban street but with gravel driveways leading off the asphalt road. Vegetation spills onto the southern nature strip where an arm of the internal drain joins into the stormwater system. The drain opening is protected by a triangular timber barrier fence.



Western view along Cardigan Road

4. Development of a Conservation Policy

Edna Walling's Vision for Bickleigh Vale (from Hardy p.125-6)

Edna Walling described her vision for Bickleigh Vale in a 1930 article for *Home Beautiful* called 'Adventure in Landscape Gardening'. The theme was of English cottages set in picturesque planted surroundings combined with the preservation of the existing landscape. Some of Edna's design philosophies are contained in these words.

It is desired that all the cottages will be screened and sheltered with trees and shrubs, so that each will appear to be the only one on the landscape to those living within, except perhaps for a tiny peep of some distant stone chimney or a thread of blue smoke curling up from another. There will be thickets of Birches and Poplars, and groups of Lilacs and Spireas. There will be blossom trees in plenty and masses and masses of Iris. There will be the red of the Liquidambers and the gold of the Silver Birches, and Barberries and Crabapples, and Oaks and Elms and Willows. All will flaunt their beauty in the mellow season of autumn.

In one corner a nursery has been formed, roughly an acre in extent. Here the trees and shrubs are being raised for making the landscape pictures. . . Amongst those already present in the nursery there are Purple Leaf Birches, Yellow Birches, Silver Birches, Swamp, Red and Scarlet Oaks; Elms of many varieties (not the English, which is the worst of all for suckering); many varieties of the Ash; American, English and Mexican Hawthorns; Hackberries, Golden Willows and a little low-growing pussy willow of the most charming habit; Pear trees with beautiful autumn foliage; Golden and Lombardy Poplars. There are old-fashioned Weigelas, Japonicas, Viburnums and Spireas, Lilacs and Hydrangeas. There are climbing roses, red vines and honeysuckles for the walls, and Lavender and Rosemary for around the doors. There are specimens of clipped Box and Privet for the trimness that is often right in the most informal schemes.

Many of the plants listed above can be found along Bickleigh Vale Road, although it is not known how many of these were planted by Walling. The trunk size of exotic pines and the multiple stems of old shrubs provide a clue to their ages. The article noted the importance of a good water supply to prevent the loss of young trees during drought in their early tender years, perhaps a subconscious recognition that creating cottage scenery in an Australian climate was not an easy task. Walling certainly appreciated the aesthetic character of the remnant vegetation in Mooroolbark, as the end of the article states:

...the remaining land has grey [Leptospermum myrtifolium] and woolly tea-tree [L. lanigerum] and white swamp gums [Eucalyptus ovata] scattered about in picturesque groups. It is already 'landscaped' for someone.

It is recognised that, while Bickleigh Vale was conceived and planted in the 1930s as an English landscape, Walling was an early practitioner of ecological design showing a preference for the use of only native plants in her landscape designs from the 1950s. This approach is expressed in her publications of *A Gardener's Log* (1948 p.32) and *The Australian Roadside* in 1952. The native plants that have found their way into the Bickleigh Vale roadsides are suggestive of this period of Walling's career.

Conservation Policy

The Victorian Heritage Register Number H2053 includes a Statement of Significance for Bickleigh Vale. This notes that the village is of aesthetic (landscape), scientific (horticultural), historical and architectural significance to the State of Victoria. The most relevant of these criteria in relation to the roadside vegetation management plan are the aesthetic and scientific significance criteria. The aesthetic significance is repeated below:

Bickleigh Vale is of aesthetic (landscape) significance as the major work of its creator, the gifted and single-minded landscape designer Edna Walling. Walling received her certificate from Burnley Horticultural College at the end of World War One and was one of the first women to establish a successful garden design practice. Her reputation was enhanced by her regular gardening column in the Australian Home Beautiful which popularised her ideas about gardens and their designs. The village survives as her largest single creation, and is significant for the retention of much of the landscape character as planned by Walling, and the survival of many cottages created or approved by Walling, as well as garden plantings inspired by Walling's writings and designs. The aesthetic quality of the landscape includes the apparently casual nature of the internal lanes, the character of the mature plantings, the continuous nature of the landscaping which permits glimpses of carefully sited cottages, and the complementary relationship between exotic and Australian plants.

The Victorian Heritage Register also includes a Permit Policy as follows (edited):

Permit policy is to protect the cultural heritage significance of Bickleigh Vale and those elements that form, or contribute to, the significance. The purpose of the permit exemptions is to allow works that do not affect the cultural heritage significance of Bickleigh Vale to take place without the need for a permit.

A permit is not required for routine repairs and maintenance which replace like with like materials, or emergency and safety work.

Gardens and trees are continuously changing and subject to environmental factors. The process of gardening, weeding, mowing, pruning, hedge maintenance, and replanting is acknowledged as being important for the conservation and welfare of gardens. It is acknowledged that trees will eventually die and gardens require constant renewal and planting changes may be necessary. The unavailability of plant species and changes to maintenance and cost considerations may require species substitution.

After discussions with the Friends of Edna Walling, and understanding the group's concerns for the landscape, the following Conservation Policy is proposed:

The conservation policy for the Bickleigh Vale Village roadsides is to conserve and maintain the cultural heritage significance which includes preservation and restoration of the "Edna Walling" landscape character.

The Edna Walling landscape character of the roadsides is contributed to by a combination of the following elements:

- the curving road alignments;
- the strategically-placed groups of plants to create curves and views;
- the concealing of boundaries between roadsides and dwellings with glimpses between planting to allow limited views;
- the dominance of landscape over built form;
- the use of Edna Walling's "signature" plants;
- the use of mixed species with contrasting forms, foliage and colour; blending native, indigenous and exotic plants.

Restoration and maintenance works should be guided by retention or reinforcement of these elements. Note that the existing character is not necessarily what was envisaged by Edna Walling: the natural processes of growth and senescence, the overshadowing of understorey plants by large trees, the proliferation of self-sown weed species, the formation of the "tunnel" by Cotoneasters and Coastal Tea-tree, the planting and intervention over time by residents, and the removal of screening vegetation for opening up of new driveways have caused incremental changes to the landscape character. The vegetation maintenance strategy should aim to avoid any wholesale clearances that will impact on the roadside character. The use of mulch and ground cover plants will assist in moisture retention and weed control.

5. Vegetation Management Plan

Landscape and Vegetation Issues

Threats to existing planted or remnant vegetation may be caused by:

- *Senescence or ageing* – some trees and shrubs were planted in the 1930s and may be reaching the end of their useful (aesthetic) lives;
- *Storm damage* due to wind, hail and/or heavy rain - trees are more susceptible after a long period of drought when the lack of deep watering results in shallow surface roots and loss of stability;
- *Fire* – bushfire hazards relate to the amount of fine fuel present (leaf litter or twigs less than 5mm diameter), and increase with temperature, wind speed and low moisture content.
- *Drought* – prolonged drought may result in vegetation loss due to increased competition for moisture from adjacent plants. Many plants also have high water requirements – these plants may have originated in cooler climates or in rain forests;
- *Flood* – potential damage with plants being inundated, having broken branches or being washed away due to blocked drains;
- *Competition from weed species* – self-sown plants will compete with planted species for light, space, soil moisture and nutrients;
- *Overshadowing* of gardens by large evergreen trees – densely-foliaged evergreens may change micro-climate conditions for shrubs underneath, particularly if they are species that prefer to grow in full sunlight;
- *Competition* for light in closely-spaced planting can result in poor plant shapes and poor plant structure;

Clearing by authorities – vegetation removal may be carried out by council or service authorities to maintain statutory clearances for traffic (e.g. headroom clearance for CFA trucks and other emergency vehicles), for bushfire fuel reduction, or for overhead power or telephone clearance.

Threats posed by vegetation - public safety issues may arise from the following causes:

- Risk of falling trees for pedestrians and vehicles, or for damage to other vegetation – due to senescence, dead trees or storm damage;
- Risk of falling limbs for pedestrians, vehicles, or for damage to other vegetation - due to senescence, dieback of limbs or storm damage;
- Traffic hazard posed by trunks or overhanging foliage too close to road edges;
- Thorny or spiny shrubs planted, or self-sown, too close to road edges posing hazards to pedestrians;
- Dense shrubs causing visibility problems adjacent to driveways for traffic or pedestrians.

Landscape maintenance strategies

Replacement plant selection

Plants may need to be replaced because they have died, are displaying senescence and can't be reinvigorated, are unsightly, have diseases, are intolerant of changed micro-climatic conditions, or may be an inappropriate selection (e.g. what are now considered to be noxious weeds). Replacement of "like with like" is not necessarily the preferred option, particularly when the original species is on the Shire's weed list. Species substitution may be necessary if planting conditions have changed, if maintenance costs are high or if the original species are unavailable. Desirable characteristics of replacement plants, where required, include low maintenance requirements, tolerance of drought conditions, low water requirements and be easy to establish. Selection of plants with weedy tendencies should be given careful consideration as these will require monitoring; unfortunately, a large majority of Edna Walling's "favorites" are now on the Shire of Yarra Ranges' weed list. (Refer to Appendix D)

Refer to Appendix B for a proposed list of replacement plants. The lists have been compiled from publications on Edna Walling's favorites and mainly include plants with low or medium water requirements; the lists also include indigenous plants noted by Walling at Mooroolbark. The lists are not exhaustive and more plants may be nominated if they meet these criteria. Preference has been given to plants that tolerate shade or semi-shade.

Tree management

Refer to Shire of Yarra Ranges *Tree Management Plan 2009*. Principal objectives are as follows:

- *Tree retention:* all available alternatives will be explored to retain trees and avoid and minimize unnecessary tree removal.
- *Tree maintenance:* using agreed arboriculture practices vegetation will be maintained in healthy and safe condition.
- *Tree revegetation:* Council will replant trees or carry out offset planting where tree removal cannot be avoided. Council will implement a planned approach to tree planting within the municipality.

The Shire of Yarra Ranges has a tree assessment and risk management strategy that currently classifies Bickleigh Vale Road as a low-risk area with inspections only carried out on request. It is recommended that a request be lodged with Council to assess all Bickleigh Vale road reservations as the first task to be carried out under the Roadside Vegetation Management Plan.

Any pruning undertaken on trees must comply with *AS 4373-2007 Pruning of Amenity Trees*. Pruning includes formative pruning, hazard reduction and selective pruning and thinning. Formative pruning is an important requirement for many young trees.

The Shire's roadside clearance strategies include the following:

- pruning of trees and other vegetation to maintain appropriate sight distances to signs, at intersections and around curves;
- removal of immature trees with a trunk diameter less than 200mm growing within the road formation that have the potential to cause future obstruction;
- Council will endeavor to maintain the aesthetics and amenity of the roadside, and protect the environmental heritage aspects of the vegetation.

Note that while the latter dot-point does not include cultural heritage aspects, exemptions may be granted for significant trees. *Appendix 8* of the *SYR Tree Management Plan* contains clearance code guidelines for roads: Bickleigh Vale Road and Edna Walling Lane would be rated as Type 3 (trafficable width less than 3m, unsealed, one lane of traffic with table drain). The current clearance height of 3.6m at the tunnel is less than the minimum statutory clearance height and would need an exemption.

We have been advised that the Council currently has no listing of any heritage trees at Bickleigh Vale; however, a maintenance program exists for control of elm leaf beetle for the elm in front of no.5 Bickleigh Road. Trees for consideration in the roadside reservations include species rare in cultivation in Victoria, such as Bishop Pine (*Pinus muricata*), and remnant indigenous trees of outstanding size.

Shrub management

Roadside shrub management must be carried out sensitively to respect "Edna Walling" character. Shrubs play an important role in Walling's vision for a "country lane", through screening of properties and providing a sense of enclosure. While self-sown weedy species can be removed and suckers cut back, wholesale clearance must be avoided so that properties are not opened up to view. Clearance should be restricted to small patches followed up with replanting as necessary. Planting is also required by private owners on the property side of boundary lines or fences to reinforce screening. Shrub management in the Bickleigh Vale situation applies to all shrubs as well as to small trees.

Removal of shrubs may be necessary if the plants have died, are unsightly and ill-formed and unable to be re-shaped, are damaged or diseased, are planted in an inappropriate location, or if shrubs bearing thorns or spines are located close to the edge of the roads and may pose threats

to pedestrians. Removal or pruning may also be necessary to provide safe sight lines for driveway entries.

Pruning is essential to maintain shrubs for the following reasons:

- Shape plants and control growth to maintain essential habit and character;
- Formative pruning to provide good branch structure, remove multiple leaders and avoid V-crotches and lift canopy;
- To reinvigorate plant growth and extend the life of plants;
- To remove excess branches or thin out foliage;
- To maintain road clearance and visibility;
- To remove pest-infected growth;
- To remove damaged branches.

General guidelines for shrub management at Bickleigh Vale include the removal of any sucker growth or self-sown plants that are within 2m of road edges. Large shrubs where stems are set further back from the road, but which have wide-spreading canopies, can be trimmed back as required. Old shrubs with multiple-stem growth can have up to one third of their branches or canes removed. Small shrubs less than 1m high can be retained within the 2m zone, particularly where they may screen fences. Pruning or clipping of shrubs into geometric shapes (topiary or hedging) is not considered to be appropriate. The general appearance of vegetation should be informal, or natural, in keeping with Walling's vision of a country lane.

Refer to Appendix B for a proposed list of replacement species. Species selection includes Edna Walling favorites with either low or medium water requirements as well as tolerance of semi-shaded environments.

Weed management

Refer to Shire of Yarra Ranges' *Weed Management Strategy*.

As previously noted above, many of the plants growing on the Bickleigh Vale roadsides are considered to be weed species and are included on the Shire's weed list. However, this does not imply that they should all be immediately removed; noxious weeds are the exception. Problem species should be taken out and replaced with plants that meet the desired criteria. These include Sweet Pittosporum (*Pittosporum undulatum*), Privet (*Ligustrum lucidum* and *L. vulgare*), and English Hawthorn (*Crataegus monogyna*). It should be noted that there is more than one species of Pittosporum growing along the roadside and plants need to be correctly identified before being tagged for removal; for example, *P. ralphii* is known to be present.

Replacement species could include less-weedy species of the relevant genus such as Karo (*P. crassifolium*), or Kohuhu (*P. tenuifolium*). Similarly, Washington Thorn (*Crataegus phaenopyrum*) and *C. smithiana* may be appropriate replacements for English Hawthorn.

Weedy species to be retained where necessary for screening, etc., but pruned and monitored, include *Berberis*, *Viburnum*, *Crataegus* and *Cotoneaster*. Large mature Hawthorns could be retained but seedlings and suckers should be removed. Plants such as *Agapanthus* and *Erigeron karvinskianus* are acceptable, the latter being an Edna Walling “signature plant”. Noxious weeds such as Boneseed (*Chrysanthemoides monilifera*) and Blackberry (*Rubus fruticosus* spp.agg) should be removed without question.

Weedy ground cover species that should be removed wherever they are found include English Ivy (*Hedera helix*) and Wandering Jew (*Tradescantia fluminensis*). English Ivy also needs to be removed from any tree trunks. Weedy ground covers should be removed for the total width of the distance between the road and property boundaries. *Vinca major* should be thinned out or replaced with *Vinca minor*, *Viola hederacea* or *Ajuga reptans*.

Weeds should either be removed by hand (e.g. Ivy), or by cutting stems at ground level and immediately painting with an appropriate herbicide such as glyphosate. Cut material should be removed from site to avoid further spreading of berries or seeds.

Plant Monitoring

Photo points should be set up for images to be recorded from the same position at regular intervals to record vegetation growth and changes; these should be taken on a yearly basis. Records should also be kept of all maintenance actions taken, including planting species, numbers and locations.

Other Maintenance Issues

The Lilydale toppings surface of Bickleigh Vale Road and Edna Walling Lane requires regular maintenance and grading. This includes an application of dust suppressant for summer months by Council. Where necessary, the road surface should be topped up to replace material that is spread by traffic into the drains or roadside.

Concrete pipe culverts should be retained to crossovers; it is important to retain rural character by avoiding construction of excessive over-engineered crossovers and culverts.

The unformed stormwater drainage channels need regular cleaning to prevent build up of leaf litter, etc., which may cause blockages of pits and driveway culverts and minor flooding.

Gratings or wire mesh screens can be fitted to pits or to culvert inlets to prevent build-up of litter, but these will still need to be cleaned out on a regular basis along with the drains. The stormwater pit at the Pembroke Road end of Bickleigh Vale Road is undersized and is probably choked with poplar and elm roots. Similarly, the pit to the eastern side of the north-eastern end of Bickleigh Vale Road (outside No. 28) requires construction of a grated pit. The Shire of Yarra Ranges should carry out an assessment of stormwater pits and roadside drainage and discuss proposed actions with Friends of Edna Walling.

Potential improvement works include the replacement of all basalt rocks with sedimentary fieldstone that is naturally found in the area. Edna Walling was always careful to use local stone where possible, and basalt does not occur in this part of Melbourne.

Tree and Shrub Planting and Establishment

Soil preparation – remove any existing mulch or litter from planting site. Dig hole to at least twice the width of the pot diameter and to allow the plant to be placed at the same depth as the soil in the container. Break up the sides of the hole if the soil is compacted to allow roots to penetrate. Avoid large roots of existing trees when selecting planting locations.

Planting and staking – ensure the plant is well-watered in the container prior to planting. Remove plant from container and support soil plus root ball while gently teasing out roots. Place plant upright in hole and support while back-filling around rootball with soil dug from hole. Firm soil around rootball to remove air pockets, to ensure that roots will be in contact with surrounding soil and to maintain stems upright. Form a ring of soil around the plant as a basin to contain up to 10 litres of water. Install stakes as appropriate for the size of plant – small containers should not require staking, although a bamboo stake can be placed as a marker to reduce the chance of being trodden on. Larger plants such as semi-advanced trees may need up to three 50 x 50mm wooden stakes driven into the ground 450mm to 600mm to provide support; loosely fix plant stem with hessian ties to allow plant to move in the wind (avoid using rigid or narrow ties that will chafe stems); tree stems should have ties fixed at no higher than one third plant height. Stakes must be placed far enough away from trees to prevent any damage to branches or foliage from wind movement (this can be up to 0.9m to 1m apart depending on plant size).

Tree guard – plastic film tree guards protect young plants from drying winds and rabbit grazing during the early stages of establishment. These are supported by three 20 x 20mm wooden stakes or by wire frames; bamboo stakes do not have enough rigidity and are not suitable.

Mulch – provide a minimum depth of 75mm loose mulch to a diameter of 1m around the plant and ensure that mulch is not up against the plant stem. Mulch selection is important: fine

mulches should be avoided as these may not allow air and rain to penetrate; coarse mulch is preferred, but not pine bark, shredded pine or wood chips. “Euca-mulch” is suitable, or weed-free, recycled and aged council clippings with some leaf litter content. Mulch should be spread generally along the roadsides.

Watering – plants should be watered in at planting with at least 10 litres. If the soil is dry, the hole should first be filled with water and allowed to drain away, prior to planting. Semi-advanced trees will require at least 10 litres per 25mm of trunk diameter. Provide follow-up watering on a weekly basis in dry conditions for at least the first summer.

Weed control – grass or weeds will compete with young plants for moisture and nutrients. Hand-pulling to 1m diameter from the stem is the preferred method for weed removal. Weeding should be done on a regular basis.

Formative pruning – if tree branches are pruned when they are small, the risk of decay entering the tree will be much less. It is good practice to remove any unwanted branches when they are less than 50mm thick. The majority of trees form a single leading shoot with smaller side branches. If a double leader is found, one shoot should be pruned back. Remove dead, crossing or broken branches. If a clear stem is required remove lower branches, but only up to one third the height of the tree. Careful removal of branches will also help to reduce the wind resistance of the tree, and this may be needed if a young tree has grown very quickly before a strong root system has formed.

6. Case Studies for Six Trial Areas in Bickleigh Vale Road / Edna Walling Lane

The following tables are a representative list of plants recorded. Identification was not always possible for deciduous species without leaves or tall eucalypts where leaves and fruit could not be reached. Species were recorded for each side of the road working from west to east. The actions noted following the plant lists may not necessarily cover all works required for that area. All mature trees should be assessed for stability and dead-wooding of branches.

(1) Bickleigh Vale Road entry off Pembroke Road

| Botanical name | Common name | | Botanical name | Common name |
|---|-------------------------|--|---|-------------------------|
| North side | | | South side | |
| <i>Rosa sp.</i> | Rose | | <i>Populus alba</i> | White Poplar |
| <i>Spiraea thunbergii</i> | Spiraea | | <i>Prostanthera rotundifolia</i> | Round-leaf Mint-bush |
| <i>Quercus canariensis</i> | Algerian Oak | | <i>Erigeron karvinskianus</i> | Babies' Tears |
| <i>Abelia x grandiflora</i> | Abelia | | <i>Quercus robusta</i> | English Oak |
| <i>Pinus muricata</i> | Bishop Pine | | <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster |
| <i>Eucalyptus radiata</i> | Narrow-leaf Peppermint | | <i>Cotoneaster pannosus</i> | Silver-leaf Cotoneaster |
| <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster | | <i>Crataegus sp.</i> | Hawthorn |
| <i>Philotheca myoporoides</i> | Long-leaf Waxflower | | <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus |
| <i>Cotoneaster pannosus</i> | Silver-leaf Cotoneaster | | <i>Acacia mearnsii</i> | Black Wattle |
| <i>Jasminum mesnyi</i> | Japanese Jasmine | | <i>Acacia sp.</i> | Wattle |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum | | <i>Viburnum tinus</i> | Laurustinus |
| <i>Pinus radiata</i> | Monterey Pine | | <i>Ligustrum lucidum</i> | Privet |
| <i>Berberis x stenophylla</i> | Rosemary Barberry | | <i>Eucalyptus radiata</i> | Narrow-leaf Peppermint |

North side of road:

- Generally prune shrubs with stems inside 2m from road edge to maintain visibility for traffic. Mature weed species can be retained but canopies should be lifted to 2.5m above ground.

- Remove any sucker growth from shrubs or trees. Prune young Oak back to a single trunk and carry out formative pruning.
- Remove and poison elm suckers.
- Prune Abelia and Cotoneaster by removing up to one third of multiple stems.
- Prune rose.
- Remove *Pittosporum undulatum*.
- Plant a Banksia Rose on the short wire fence or a *Rosa* 'Edna Walling'.

South side of road:

- Generally prune shrubs with stems inside 2m from road edge to maintain visibility for traffic. Mature weed species can be retained but canopies should be lifted to 2.5m above ground.
- Prune and lift canopy of young Oak.
- Remove any sucker growth.
- Remove *Acacia mearnsii* in poor condition.
- Remove Privet.
- Removal White Poplar to Pembroke Road nature strip – the leaning habit of this tree was caused by overshadowing from a large pine removed from inside the corner of Mistover in 2008. The Oak to the rear will grow to be a suitable replacement.
- Consider planting a Banksia Rose on the Mistover fence corner to soften its appearance.
- Install a leaf litter trap to the pit at the end of the road drain. Clean pit and remove any root growth.

(2) The Tunnel

| Botanical name | Common name | | Botanical name | Common name |
|---|------------------------|--|---|------------------------|
| North side | | | South side | |
| <i>Pinus radiata</i> | Monterey Pine | | <i>Philotheca myoporoides</i> | Long-leaf Waxflower |
| <i>Pittosporum ralphii</i> | Pittosporum | | <i>Vinca major</i> | Blue Periwinkle |
| <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster | | <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster |
| <i>Quercus ? robur</i> | Oak | | <i>Ligustrum lucidum</i> | Privet |
| <i>Vinca major</i> | Blue Periwinkle | | <i>Pittosporum sp.</i> | Pittosporum |
| <i>Ligustrum lucidum</i> | Privet | | <i>Hedera helix</i> | English Ivy |

Bickleigh Vale Roadside Vegetation Management Plan

| | | | | |
|---|-------------------------|--|---|-------------------------------|
| <i>Agapanthus praecox subsp. orientalis</i> | Agapanthus | | <i>Viburnum tinus</i> | Laurustinus |
| <i>Cotoneaster pannosus</i> | Silver-leaf Cotoneaster | | <i>Robinia pseudoacacia</i> | Black Locust |
| <i>Iris unguicularis</i> | Winter Iris | | <i>Leptospermum laevigatum</i> | Coast Tea-tree |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum | | <i>Berberis x stenophylla</i> | Rosemary Barberry |
| <i>Leptospermum laevigatum</i> | Coast Tea-tree | | <i>Cupressus glabra</i> | Smooth-barked Arizona Cypress |
| | | | <i>Spiraea thunbergii</i> | Spiraea |
| | | | <i>Agapanthus praecox subsp. orientalis</i> | Agapanthus |
| | | | <i>Pelargonium sp.</i> | Geranium |

North side of road:

- Prune shrubs over the roadway to maintain a minimum clearance of 3.6m overhead.
- Selectively thin out or prune Cotoneaster but maintain tunnel form.
- Remove Privet.
- Remove *Pittosporum undulatum* but retain *P.ralphii*.

South side of road:

- Prune shrubs as required to maintain a minimum clearance of 3.6m overhead.
- Selectively thin out or prune Cotoneaster but maintain tunnel form.
- Remove Ivy.
- Remove Privet.
- Thin out *Vinca major*.

(3) Driveway junctions

Approximate scope from Glencairn's eastern boundary to Badgers Wood (N), and from Merewether to Whistlewood (S).

| Botanical name | Common name | | Botanical name | Common name |
|--------------------------------|------------------------|--|----------------------------|-------------|
| North side | | | South side | |
| <i>Pinus radiata</i> | Monterey Pine | | <i>Jasminum polyanthum</i> | Jasmine |
| <i>Correa baeuerlenii</i> | Chef's Cap Correa | | <i>Prunus cerasifera</i> | |
| <i>Leptospermum petersonii</i> | Lemon-scented Tea-tree | | <i>Spiraea thunbergii</i> | Spiraea |

Bickleigh Vale Roadside Vegetation Management Plan

| | | | | |
|---|------------------------|--|---|-------------------------|
| <i>Allocasuarina torulosa</i> | Rose She-oak | | <i>Eucalyptus ovata</i> | Swamp Gum |
| <i>Correa reflexa</i> | Common Correa | | <i>Hedera helix</i> | English Ivy |
| <i>Helleborus sp.</i> | Hellebore | | <i>Lonicera japonica</i> | Woodbine or Honeysuckle |
| <i>Cotinus coggygria</i> | Smoke Bush | | <i>Crataegus monogyna</i> | Hawthorn |
| <i>Viola hederacea</i> | Native Violet | | <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum | | <i>Allocasuarina torulosa</i> | Rose She-oak |
| <i>Vinca major</i> | Blue Periwinkle | | <i>Acacia floribunda</i> | White Sallow Wattle |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum | | | |
| <i>Jasminum polyanthum</i> | Jasmine | | | |
| <i>Berberis x stenophylla</i> | Rosemary Barberry | | | |
| <i>Hedera helix</i> | English Ivy | | | |
| <i>Leptospermum laevigatum</i> | Coast Tea-tree | | | |
| <i>Viburnum tinus</i> | Laurustinus | | | |
| <i>Rosa sp.</i> | Rose | | | |
| <i>Crataegus sp.</i> | Hawthorn | | | |
| <i>Westringia longifolia</i> | | | | |
| <i>Dodonaea cuneata</i> | Hop Bush | | | |
| <i>Grevillea 'Royal Mantle'</i> | | | | |
| <i>Correa sp.</i> | | | | |
| <i>Westringia fruticosa</i> 'Morning Light' | | | | |
| <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster | | | |
| <i>Prostanthera rotundifolia</i> | Round-leaf Mint-bush | | | |

North side of road:

- Remove Ivy groundcover.
- Remove Pittosporum but retain Hawthorn.
- Remove dead eucalypts and replace with an alternative indigenous species.

- Remove foliage as required to maintain sight lines to edge of driveways - this may include removing tall shrubs with stems within one metre of the road or driveway edges.

South side of road:

- Remove Ivy groundcover.
- Remove sucker growth from Hawthorn and prune back to a single trunk.
- Monitor growth of Jasmine on fenceline and cut back as necessary to ensure that it does not get out of control; cut back where growing up trees.

(4) The Island

| Botanical name | Common name | Botanical name | Common name |
|--|-------------------------|--------------------------------|------------------|
| <i>Hakea salicifolia</i> | Willow-leaved Hakea | <i>Erigeron karvinskianus</i> | Babies' Tears |
| <i>Fraxinus angustifolia subsp. angustifolia</i> | Narrow-leaf Ash | <i>Rosa sp.</i> | Rose |
| <i>Prunus sp.</i> | | <i>Hedera helix</i> | English Ivy |
| <i>Cotoneaster glaucophyllus var. serotinus</i> | Large-leaf Cotoneaster | <i>Jasminum mesnyi</i> | Japanese Jasmine |
| <i>Viburnum tinus</i> | Laurustinus | <i>Spiraea thunbergii</i> | Spiraea |
| <i>Cotoneaster pannosus</i> | Silver-leaf Cotoneaster | <i>Plectranthus argentatus</i> | |
| <i>Crataegus monogyna</i> | Hawthorn | <i>Ligustrum lucidum</i> | Privet |
| <i>Berberis x stenophylla</i> | Rosemary Barberry | <i>Hibbertia truncata</i> | Guinea-flower |

- Remove Prunus and replant.
- Remove Privet.
- Remove Hakea.
- Remove Ash.
- Prune rose suckers.
- Remove Ivy and stump.

(5) Edna Walling Lane southern end

| Botanical name | Common name | | Botanical name | Common name |
|---|-------------------------|--|---|------------------------|
| The Barn (west side) | | | Devon Cottage (east side) | |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum | | <i>Viburnum tinus</i> | Laurustinus |
| <i>Jasminum mesnyi</i> | Japanese Jasmine | | <i>Hedera helix</i> | English Ivy |
| <i>Hibbertia truncata</i> | | | <i>Pittosporum undulatum</i> | Sweet Pittosporum |
| <i>Hedera helix</i> | English Ivy | | <i>Jasminum mesnyi</i> | Japanese Jasmine |
| <i>Viburnum tinus</i> | Laurustinus | | <i>Agapanthus praecox subsp. orientalis</i> | Agapanthus |
| <i>Agapanthus praecox subsp. orientalis</i> | Agapanthus | | <i>Crataegus sp.monogyna</i> | Hawthorn |
| <i>Cotoneaster glaucophyllus var. serotinus</i> | Large-leaf Cotoneaster | | <i>Prunus lusitanica</i> | Portuguese Laurel |
| <i>Spiraea thunbergii</i> | Spiraea | | <i>Rosa sp.</i> | Rose |
| <i>Ligustrum lucidum</i> | Privet | | <i>Osmanthus sp.</i> | |
| <i>Allium triquetrum</i> | Angled Onion | | <i>Pinus sp.</i> | Pine |
| <i>Lonicera sp.</i> | Woodbine or Honeysuckle | | <i>Eucalyptus radiata</i> | Narrow-leaf Peppermint |
| <i>Eucalyptus viminalis</i> | Manna Gum | | | |

The Barn

- Remove Pittosporum.
- Remove Angled Onion.
- Remove Privet.
- Remove Ivy.

Devon Cottage

- Remove Pittosporum.
- Remove Ivy.
- Remove Privet.

(6) Bickleigh Vale Road northern end

| Botanical name | Common name | | Botanical name | Common name |
|---|----------------------------|--|---|-------------------------------------|
| West side | | | East side | |
| <i>Pittosporum undulatum</i> | Sweet Pittosporum | | <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster |
| <i>Pinus radiata</i> | Monterey Pine | | <i>Spiraea thunbergii</i> | Spiraea |
| <i>Acacia prominens</i> | Golden Rain Wattle | | <i>Acacia prominens</i> | Golden Rain Wattle (stumps only) |
| <i>Crataegus monogyna</i> | Hawthorn | | <i>Hedera helix</i> | English Ivy |
| <i>Cedrus deodara</i> | Deodar | | <i>Acacia iteaphylla</i> | Gawler Range Wattle |
| <i>Philotheca myoporoides</i> | Long-leaf Waxflower | | <i>Berberis x stenophylla</i> | Rosemary Barberry |
| <i>Viburnum tinus</i> | Laurustinus | | <i>Acanthus mollis</i> | Bear's Breech |
| <i>Acacia obliquinervia</i> | Mountain Hickory Wattle | | <i>Strelitzia reginae</i> | Bird of Paradise |
| <i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i> | Large-leaf Cotoneaster | | <i>Agapanthus praecox</i> subsp. <i>orientalis</i> | Agapanthus |
| <i>Callistemon sp.</i> | Bottlebrush | | <i>Dicksonia antarctica</i> | Soft Tree-fern (dead) |
| <i>Berberis x stenophylla</i> | Rosemary Barberry | | <i>Betula pendula</i> | Silver Birch |
| <i>Dicksonia antarctica</i> | Soft Tree-fern (dead) | | | |
| <i>Ligustrum lucidum</i> | Privet | | | |
| <i>Viola hederacea</i> | Native Violet | | | |

West side of road:

- Remove Pittosporum.
- Remove dead fern stumps.
- Remove Privet.

East side of road:

- Remove Ivy.
- Remove dead fern stumps.
- Remove stumps each side of gateway to No. 28 and replant 2 no. *Acacia prominens*.

7. Works Program

Works Priorities for 2010-2011

The extent of works listed below is dependent on allocation of the Shire of Yarra Ranges \$20,000.00 budget for the financial year. It is understood that works to hazardous trees is not included in this budget.

(1) Safety Issues

(a) Assessment by Friends of Edna Walling and Shire of Yarra Ranges:

- Identification of hazardous or dead trees and dead branches to be removed.
- Identification of unstable trunks or branches
- Identification of traffic visibility issues adjacent to driveways on Bickleigh Vale Road or Edna Walling Lane.

Friends of Edna Walling to make a preliminary identification of trees and shrubs to be removed.

Walk-through with Friends of Edna Walling and Shire of Yarra Ranges to tag trees and shrubs for removal.

(b) Hazard reduction works by Shire of Yarra Ranges:

- Removal of hazardous trees and dead-wooding of branches.
- Some dead trees to be reduced to 3m for habitat values.
- Cabling of unstable trunks or branches.
- Pruning of shrubs and raising of tree canopies to improve visibility.

Note that stumps of removed trees are to be grubbed out, where possible, or cut back to ground level; this includes any existing stumps. SYR to consult with residents regarding removal of tree waste (potential logs for firewood).

(2) Weed Management

(a) Assessment by Friends of Edna Walling and Shire of Yarra Ranges:

- Identification of weedy trees and shrubs to be removed.
- Identification of areas for Ivy removal.

(b) Removal of weedy trees and shrubs by Shire of Yarra Ranges.

- Cut down trees and shrubs and remove from site; this work may involve immediate painting of stumps with herbicide to prevent regrowth.
- SYR to engage a contractor to remove Ivy.

Works shall include spreading of mulch to cleared areas to control opportunistic weed growth until the areas can be replanted with suitable species. Mulch should not be pine

bark, shredded pine or wood chips; composted leaf clippings free of weed seed is preferred or “Euca-mulch’ or equivalent.

(3) Aesthetic Management

(a) Assessment by Friends of Edna Walling and Shire of Yarra Ranges:

- Identification of trees and shrubs to be pruned (or selectively removed) - removal of sucker growth and multiple stems, raising of canopies, thinning of dense growth.
- Identification of plants to be pruned for rejuvenation and removal of straggly growth – roses, etc.
- Identification of climbers to be pruned to control growth – e.g. Jasmine, Honeysuckle.

(b) Pruning works:

- Works carried out by a combination of Friends of Edna Walling and Shire of Yarra Ranges (by agreement).
- Pruned material to be removed from site by SYR.

(c) Replacement planting:

- Selection of replacement trees, shrubs and groundcovers by Friends of Edna Walling for agreed locations.
- Provision of plants by Shire of Yarra Ranges (to be negotiated).
- Provision of additional mulch by Shire of Yarra Ranges (on request).
- Planting and ongoing maintenance by Friends of Edna Walling.

Future Works

Future works will be required on an on-going basis and will rely on monitoring, vegetation maintenance and replacement planting by Friends of Edna Walling. Quarterly working bees should be adequate to handle most issues except for emergencies.

(1) Safety Issues

- Friends of Edna Walling should notify the Shire of Yarra Ranges if any urgent arboricultural works are required. This may be the result of damage from high winds or storms resulting in fallen trees or large branches dropping. Trees which die due to drought, disease or other reasons may also need removal.
- Friends of Edna Walling should provide follow-up pruning of vegetation cut back by the Shire of Yarra Ranges for traffic visibility or for overhead vehicle clearances. Liaise with the Shire of Yarra Ranges for pick up and removal of pruned material.

(2) Weed Management

- Weeding will be required on a regular basis. Liaise with the Shire of Yarra Ranges for pick up and removal of plant debris and rubbish.
- Mulch replenishment will be required on at least an annual basis. Liaise with the Shire of Yarra Ranges for supply and delivery of mulch. As noted above, mulch should not contain any weed seeds.

(3) Aesthetic Management

- Pruning will be required for both trees and shrubs to maintain pedestrian and traffic visibility and to ensure that plant growth does not create nuisance. Vigorously-growing plants may need to be cut back to avoid overshadowing or out-competing neighboring vegetation. Climbers need to be controlled and kept off tree trunks. Roses should be pruned on an annual basis.
- Replanting will be necessary to replace dead, diseased or removed plants or to thin out vegetation that has become too dense. Similarly, some plants may need to be removed if they fail to thrive under shade conditions created by larger trees. Note that replacements do not necessarily have to be with the same species; the aim should always be to retain Edna Walling's vision for a country lane.
- Monitoring involves regular visual inspections, the keeping of records of actions carried out, and photographic records taken from the same vantage points on an annual basis. The photographs will record vegetation changes over time.

(4) Road Management

- The Shire of Yarra Ranges is responsible for ongoing road maintenance: surface grading, replenishing the Lilydale toppings surface, an annual application of dust suppressant, and maintenance of drains. Friends of Edna Walling need to advise council if any works require urgent attention.

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Appendix A

Victorian Heritage Register Number: H2053

Appendix B

Proposed List of Replacement Plants

| Proposed Planting List | | | | | | | |
|---|---------------------------|----------------------------|-------------------|-------------------|------------------------------|--------|------------------|
| Botanical name | Common name | Height & width at maturity | Drought tolerance | Water requirement | Edna Walling signature plant | Native | SYR Weed species |
| Species with low water requirements only | | | | | | | |
| Trees | | | | | | | |
| <i>Acacia melanoxylon</i> | Blackwood | 8-15 x 6-8 | | L | | x | |
| <i>Acmena smithii</i> | Lilly-pilly | 20-30 x 6 | D | L | x | x | P |
| <i>Callitris glaucophylla</i> | White Cypress Pine | 8-15 x 12 | D | L | x | x | |
| <i>Cupressus arizonica var. glabra</i> | Smooth Arizona Cypress | 9-15 x 5 | D | L | x | | |
| <i>Cupressus sempervirens</i> | Italian Cypress | 15-20 x 5 | D | L | x | | |
| <i>Eucalyptus cephalocarpa</i> | Silver-leaved Stringybark | 10-20x5-15 | D | L | | x | |
| <i>Eucalyptus melliodora</i> | Yellow Box | 15-25x8-15 | D | L | | x | |
| <i>Eucalyptus ovata</i> | Swamp Gum | 8-25 x 8-10 | | L | | x | |
| <i>Eucalyptus radiata</i> | Narrow-leaf Peppermint | 10-20x8-15 | D | L | | x | |
| <i>Eucalyptus rubida</i> | Candlebark | 20-30x10-15 | D | L | | x | |
| <i>Eucalyptus viminalis</i> | Manna Gum | 20-30x10-15 | | L | | x | |
| <i>Lagerstroemia indica</i> | Crepe Myrtle | 6-8 x 6 | | L | x | | |
| <i>Leptospermum laevigatum</i> | Coastal Tea-tree | 3-6 x 4 | D | L | x | x | |
| Shrubs | | | | | | | |
| <i>Abelia x grandiflora</i> | Glossy Abelia | 1.5-3 x 2.5 | D | L | x | | |
| <i>Berberis thunbergii var. atropurpurea</i> | Purple Japanese Barberry | 1-1.5 | | L | x | | |
| <i>Berberis x stenophylla</i> | Rosemary Barberry | 2-3 x 5 | | | x | | |
| <i>Ceanothus griseus</i> | Californian Lilac | 1.5-2.4 x 2 | | L | x | | |
| <i>Ceanothus papillosus</i> | Californian Lilac | 1.5-3 x 2.5 | | L | x | | |
| <i>Chaenomeles speciosa</i> | Japonica | 2-3 x 2 | | L | x | | |
| <i>Cotinus coggygria</i> | Smoke Bush | 3-5 x 5 | D | L | x | | |
| <i>Elaeagnus pungens</i> | Silverberry | 3-4 x 5 | | L | x | | |
| <i>Escallonia bifida</i> | White Escallonia | 2-3 x 2.5 | | L | x | | |
| <i>Escallonia rubra</i> | Escallonia | 2-2.5 x 2 | D | L | x | | |
| <i>Leptospermum lanigerum</i> | Woolly Tea-tree | 3-4.5x1.5-3 | | L | ? | x | |
| <i>Leptospermum myrtifolium</i> | Swamp Tea-tree | 1-2.5 x 3 | | L | | x | |
| <i>Leptospermum scoparium</i> | Manuka | 3-5 x 2 | D | L | x | x | |

Bickleigh Vale Roadside Vegetation Management Plan

| | | | | | | | |
|--------------------------------------|--------------------------|------------|---|---|---|---|---|
| <i>Philotheca myoporoides</i> | Long-leaf Waxflower | 2-4 x 2 | | L | x | x | |
| <i>Prostanthera lasianthos</i> | Victorian Christmas Bush | 3-5 x 2 | | L | ? | x | |
| <i>Rosa banksii</i> | Banksia Rose | 4-6 x 4 | | L | x | | |
| <i>Viburnum tinus</i> | Laurustinus | 3-5 x 3 | | L | x | | P |
| Groundcovers & Perennials | | | | | | | |
| <i>Erigeron karvinskianus</i> | Babies' Tears | 0.15 x 0.6 | D | L | x | | |
| <i>Hibbertia truncata</i> | Guinea-flower | 0.4 x 0.6 | D | L | | x | |
| <i>Iris unguicularis</i> | Algerian Iris | 0.3 x 0.6 | D | L | x | | |
| <i>Viola hederacea</i> | Native Violet | 0.1 x 0.1 | | L | | | |

| Botanical name | Common name | Height & width at maturity | Drought tolerance | Water requirement | Edna Walling signature plant | Native | SYR Weed species |
|---|---------------------|----------------------------|-------------------|-------------------|------------------------------|--------|------------------|
| Species with medium water requirements | | | | | | | |
| Trees | | | | | | | |
| <i>Acacia prominens</i> | Golden Rain Wattle | 5-20x4-15 | | M | ? | x | ? |
| <i>Acer campestre</i> | Hedge Maple | 9 x 3.5 | | M | x | | |
| <i>Amelanchier canadensis</i> | Shadbush | 4-6 x 3 | | M | ? | | |
| <i>Crataegus phaenopyrum</i> | Washington Thorn | 9 x 9 | | M | x | | |
| <i>Malus floribunda</i> | Japanese Crabapple | 3.5 x 6 | | M | x | | |
| <i>Malus ioensis</i> | Prairie Crabapple | 6 x 6 | | M | x | | |
| <i>Malus x purpurea</i> 'Sonningensis' | Sonning Crabapple | 6 x 8 | | M | x | | |
| <i>Quercus canariensis</i> | Algerian Oak | 25-30 x 15 | D | M | x | | |
| <i>Quercus rubra</i> | Red Oak | 30 x 21 | | M | x | | |
| <i>Zelkova serrata</i> | Japanese Zelkova | 18-30 x 15 | | M | x | | |
| Shrubs | | | | | | | |
| <i>Anemone x hybrida</i> | Japanese Windflower | 1.2 x 1.0 | | M | x | | |
| <i>Deutzia crenata</i> | Deutzia | 0.6 x 1.2 | | M | ? | | |
| <i>Osmanthus heterophyllus</i> | Holly Osmanthus | 3-5 x 5 | | M | x | | |
| <i>Philadelphus mexicanus</i> | Mexican Mock Orange | 1.5-5 x 2 | | M | x | | |
| <i>Spiraea cantoniensis</i> | Reeve's Spiraea | 1.5 x 0.75 | | M | x | | |
| <i>Spiraea thunbergii</i> | Thunberg's Spiraea | 1-1.2 x 1-2 | | M | x | | |
| <i>Weigela florida</i> | Weigela | 1.5-2 x 1.5 | | M | ? | | |
| Groundcovers & Perennials | | | | | | | |
| <i>Ajuga reptans</i> | Bugle | 0.3x0.5 | | M | X | | |
| <i>Brachyscome multifida</i> | Cut-leaf Daisy | 0.3 x 0.8 | | M | x | x | |
| <i>Helleborus x hybridus</i> | Hellebore | 0.45 x 0.45 | | M | ? | | |
| <i>Vinca minor</i> | Lesser Periwinkle | 0.2 x 1 | | M | ? | | |

Appendix C: Shire of Yarra Ranges Weed Lists

Appendix D: Plans for six trial areas