



**Bickleigh Vale**  
**Roadside Vegetation Management Plan**

**For Friends of Edna Walling**

**Review July 2019**

<b>Contents</b>	<b>Page No.</b>
<b>1. Introduction</b>	3
Ownership and copyright	3
Acknowledgement	3
Background and aims of report	3
Study area	4
Methodology	5
Heritage listings	5
<b>5. Vegetation management Plan</b>	7
Landscape and vegetation issues	7
Landscape maintenance strategies	7
Planting character	8
Replacement plant selection	8
Tree management	9
Shrub management	10
Weed management	11
Pest and disease management	12
Plant monitoring	13
Other maintenance Issues	13
Tree and shrub planting and establishment	13
<b>6. Current roadside issues</b>	16
<b>7. Works program</b>	19
Works Priorities for 2019-2029	19
Future Works	20
<b>Bibliography</b>	22
<b>Appendix A: Original plan mark-ups (2No. A3 sheets)</b>	
<b>Appendix B: Proposed List of Replacement Plants</b>	23

# **Bickleigh Vale Roadside Vegetation Management Plan**

## **1. Introduction**

This review of the original 2010 report has been commissioned by the Yarra Ranges Council on behalf of the Friends of Edna Walling.

The review has been prepared by Barrie Gallacher of CDA Design Group Pty Ltd, Landscape Architects, 185 Faraday Street, Carlton VIC 3053.

(Contact details: Tel 03 9349 5866, email [bg@cdadesigngroup.com.au](mailto:bg@cdadesigngroup.com.au)).

### **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 Yarra Ranges Council.

### **Acknowledgement**

The production of the Bickleigh Vale Roadside Vegetation Management Plan Review was carried out with funds made available by the Yarra Ranges Council.

### **Background and Aims of the Review**

Friends of Edna Walling and Yarra Ranges Council have carried out maintenance actions on a regular basis, since preparation of the 2010 report, to the vegetated road reservations in the Bickleigh Vale Estate. The intention is to preserve the country lane character as originally envisaged by Edna Walling. The cultural significance of the roadside vegetation is under threat due to climate change with reduced rainfall, changes in access to adjacent properties, and safety requirements of public authorities. This review is a follow-up for the Friends of Edna Walling and Yarra Ranges Council to maintain and renew the “Edna Walling landscape character” of the roadsides. It is also intended to provide advice on “future-proofing” of the vegetation.

The aims of the review are as follows:

1. Review and provide an update of the 2010 management report for the roadside vegetation.
2. Meet with the Friends of Edna Walling and Yarra Ranges Council to discuss issues requiring attention.
3. Conduct a brief analysis of existing conditions.
4. Recommend possible solutions for perceived problems.
5. Prepare a revised planting list to include species that may be more tolerant of climate change.

## 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 Sarn (The Cabin)	B20 Mistover
B7 112 Cardigan Rd	B14 Sonning	B21 Downderry
N1 104 Pembroke Rd	N6 142 Cardigan Rd	N11 Mousehole
N2 The Spinney	N7 Windsong	N12 Whistlewood
N3 132 Cardigan Rd	N8 Littlewood	N13 Homeleigh
N4 136 Cardigan Rd	N9 Abbotsley	N14 Wintersweet
N5 138 Cardigan Rd	N10 Sonningfield	

**Site location plan from the Victorian Heritage Register/Bickleigh Vale Village website**

## **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 were held with representatives of the Yarra Ranges Council and of the Friends of Edna Walling in Bickleigh Vale Road. A site inspection followed to assess vegetation and roadside conditions and to take photographs.

## **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 sub-division 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.



## 5. Vegetation Management Plan

The following sections of the original report have been revised with new items or changes shown in blue.

### Landscape and Vegetation Issues

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

- *Senescence or ageing* – some trees and shrubs were planted at Bickleigh Vale in the 1930s and may be reaching the end of their useful (aesthetic) lives; these plants will eventually require replacement;
- *Storm damage* due to wind, hail and/or heavy rain - trees are more susceptible to being blown over 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, e.g. pine needles), and increase with temperature, wind speed and low moisture content;
- *Drought* – prolonged drought may result in vegetation loss due to increased competition for moisture and nutrients from adjacent plants with aggressive root systems. Many plants at Bickleigh Vale also have high water requirements – these plants may have originated in cooler northern climates or in rain forests;
- *Flood* – potential damage in low-lying areas 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; e.g. Agapanthus, Euphorbia, Jasmine, Viburnum;
- *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; plants for these areas must be selected for shade tolerance;
- *Competition* for light in closely-spaced planting can result in poor plant shapes and poor plant structure;
- *Root competition under established trees* - creates issues for establishment of new planting - soil moisture and nutrients;
- *Animal, insect, fungal disease* – problems may include possum attack (e.g. Oak at Bickleigh Vale Road entry off Pembroke Road), leaf-sucking or leaf mining insects, scale, caterpillars/saw fly larvae, Cinnamon fungus or Armillaria attacking roots;
- *Climate change* – predicted changes that will affect vegetation are increases in maximum temperatures and prolonged heat waves, reduced rainfall, more frequent and longer drought periods, higher intensity rainfall or storm events; the immediate effect on vegetation is reduced moisture availability and increased heat stress with potential damage to vegetation originating from cool climates. Prolonged droughts

will result in a lowering of the water table. High intensity rain events will result in most of the water running off and not soaking into the soil.

*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**

### *Planting character*

The importance of retaining Edna Walling’s “country lane” landscape character for Bickleigh Vale Road and Edna Walling Lane has been discussed under Conservation Policy in the original report. It is of prime aesthetic importance to retain an informal mix of both deciduous and evergreen trees and shrubs and avoid any rigid or formal approach to planting. Hedges are to be discouraged. Deciduous trees provide autumn foliage colour; evergreen trees and shrubs supply background screening all year round. (Edna was very keen on different shades of green foliage with less emphasis on flowers.) Variation in plant size, shape and foliage texture also provides interest. Scattered planting of crab apples or flowering plums create visual focal points. Planting should be graduated in height or layered from road edges, beginning with low ground covers to embankments with shrubs set further back. Large areas of mass planting of a single species should be avoided in preference to smaller groupings, or “drifts”, as Edna described them.

### *Replacement plant selection*

Plants may need to be replaced because they have died, are displaying senescence and can’t be reinvigorated (e.g. by pruning), are unsightly, have diseases, are intolerant of changed macro- or micro-climatic conditions, or may be an inappropriate selection (e.g. plants that 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 Council's [list of weeds](#). Species substitution may be necessary if planting conditions have changed ([e.g. due to climate change effects](#)), if maintenance costs are high ([regular water requirements, regular pruning](#)) 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 easy to establish. Selection of plants with weedy tendencies ([i.e. a propensity for self-seeding to become "garden escapes"](#)) should be given careful consideration as these will require monitoring; unfortunately, a large majority of Edna Walling's "favorites" are now on the [Yarra Ranges Council's](#) weed list. (Refer to Appendix C)

Refer to Appendix B ([revised](#)) for a proposed list of replacement plants. The lists have been compiled from publications on Edna Walling's favorites ([as well as other sources](#)) 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 [Yarra Ranges Council Tree Policy 2016](#). Principal objectives are as follows:

- *Tree retention:* all available alternatives will be explored to retain trees and avoid and minimize unnecessary tree removal. [Retention may also include dead trees for habitat reasons, where applicable.](#)
- *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 Yarra Ranges Council 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 a 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 ([i.e. removal of dead or dangerous branches](#)) and selective pruning and thinning. Formative pruning is an important requirement for many young trees.

The Council'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. [The Yarra Ranges Council's Tree Policy \(2016\)](#) contains clearance code guidelines for roads: Bickleigh Vale Road and Edna Walling Lane would be rated as Type 3 (trafficable width less than 4.5m, 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 Vale Road. [Since the original report was written, the large specimen of \*Eucalyptus dunnii\* \(Dunn's White Gum\), in the median strip of the southern end of Edna Walling Lane, has been added to the National Trust of Australia \(Victoria\) Register of Significant Trees.](#)

#### *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 [both](#) 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, avoid [narrow](#) 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.

#### *Weed management*

Refer to [Yarra Ranges Council's 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 Council's weed list. However, this does not imply that they should all be immediately removed; noxious weeds are the **obvious** 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 tinus*, *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". **Note that *Agapanthus* has since become problematic.** 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.

### *Pest and Disease Management*

Refer to *Hockings (2014)* in Bibliography for images of pest symptoms and suggested controls. Some typical issues are set out below:

- Elm leaf beetle is being controlled by Council to the tree outside No. 5.
- Saw fly larvae can cause unsightly damage to eucalyptus, melaleuca and callistemon leaves, usually in late summer; this can be reduced by spraying foliage with pyrethrin, but the trees will recover and grow new leaves.
- Insects such as aphids, thrip, caterpillars, scale, snails, slugs, red spider mite, etc., can all be controlled with common gardening remedies.
- Fungal diseases: Cinnamon fungus (*Phytophthora cinnamomi*) is a serious disease that affects a wide variety of plants by infecting the roots causing thinning of foliage, dieback or plant death. The disease is commonly associated with wet soils and heavy clay. One of the few ways to combat this is to improve drainage. Infection often results in the death of the plant, with earlier symptoms including wilting, yellowing and retention of dried foliage and darkening of young feeder roots and occasionally the larger roots. *Phytophthora cinnamomi* requires moist soil conditions and warm temperatures to be active, but damage caused by the disease most often occurs in summer when plants are drought stressed. The plant is unable to adequately absorb enough water from the soil because its roots are damaged and consequently may die. There is no way of visually telling if the pathogen is present in the soil. ("Phytophthora root rot — fact sheet". Botanic Gardens Trust, Sydney 2005.)

Armillaria root rot is also a potential problem, particularly for conifers; this kills the plant and it must be removed to limit further spread in the soil. The fungus *Armillaria luteobubalina* is native to Australia and causes losses in natural ecosystems, forest plantations, fruit crops and ornamental or amenity plants. The host range of the fungus is very large and poorly defined with little information on the presence of resistant or tolerant species. Early infection is difficult to detect and symptoms may not appear until late in the disease cycle and are generally not definitively diagnostic when present. Such symptoms may include dieback of the limbs and branches, yellowing of foliage, splits in the trunk of the infected tree, poor vigour, exudates from the trunk (kino production), scars may form on the trunk and darkening of the larger roots. Removal of the bark may reveal the presence of

mycelial fans, which are large sheets of fungal growth, usually white in colour. The surface of the affected timber is often pitted in appearance. The fungus produces mushrooms in May-Jun. These are olive brown to yellow in colour, can be up to 12 cm in diameter with a stipe (stalk) of up to 15 cm high, although usually less. The stipe has an annulus (the ring of tissue around the stipe) that should be quite obvious.

The Yarra Ranges Council should be notified to provide advice if symptoms of either of these diseases become apparent.

### *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. [Friends of Edna Walling need to be vigilant and look for unusual plant deaths that may be caused by fungal disease \(see above\).](#)

### *Other Maintenance Issues*

The [Coldstream gravel](#) 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. [It is noted that the Friends of Edna Walling regularly fill pot holes in the road.](#)

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.

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 or [bluestone](#) does not occur in this part of Melbourne.

### **Tree and Shrub Planting and Establishment**

[Preferred planting times](#) – autumn and spring are the best seasons to plant when there is moisture and some warmth in the soil. This will give plants a little time to become established before the onset of winter cold or summer heat.

*Soil preparation* – remove any existing mulch or litter from planting site. Avoid large roots of existing trees when selecting planting locations if possible. Cultivate the area by breaking up soil compaction and removing any existing plant roots. Apply gypsum to improve drainage of heavy clay and rake into the soil (but first test to see if gypsum will work: place a lump of soil in a glass of rainwater and if it disperses to make the water cloudy within 24 hours then gypsum treatment will be suitable). Sprinkle gypsum at the rate of 0.5kg to 1kg per square metre, rake in and allow to settle for a week. Mix in aged compost or other organic material to further improve the soil. Local mounding of the soil will improve drainage as well as providing extra soil depth for plant roots to establish in amongst existing vegetation.

*Planting* – 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. Ensure the plant is well-watered in the container prior to planting. Remove plant from container and support the root ball while gently teasing out roots. Place plant upright in hole and support while back-filling around the root ball with soil dug from hole. Firm soil around the root ball 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.

*Staking* - Install stakes as appropriate for the size of plant – plants in small containers should not require staking, although a bamboo stake can be placed as a marker to reduce the chance of young plants 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). Do not use star pickets unless they are far enough away to avoid trunk damage. Do not tie stems/trunks tightly to stakes. Remove bamboo nursery stakes as soon as possible.

*Tree guard* – (optional) 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 placed up against the plant stem. (Collar rot can develop when wet mulches are against stems.) Mulch selection is important: fine mulches should be avoided as these may not allow air and light rain to penetrate through to the soil; coarse mulch is preferred such as pine bark, but not shredded pine or wood chips (contains tannins). “Eucy-mulch” has proved to be problematic in sandy soil at the Royal Botanic Garden Cranbourne as it has created waxy coatings of the particles causing the soil to



become hydrophobic. Weed-free, recycled and aged council clippings with some leaf litter content is acceptable. Note that mulch should be spread generally along the roadsides.

*Watering* – plants should be watered in after 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 in hot, dry conditions for at least the first summer. (Note that Edna Walling’s practice was NOT to water but this was before the advent of climate change.) Plants should be encouraged to send roots down to become established but over-watering will limit root spread.

*Fertiliser* – apply appropriate fertilisers in spring to encourage healthy plant growth; fertilizing in autumn may result in soft growth which can be damaged by frost. Many native plants can be affected by too much phosphorus, therefore low-P slow release pellets are preferred for natives.

*Weed control* – grasses 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. Current Roadside Issues

### A. Possum attack to young oak at Bickleigh Vale Road western entry

- Possum damage to the young oak at entry of Bickleigh Vale Road causing unsightly defoliation: a collar could be fixed to the trunk to limit possum access, but first the surrounding tree limbs would need to be cut back so that the canopies do not touch allowing possums to have easy access. This may be a short-term problem as possums are known to change their diet for no apparent reason.



### B. Self-seeding plants becoming naturalized weeds

- *Agapanthus praecox subsp. orientalis*.  
Locations: Mistover driveway, Downderry entry, Badgers Wood, Sarn entry, Edna Walling Lane leading to the Barn.  
Issue: plants are spreading.  
Remedy: remove (dig out tuberous roots). Replace with *Iris unguicularis* (sunny) or *Dianella tasmannica* or *Hellebore* spp. (in shade).



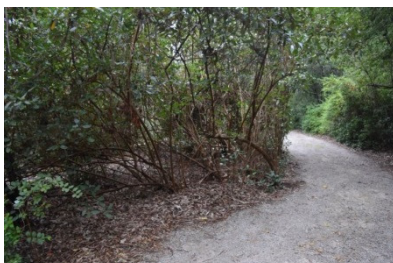
- *Euphorbia characias subsp. wulfenii*.  
Locations: east of Mistover driveway, front of Downderry and front of Glencairn opposite.  
Issue: plants are spreading and forming monocultures on both sides of road.  
Remedy: Remove all seedlings and larger plants. Replace with small shrubs set back from the road or with low groundcovers at the roadside.



- *Jasminum polyanthum*  
Location: front of Homeleigh.  
Issue: this vigorous climber is getting out of control and currently requires cutting back on a monthly basis.  
Remedy: cut back or remove completely. Replace with *Clematis microphylla* or *Hardenbergia violacea* to the fence and possibly *Lavandula*, *Nepeta* or *Perovskia* in front (in sunny locations), as well as a low ground cover to the road edge.



- *Viburnum tinus*  
Location: Edna Walling Lane – Devon Cottage entry road.  
Issue: too close to edge of road restricting vision of traffic around bend.  
Remedy: Cut back stems to be within 1m of edge of road surface.



### C. Dry patches and embankments

- Planting under pines. Issue appears to be massive root system rather than soil pH. Bare patches under pines: soil preparation / soil treatment, mounding.

Shade – consider planting *Plectranthus*, *Hypericum*, *Thymus*, *Grevillea confertifolia*, *Correa alba*, *C. reflexa*, *Viola hederacea*, *Scaevola aemula* ‘Mauve Clusters’.

- Bare patches to roadside embankments - sunny locations. Soil preparation / treatment required before any replanting with trailing groundcovers: *Erigeron karvinskianus*, *Scaevola aemula* ‘Mauve Clusters’, *Myoporum parvifolium*, *Pultenea pedunculata*.



#### D. Staking

- Refer to notes in previous section. Star pickets need to be replaced to the two *Acacia prominens* outside Abbotsley, and to the *Prunus* in The Island. Bamboo nursery stakes should be removed as soon as possible.

## 7. Works Program

### Works Priorities for 2019-2029

#### *(1) Safety Issues*

(a) Assessment by Friends of Edna Walling and [Yarra Ranges Council](#):

- 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 [Yarra Ranges Council](#) to tag trees and shrubs for removal.

(b) Hazard reduction works by [Yarra Ranges Council](#):

- 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. [YRC](#) to consult with residents regarding removal of tree waste (potential logs for firewood).

#### *(2) Weed Management*

(a) Assessment by Friends of Edna Walling and [Yarra Ranges Council](#):

- Identification of weedy trees and shrubs to be removed.
- Identification of areas for Ivy removal.
- [Removal of weedy small shrubs.](#)

(b) Removal of weedy trees and [large shrubs](#) by [Yarra Ranges Council](#).

- 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 shredded pine or wood chips; composted leaf clippings free of weed seed is preferred.

#### *(3) Aesthetic Management*

(a) Assessment by Friends of Edna Walling and [Yarra Ranges Council](#):



- 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 [Yarra Ranges Council](#) (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 [Yarra Ranges Council](#) (to be negotiated).
- Provision of additional mulch by [Yarra Ranges Council](#) (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 [Yarra Ranges Council](#) 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, [climate change effects](#), disease or other reasons may also need removal.
- Friends of Edna Walling should provide follow-up pruning of vegetation cut back by the [Yarra Ranges Council](#) for traffic visibility or for overhead vehicle clearances. Liaise with the [Yarra Ranges Council](#) for pick up and removal of pruned material.

#### *(2) Weed Management*

- Weeding will be required on a regular basis. Liaise with the [Yarra Ranges Council](#) for pick up and removal of plant debris and rubbish.

Mulch replenishment will be required on at least an annual basis. Liaise with the [Yarra Ranges Council](#) 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 [including the potential effects of climate change](#).

### *(4) Road Management*

- The [Yarra Ranges Council](#) is responsible for ongoing road maintenance: surface grading, filling ruts and potholes, replenishing the gravel 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.

## Bibliography

- Watts, Peter (second edition 1991), *Edna Walling and Her Gardens*, Florilegium.
- Hardy, Sara (2005), *The unusual Life of Edna Walling*, Allen & Unwin.
- Dixon, Trisha and Churchill, Jennie (1998), *The Vision of Edna Walling: Garden Plans 1920-1951*, Bloomings Books.
- Hitchmough, James and Fieldhouse, Ken (2004), *Plant User Handbook: A guide to effective specifying*, Blackwell Publishing.
- Elliot, Rodger (1993), *Pruning: A practical guide*, Lothian.
- Elliot, Rodger (2003), *Australian Plants for Mediterranean Climate Gardens*, Rosenberg Publishing.
- Victorian Heritage Register (H2053) Bickleigh Vale.
- [Yarra Ranges Council Tree Policy 2016](#).
- [Yarra Ranges Council Weed Management Strategy](#).
- Trevor Westmore (2003), [Yarra Ranges Council](#) Heritage Advisory Service, *Bickleigh Vale Estate, Mooroolbark: Preliminary Guidelines*.
- Olsen, Wilkin & Associates (1997), *Restoration and Maintenance Management Plan for Sonning Garden, prepared for Ann West in part fulfillment of Amendment L4, of the Yarra Ranges Council Planning Scheme*.
- National Trust of Australia (Victoria) History of Bickleigh Vale notes.
- [Walling, Edna \(1946\), \*Gardens in Australia: their design and care\*, Oxford University Press.](#)
- [Walling, Edna \(1948\), \*A Gardener's Log\*, Oxford University Press.](#)
- [Walling, Edna \(1952\), \*The Australian Roadside\*, Oxford University Press.](#)
- [Horsfall, Mary \(2014\), \*Australian Garden Rescue: restoring a damaged garden\*, CSIRO.](#)
- [Handreck, Kevin \(1993\), \*Gardening Down-under: better soils and potting mixes for better gardens\*, CSIRO.](#)
- [Handreck, Kevin \(2008\), \*Good Gardens With Less Water\*, CSIRO.](#)
- [Hockings, F. David \(2014\), \*Pests, Diseases and Beneficials: friends and foes of Australian gardens\*, CSIRO](#)

## 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 <b>low</b> water requirements only							
<b>Trees</b>							
<i>Acacia melanoxylon</i>	Blackwood	8-15 x 6-8		L		x	
<i>Syzygium 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>Hesperocyparis glabra</i> 'Blue Ice'	Smooth Arizona Cypress	9-15 x 5	D	L	x		
<i>Cupressus sempervirens</i> 'Stricta'	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	
<i>Elaeocarpus reticulatis</i>	Blueberry Ash	5-7 x 3-4	D	L		x	
<b>Shrubs</b>							
<i>Abelia x grandiflora</i>	Glossy Abelia	1.5-3 x 2.5	D	L	x		
<i>Berberis thunbergii</i> var. <i>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> 'Blue Pacific'	Californian Lilac	1.5-3 x 2.5		L	x		
<i>Chaenomeles speciosa</i>	Japonica	2-3 x 2		L	x		
<i>Cotinus coggygia</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	
<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	x	

Bickleigh Vale Roadside Vegetation Management Plan: 2019 Review

<i>Rosa banksii</i>	Banksia Rose	4-6 x 4		L	x		
<i>Rosmarinus officinalis</i>	Rosemary	1.5 x 1.5	D	M	x		
<i>Viburnum tinus</i>	Laurustinus	3-5 x 3		L	x		P
<i>Correa alba</i>	White Correa	1-1.5 x 1.5-2	D	L	x	x	
<i>Correa reflexa</i>	Common Correa	0.3-1 x 1-1.5	D	L	x	x	
<i>Nepeta 'Six Hills Giant'</i>	Catmint	0.5 x 0.85	D	L			
<i>Perovskia atriplicifolia 'Little Spires'</i>	Russian Sage	1.2 x 3	D	L			
<i>Salvia azurea</i>	Blue Sage	0.8 x 1	D	L	x		
<i>Lavandula angustifolia</i>	English Lavander	0.3 x 0.45	D	L	x		
<b>Groundcovers, Perennials &amp; Climbers</b>							
<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>Hibbertia pedunculata</i>	Stalked Guinea-flower	0.2 x 0.5-1	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			
<i>Myoporum parvifolium</i>	Creeping Boobialla	0.2 x 1.5-3	D	L		x	
<i>Pultenea pedunculata</i>	Mat Bush-pea	0.1 x 1-1.5	D			x	
<i>Hardenbergia violacea</i>	Purple Coral-pea	med.climber	D	L		x	
<i>Hypericum calycinum</i>	St John's Wort	0.2 x 1.5	D	L	x		
<i>Thymus serpyllum</i>	Creeping Thyme	0.05 x 0.3	D	L	x		
<i>Chrysocephalum 'Golden Buttons'</i>	Common Everlasting	0.3 x 1-1.5	D	L		x	
<i>Brachyscome 'Mauve Delight'</i>	Cut-leaf Daisy	0.3 x 0.8-1.2	D	L		x	
<i>B. multifida 'Breakoday'</i>	Cut-leaf Daisy	0.3 x 0.8-1.2	D	L		x	
<i>B. multifida 'Moonlight'</i>	Cut-leaf Daisy	0.3 x 0.8-1.2	D	L		x	
<i>Dampiera linearis</i>	Common Dampiera	0.2 x 0.6-1.5	D	L		x	
<i>D. rosmarinifolia</i>	Rosemary Dampiera	0.3 x 0.5-1.5	D	L		x	
<i>Scaevola aemula 'Purple Fanfare'</i>	Fan-flower	0.3 x 0.5-1	D	L		x	

<i>Botanical name</i>	<i>Common name</i>	<i>Height &amp; width at maturity</i>	<i>Drought tolerance</i>	<i>Water requirement</i>	<i>Edna Walling signature plant</i>	<i>Native</i>	<i>SYR Weed species</i>
<b>Species with medium water requirements</b>							
<b>Trees</b>							
<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 'Plena'</i>	Prairie Crabapple	6 x 6		M	x		
<i>Malus x purpurea 'Sonningensis'</i>	Sonning Crabapple	6 x 8		M	x		
<i>Quercus canariensis</i>	Algerian Oak	25-30 x 15	D	M	x		

Bickleigh Vale Roadside Vegetation Management Plan: 2019 Review

<i>Quercus rubra</i>	Red Oak	30 x 21		M	x		
<i>Zelkova serrata</i>	Japanese Zelkova	18-30 x 15		M	x		
<b>Shrubs</b>							
<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	?		
<i>Prostanthera ovalifolia</i>	Mint-bush	1.5 x 1-1.5		M	x	x	
<b>Groundcovers &amp; Perennials</b>							
<i>Anemone x hybrida</i>	Japanese Windflower	1.2 x 1.0		M	x		
<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	?		