









Langhorne Creek Wine Region

NatureMaps 'quick start' guide

Information compiled by Dr Mary Retallack, April 2022

NatureMaps is an online program that can be used to source information for individual properties located in South Australia. This is a 'quick guide' to help get you started on your property planning project and it provides details of the major pre-European plant communities found in the Langhorne Creek Wine Region.

| Step # | Instruction |
|---------|---|
| Step 1 | To get started open the following link https://data.environment.sa.gov.au/NatureMaps/Pages/default.aspx |
| Step 2 | Select the 'start' button  and wait for the program to load |
| Step 3 | Type your details in the 'find your address or location' bar  |
| Step 4 | Select the best fit from the ALVS tab  (204) ALVS LANGHORNE CREEK, 5255 and the map will zoom to your address |
| Step 5 | Use the zoom 'in or out' buttons to navigate around the map (toggle out so you can see the region)  |
| Step 6 | Select the 'layers' button at the bottom of the screen  |
| Step 7 | Select the 'vegetation' layer  and then select the + button to open the drop down menu. |
| Step 8 | Select 'Pre-European Vegetation' from the drop-down menu  |
| Step 9 | Slide the bar to change the transparency of the layer selected  |
| Step 10 | Place your cursor over a coloured area on the map to get more information about the selected layer. Then select 'view additional details' in the white summary box to access further details. |
| Step 11 | Once you have identified the name of your local plant community you can search and download a list of plants here https://www.landscape.sa.gov.au/hf/our-priorities/nature/native-plants-and-animals/native-plants/native-plant-species-lists |

For further info see <https://data.environment.sa.gov.au/NatureMaps/Documents/NatureMaps%20Help%20Guide.pdf>

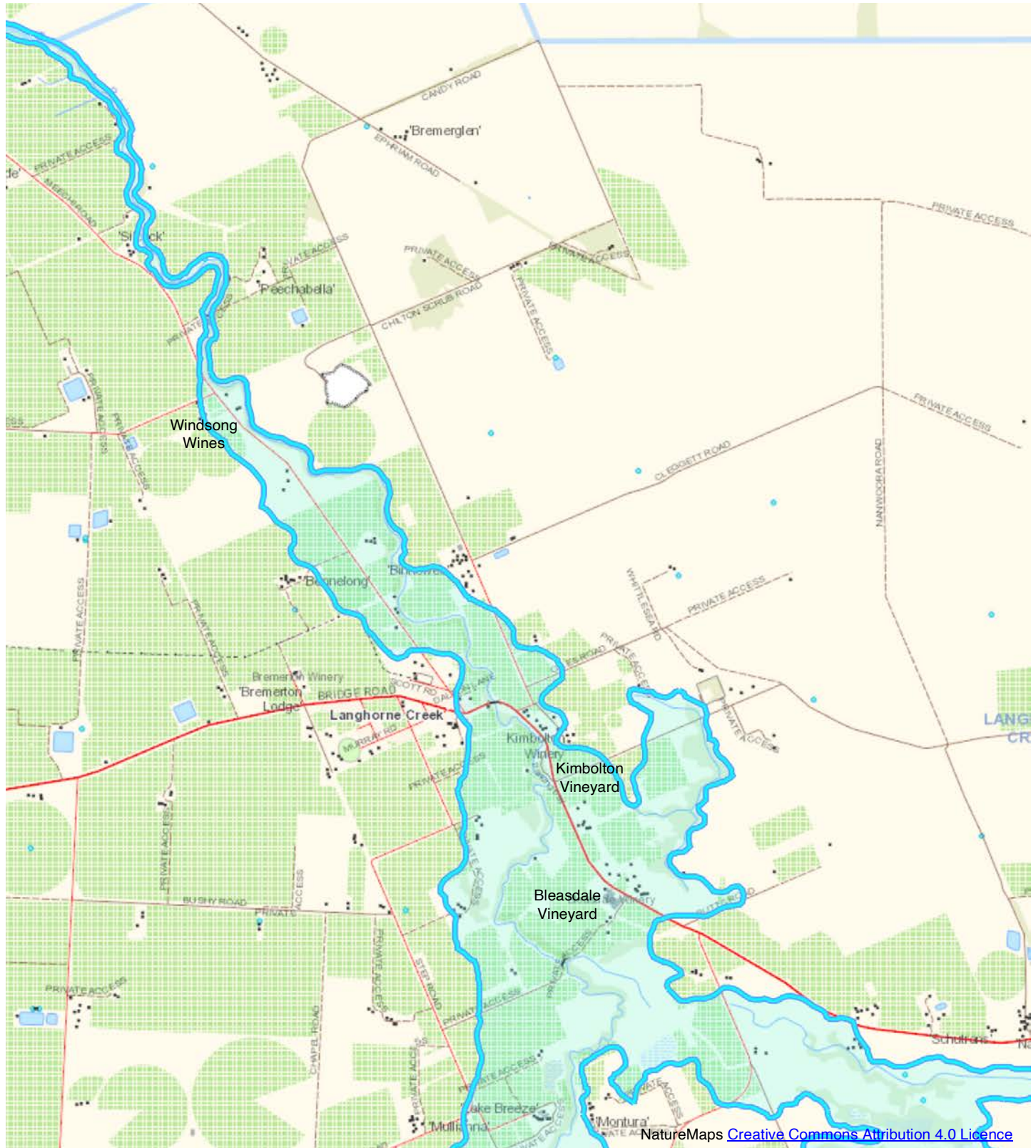
Please refer to the plant community lists below (which relate the location of the EcoVineyards demonstration sites) or enter your details into NatureMaps and follow the process above to access a plant list for your local area.

Langhorne Creek Wine Region

Red gum, *Eucalyptus camaldulensis* var. *camaldulensis* woodland (H12) plant species list

Description: *Eucalyptus camaldulensis* woodland over an open understorey of sedges, rushes, grasses and herbs

EcoVineyards site: Kimbolton Vineyard, Bleasdale Vineyard and Windsong Wines



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Red gum, *Eucalyptus camaldulensis* var. *camaldulensis* woodland species list

This list may contain historical scientific or common names and includes plant species that grew naturally in this vegetation association that are commercially available. This information has been summarised from <https://www.landscape.sa.gov.au/hf/our-priorities/nature/native-plants-and-animals/native-plants/native-plant-species-lists> <https://www.stateflora.sa.gov.au/> and <http://plantselector.botanicgardens.sa.gov.au>. Information is also presented about each plant's potential to provide nectar and/or pollen to nourish predatory arthropods. This information should be used as a guide only.

| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|--------------|---------------------|--|----------------------|------------------|------------------|------------|------------|----------------------|---------------|--------|----------------------------|
| | | | | Pollen | Nectar | | | | | | |
| Tree | <i>Acacia</i> | <i>melanoxylon</i> | blackwood | yes | ¹ yes | 7 to 20 | 4 to 10 | resistant | yellow | | winter to spring |
| | <i>Acacia</i> | <i>pycnantha</i> | golden wattle | yes | ¹ yes | 4 to 6 | 2 to 6 | moderately sensitive | yellow | | winter to spring |
| | <i>Acacia</i> | <i>retinodes</i> var. <i>retinodes</i> | swamp wattle | yes | ¹ yes | 5 to 8 | 3 to 7 | moderately sensitive | yellow | | winter to spring |
| | <i>Callistemon</i> | <i>sieberi</i> | river bottlebrush | yes | yes | 2 to 4 | 2 to 3 | moderately sensitive | cream | | spring |
| | <i>Eucalyptus</i> | <i>camaldulensis</i> ssp. <i>camaldulensis</i> | river red gum | yes | yes | 20 to 30 | 10 to 15 | resistant | white | | summer |
| | <i>Eucalyptus</i> | <i>dalrympleana</i> ssp. <i>dalrympleana</i> | candlebark gum | yes | yes | 15 to 35 | 11 to 15 | resistant | white | | spring to summer |
| | <i>Eucalyptus</i> | <i>leucoxydon</i> ssp. <i>leucoxydon</i> | SA blue gum | yes | yes | 8 to 30 | 8 to 25 | moderately sensitive | cream | pink | autumn to winter |
| | <i>Eucalyptus</i> | <i>viminialis</i> ssp. <i>cygnetensis</i> | rough-bark manna gum | yes | yes | 6 to 20 | 8 to 20 | moderately sensitive | white | | spring to autumn |
| | <i>Exocarpos</i> | <i>cupressiformis</i> | native cherry | yes | | 3 to 6 | 2 to 3 | resistant | cream | | spring to autumn |
| Shrub | <i>Acacia</i> | <i>acinacea</i> | gold dust wattle | yes | ¹ yes | 1 to 2 | 1 to 2 | resistant | yellow | | winter to spring |
| | <i>Bursaria</i> | <i>spinosa</i> ssp. <i>spinosa</i> | christmas bush | yes | yes | 2 to 4 | 1 to 3 | resistant | white | | late spring to late summer |
| | <i>Cullen</i> | <i>australasicum</i> | tall scurf-pea | yes | yes | 0.5 to 2.5 | 1 to 2 | moderately sensitive | pink | | spring |
| | <i>Enchylaena</i> | <i>tomentosa</i> var. <i>tomentosa</i> | ruby saltbush | yes | | 0.3 to 1 | 0.5 to 1.5 | resistant | insignificant | | spring to summer |
| | <i>Goodenia</i> | <i>amplexans</i> | clasping goodenia | yes | yes | 0.5 to 1.2 | 0.5 to 1 | moderately sensitive | yellow | | spring to summer |
| | <i>Leptospermum</i> | <i>continentale</i> | prickly tea-tree | yes | yes | 0.5 to 2 | 1 to 2 | resistant | white | | spring to summer |
| | <i>Leptospermum</i> | <i>lanigerum</i> | woolly tea-tree | yes | yes | 2 to 5 | 1.5 to 4 | resistant | cream | | spring to summer |
| | <i>Pultenaea</i> | <i>largiflorens</i> | twiggy bush-pea | yes | yes | 1 to 1.5 | 0.5 to 1.5 | moderately sensitive | yellow | orange | winter to spring |
| | <i>Senecio</i> | <i>pinnatifolius</i> | variable groundsel | yes | yes | 0.5 to 1.2 | | resistant | yellow | | spring to summer |
| Strap leaved | <i>Xanthorrhoea</i> | <i>sempiplan</i> ssp. <i>sempiplan</i> | grass tree | yes | yes | 1 to 3 | 1 to 2 | moderately sensitive | cream | | winter to spring |

¹*Acacia* flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

*Growers are encouraged to explore the use of *Bursaria spinosa*, *Leptospermum* ssp. and *Rytidosperma* ssp. as insectary plants in and around their vineyards (Retallack et al., 2019). It is anticipated a broader suite of native insectary plants could extend the richness and abundance of predatory arthropods in vineyards.

More information?

If you would like to find out more information about individual plants. Visit the Botanic Gardens of SA 'Plant Selector' <http://plantselector.botanicgardens.sa.gov.au>. Enter your postcode and press search. View the results and export data to retain a copy. The Excel spreadsheet contains detailed notes about each plant and its suggested uses.

Red gum, *Eucalyptus camaldulensis* var. *camaldulensis* woodland species list – continued

| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|----------------------------|----------------------|--|------------------------------|------------------------------|--------|------------|------------|----------------------|---------------|-------|------------------|
| | | | | Pollen | Nectar | | | | | | |
| Ground cover | <i>Austrostipa</i> | <i>elegantissima</i> | feather spear-grass | yes | no | 1 | 1 | resistant | green | brown | winter to spring |
| | <i>Austrostipa</i> | <i>scabra</i> | rough spear-grass | yes | no | 0.3 to 0.6 | 0.5 | resistant | green | brown | winter to spring |
| | <i>Chloris</i> | <i>truncata</i> | windmill grass | yes | no | 0.3 to 0.5 | 0.2 to 0.5 | resistant | cream | | spring to summer |
| | <i>Goodenia</i> | <i>pinnatifida</i> | cut-leaf goodenia | yes | yes | 0.4 | 0.1 | moderately sensitive | yellow | | spring to summer |
| | <i>Lobelia</i> | <i>anceps</i> | angled lobelia | yes | | 0.1 to 0.3 | 0.3 to 2 | moderately sensitive | purple | | spring to summer |
| | <i>Microlaena</i> | <i>stipoides</i> var. <i>stipoides</i> | weeping rice-grass | yes | no | 0.1 to 0.7 | 0.2 to 1 | moderately sensitive | cream | | spring to summer |
| | <i>Rytidosperma</i> | <i>auriculatum</i> | lobed wallaby grass | yes | no | 0.2 to 0.7 | 0.1 to 0.2 | resistant | cream | | spring |
| | <i>*Rytidosperma</i> | <i>caespitosum</i> | common wallaby grass | yes | no | 0.2 to 0.8 | 0.1 to 0.3 | resistant | cream | | spring |
| | <i>*Rytidosperma</i> | <i>setaceum</i> | small-flowered wallaby grass | yes | no | 0.2 to 0.6 | 0.1 to 0.3 | resistant | cream | | spring to summer |
| | <i>Themeda</i> | <i>triandra</i> | kangaroo grass | yes | no | 0.4 to 1 | 0.5 to 1 | resistant | brown | | frequent |
| | <i>Wahlenbergia</i> | <i>stricta</i> ssp. <i>stricta</i> | tall bluebell | yes | yes | 0.3 to 0.6 | 0.5 to 1 | moderately sensitive | blue | | frequent |
| Sedges and rushes | <i>Bolboschoenus</i> | <i>caldwellii</i> | salt club-rush | yes | | 0.3 to 1.2 | | resistant | brown | | spring to summer |
| | <i>Carex</i> | <i>tereticaulis</i> | rush sedge | yes | yes | 0.6 to 1.2 | 0.6 to 1 | resistant | brown | | spring to summer |
| | <i>Cyperus</i> | <i>gymnocaulos</i> | spiny flat-sedge | yes | | 0.2 to 0.7 | 0.5 to 1 | resistant | brown | | winter to summer |
| | <i>Cyperus</i> | <i>vaginatus</i> | stiff flat-sedge | yes | | 0.3 to 1.5 | 0.5 to 2 | resistant | brown | | spring to autumn |
| | <i>Juncus</i> | <i>kraussii</i> | sea rush | yes | | 0.5 to 1 | 0.5 to 1 | resistant | brown | | frequent |
| | <i>Juncus</i> | <i>pallidus</i> | pale rush | yes | | 0.5 to 2 | 0.5 to 2 | resistant | brown | | spring to summer |
| | <i>Juncus</i> | <i>pauciflorus</i> | loose-flower rush | yes | | 0.5 to 1 | 0.5 to 1 | resistant | brown | | summer |
| Bulbs and lilies | <i>Dianella</i> | <i>revoluta</i> var. <i>revoluta</i> | black-anther flax-lily | ² buzz pollinated | no | 0.3 to 1 | 0.5 to 2 | resistant | blue | | spring to summer |
| Climber (outside vineyard) | <i>Hardenbergia</i> | <i>violacea</i> | native lilac | yes | yes | climber | 3 to 4 | moderately sensitive | purple | | winter to spring |

² **Buzz pollination:** Some native bees use a special pollination technique called 'buzz pollination' (sonication) i.e. the blue-banded bee, bangs its head on the flower's anthers 350 times a second to release the pollen. Plants from the Solanaceae (nightshade) family (tomatoes, capsicums and eggplants) and many Australian native plants including *Hibbertia* ssp. and *Dianella* ssp. are buzz pollinated. These plants have the capacity to boost biodiversity and support populations of native bees but their pollen resources may not be readily available to predatory arthropods.

Native insectary plants (general)

It is reported that the longevity of parasitoid wasps which predominantly feed on nectar are significantly enhanced by Australian native plants including Christmas bush, *Bursaria spinosa*, crimson bottlebrush, *Callistemon* sp., Hakea, *Hakea* sp., prickly tea-tree, *Leptospermum continentale*, woolly tea-tree, *Leptospermum lanigerum*, austral trefoil, *Lotus australis*, creeping mint, *Mentha satereioides*, dryland tea tree, *Melaleuca lanceolata*, creeping boobialla, *Myoporum parvifolium*, sticky boobialla, *Myoporum petiolatum*, and wallaby grasses, *Rytidosperma* ssp.

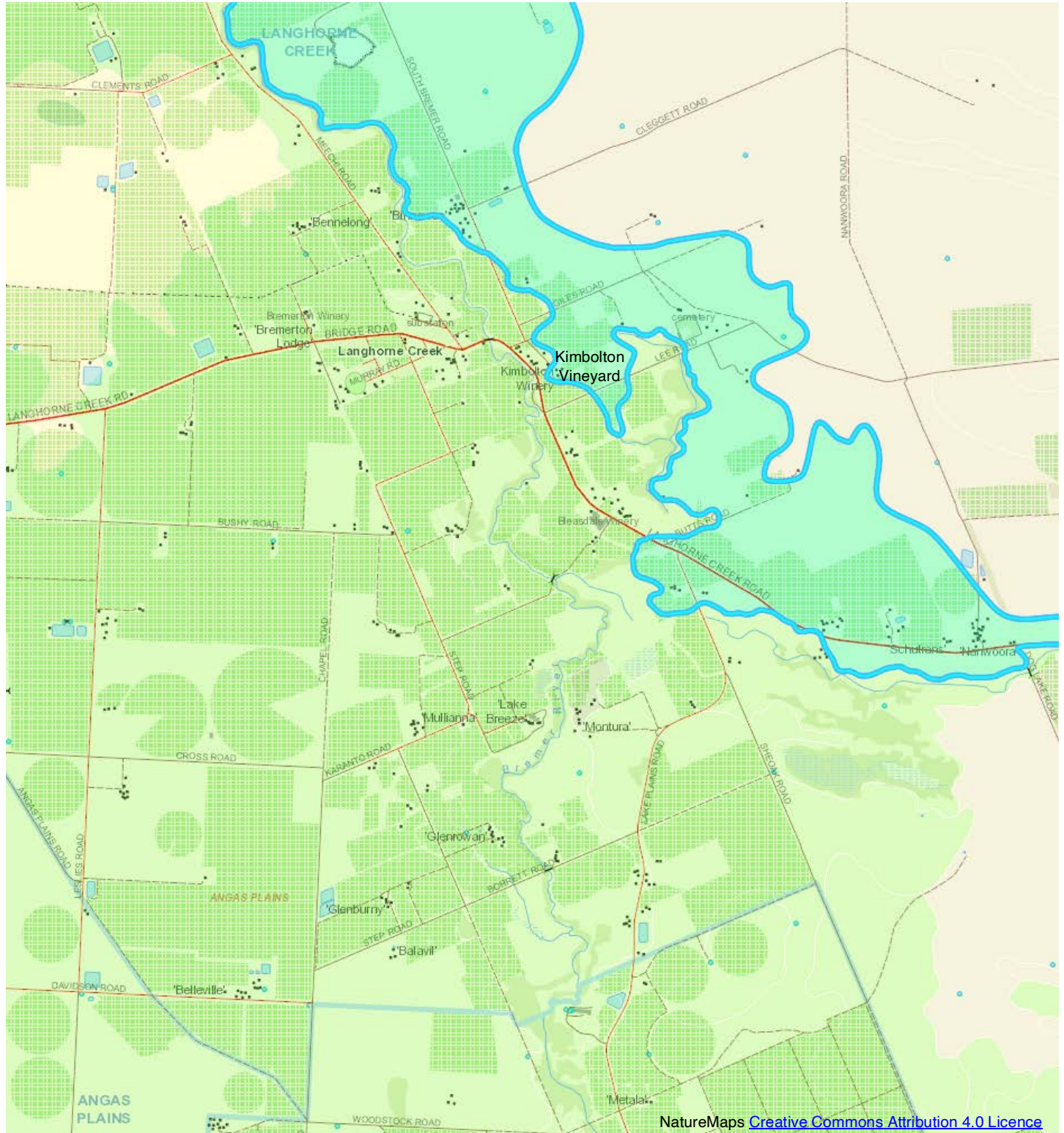
In addition, a recent desktop review of plants native to South Australia identified a broader suite of locally-adapted native plants which are regarded as having the capacity to provide insectary benefits and may hold widespread appeal. They include wild rosemary, *Dampiera rosmarinifolia*, clasping goodenia, *Goodenia amplexans*, hop goodenia, *Goodenia ovata*, cut-leaf goodenia, *Goodenia pinnatifida*, boobialla, *Myoporum insulare*, long-leaved bush-pea, *Pultenaea daphnoides*, twiggy bush-pea, *Pultenaea largiflorens*, blue-rod, *Stemodia florulenta*, fairy fan-flower, *Scaevola aemula*, as well as species of *Acacia* ssp., *Eucalyptus* ssp., and *Lomandra* ssp. that may be suited to a particular site. Other plants previously identified for their insectary benefits in vineyards include straw wallaby grass, *Rytidosperma richardsonii*, windmill grass, *Chloris truncata*, and creeping saltbush, *Atriplex semibaccata*.

Langhorne Creek Wine Region

SA blue gum, *Eucalyptus leucoxylon* ssp. *leucoxylon* woodland (H10) (AP0003PE) (SE0008PE) plant species list

Description: *Eucalyptus leucoxylon* ssp. *leucoxylon* woodland over a grassy and herbaceous understorey and sparse cover of shrubs (eg. *Cheilanthes austrotenuifolia*, *Themeda triandra*, *Lomandra multiflora* ssp. *dura*, *Dodonaea viscosa* ssp. *spathulata*, *Acacia paradoxa*, and *Gonocarpus elatus*)

EcoVineyards site: Kimbolton Vineyard



SA blue gum, *Eucalyptus leucoxylon* ssp. *leucoxylon* woodland species list

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| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|-------|----------------------|--|------------------------|------------------------------|------------------|------------|------------|----------------------|---------------|--------|----------------------------|
| | | | | Pollen | Nectar | | | | | | |
| Tree | <i>Acacia</i> | <i>pycnantha</i> | golden wattle | yes | ¹ yes | 4 to 6 | 2 to 6 | moderately sensitive | yellow | | winter to spring |
| | <i>Allocasuarina</i> | <i>verticillata</i> | drooping sheoak | yes | no | 5 to 8 | 4 to 6 | resistant | red | | autumn to winter |
| | <i>Banksia</i> | <i>marginata</i> | silver banksia | yes | yes | 2 to 8 | 1 to 5 | resistant | yellow | | spring to autumn |
| | <i>Eucalyptus</i> | <i>camaldulensis</i> ssp. <i>camaldulensis</i> | river red gum | yes | yes | 20 to 30 | 10 to 15 | resistant | white | | summer |
| | <i>Eucalyptus</i> | <i>fasciculosa</i> | pink gum | yes | yes | 5 to 18 | 5 to 12 | moderately sensitive | cream | | summer to autumn |
| | <i>Eucalyptus</i> | <i>leucoxylon</i> ssp. <i>leucoxylon</i> | SA blue gum | yes | yes | 8 to 30 | 8 to 25 | moderately sensitive | cream | pink | autumn to winter |
| | <i>Eucalyptus</i> | <i>microcarpa</i> | grey box | yes | yes | 6 to 20 | 8 to 20 | resistant | cream | | summer to winter |
| | <i>Eucalyptus</i> | <i>viminialis</i> ssp. <i>cygnetensis</i> | rough barked manna gum | yes | yes | 6 to 20 | 8 to 20 | moderately sensitive | white | | summer to autumn |
| | <i>Pittosporum</i> | <i>angustifolium</i> | native apricot | yes | yes | 4 to 8 | 3 to 4 | moderately sensitive | cream | | spring |
| Shrub | <i>Acacia</i> | <i>acinacea</i> | wreath wattle | yes | ¹ yes | 1 to 2 | 1 to 2 | resistant | yellow | | winter to spring |
| | <i>Acacia</i> | <i>cupularis</i> | coastal umbrella bush | yes | ¹ yes | 2 to 3 | 2 to 3 | moderately sensitive | yellow | | spring |
| | <i>Acacia</i> | <i>paradoxa</i> | prickly wattle | yes | ¹ yes | 2 to 4 | 3 to 4 | moderately sensitive | yellow | | spring |
| | <i>*Bursaria</i> | <i>spinosa</i> | Christmas bush | yes | yes | 2 to 4 | 1 to 3 | resistant | white | | late spring to late summer |
| | <i>Daviesia</i> | <i>leptophylla</i> | narrow-leaf bitter-pea | yes | yes | 1 to 2.5 | 1 to 2 | moderately sensitive | red | orange | spring |
| | <i>Dodonaea</i> | <i>viscosa</i> ssp. <i>spatulata</i> | sticky hop bush | yes | yes | 2 to 4 | 2 to 4 | resistant | N/A | | spring to autumn |
| | <i>Eutaxia</i> | <i>microphylla</i> | mallee bush-pea | yes | yes | 0.5 to 2 | 2 to 2 | moderately sensitive | brown | yellow | spring |
| | <i>Goodenia</i> | <i>amplexans</i> | clasping goodenia | yes | yes | 0.5 to 1.2 | 0.5 to 1 | moderately sensitive | yellow | | spring to summer |
| | <i>Grevillea</i> | <i>lavandulacea</i> ssp. <i>lavandulacea</i> | heath grevillea | yes | yes | 1 to 1.5 | 2 to 3 | resistant | red | | winter to spring |
| | <i>Hakea</i> | <i>carinata</i> | erect hakea | yes | yes | 1.5 to 3 | 1 to 2.5 | moderately sensitive | white | | spring |
| | <i>Hakea</i> | <i>rugosa</i> | dwarf hakea | yes | yes | 1 to 2 | 1 to 2 | moderately sensitive | white | | winter to spring |
| | <i>Hibbertia</i> | <i>riparia</i> | bristly guinea flower | ² buzz pollinated | no | 0.1 to 0.5 | 0.3 to 0.8 | moderately sensitive | yellow | | spring |
| | <i>*Leptospermum</i> | <i>myrsinoides</i> | silky tea-tree | yes | yes | 1 to 4 | 1 to 4 | resistant | white | | spring |
| | <i>Olearia</i> | <i>ramulosa</i> | twiggy daisy-bush | yes | yes | 1 to 1.15 | 1 to 2 | resistant | white | pink | spring to summer |
| | <i>Pultenaea</i> | <i>largiflorens</i> | twiggy bush-pea | yes | yes | 1 to 1.5 | 0.5 to 1.5 | moderately sensitive | white | | winter to spring |
| | <i>Thomasia</i> | <i>petalocalyx</i> | paper flower | ² buzz pollinated | yes | 0.6 | 0.6 to 1 | moderately sensitive | pink | purple | spring to summer |

SA blue gum, *Eucalyptus leucoxylon* ssp. *leucoxylon* woodland species list - continued

| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|----------------------------|----------------------|--|-----------------------------------|------------------------------|--------|-------------|------------|----------------------|---------------|--------|------------------|
| | | | | Pollen | Nectar | | | | | | |
| Strap leaved | <i>Lomandra</i> | <i>densiflora</i> | pointed mat-rush | yes | yes | 0.2 to 0.6 | 0.2 to 0.6 | resistant | green | | winter to summer |
| | <i>Lomandra</i> | <i>micrantha</i> | small-flower mat-rush | yes | yes | 0.2 to 0.8 | 0.2 to 0.9 | resistant | white | | autumn to spring |
| | <i>Lomandra</i> | <i>multiflora</i> ssp. <i>dura</i> | hard mat-rush | yes | yes | 0.2 to 0.8 | 0.75 | resistant | cream | | winter to summer |
| | <i>Xanthorrhoea</i> | <i>quadrangulata</i> | Mount Lofly grass tree | yes | yes | 1 to 2.5 | 0.5 to 1.5 | resistant | cream | | autumn to winter |
| | <i>Xanthorrhoea</i> | <i>sempiplan</i> ssp. <i>sempiplan</i> | grass tree | yes | yes | 1 to 3 | 1 to 2 | moderately sensitive | cream | | winter to spring |
| Sedges and rushes | <i>Juncus</i> | <i>pauciflorus</i> | loose-flower rush | yes | no | 0.5 to 1 | 0.5 to 1 | resistant | brown | | summer |
| Ground cover | <i>Aristida</i> | <i>behriana</i> | brush wire-grass | yes | no | 0.15 to 0.3 | 0.2 to 0.3 | resistant | cream | | spring to summer |
| | <i>Austrostipa</i> | <i>elegantissima</i> | elegant spear grass | yes | no | 1 | 1 | resistant | green | brown | spring to summer |
| | <i>Austrostipa</i> | <i>nodosa</i> | tall spear grass | yes | no | 0.5 to 1 | 0.5 to 1 | resistant | green | brown | spring to summer |
| | <i>Chloris</i> | <i>truncata</i> | windmill grass | yes | no | 0.3 to 0.5 | 0.2 to 0.5 | resistant | cream | | spring to summer |
| | <i>Goodenia</i> | <i>blackiana</i> | native primrose | yes | yes | 0.1 to 0.2 | 0.2 to 0.5 | moderately sensitive | yellow | | winter to spring |
| | <i>Goodenia</i> | <i>pinnatifida</i> | cut-leaf goodenia | yes | yes | 0.4 | 0.1 | moderately sensitive | yellow | | spring to summer |
| | <i>Kennedia</i> | <i>prostrata</i> | scarlet runner or running postman | yes | yes | 0.1 | 1.5 to 4 | moderately sensitive | red | | winter to spring |
| | <i>Microlaena</i> | <i>stipoides</i> var. <i>stipoides</i> | weeping rice-grass | yes | no | 0.1 to 0.7 | 0.2 to 1 | moderately sensitive | cream | | spring to summer |
| | <i>Poa</i> | <i>labillardieri</i> | common tussock-grass | yes | no | 0.5 to 1 | < 0.5 | resistant | green | | spring to summer |
| | <i>Pultenaea</i> | <i>pedunculata</i> | matted bush-pea | yes | yes | 0.1 | 1 to 3 | moderately sensitive | yellow | orange | winter to spring |
| | <i>*Rytidosperma</i> | <i>auriculatum</i> | lobed wallaby grass | yes | no | 0.2 to 0.7 | 0.1 to 0.2 | resistant | cream | | spring |
| | <i>*Rytidosperma</i> | <i>caespitosum</i> | common wallaby grass | yes | no | 0.2 to 0.8 | 0.1 to 0.3 | resistant | cream | | spring |
| | <i>*Rytidosperma</i> | <i>setaceum</i> | small-flowered wallaby grass | yes | no | 0.2 to 0.6 | 0.1 to 0.3 | resistant | cream | | spring to summer |
| | <i>Scaevola</i> | <i>albida</i> | pale fan flower | yes | yes | 0.3 to 0.6 | 0.6 to 1 | resistant | white | | all year |
| | <i>Themeda</i> | <i>triandra</i> | kangaroo grass | yes | no | 0.4 to 1 | 0.5 to 1 | resistant | brown | | frequent |
| Bulbs and lilies | <i>Dianella</i> | <i>longifolia</i> | pale flax-lily | ² buzz pollinated | no | 0.5 to 0.8 | 0.5 to 1 | resistant | blue | | spring to summer |
| | <i>Dianella</i> | <i>revoluta</i> var. <i>revoluta</i> | black-anther flax-lily | ² buzz pollinated | no | 0.3 to 1 | 0.5 to 2 | resistant | blue | | spring to summer |
| Climber (outside vineyard) | <i>Hardenbergia</i> | <i>violacea</i> | native lilac | yes | yes | climber | 3 to 4 | moderately sensitive | purple | | winter to spring |

¹ *Acacia* flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

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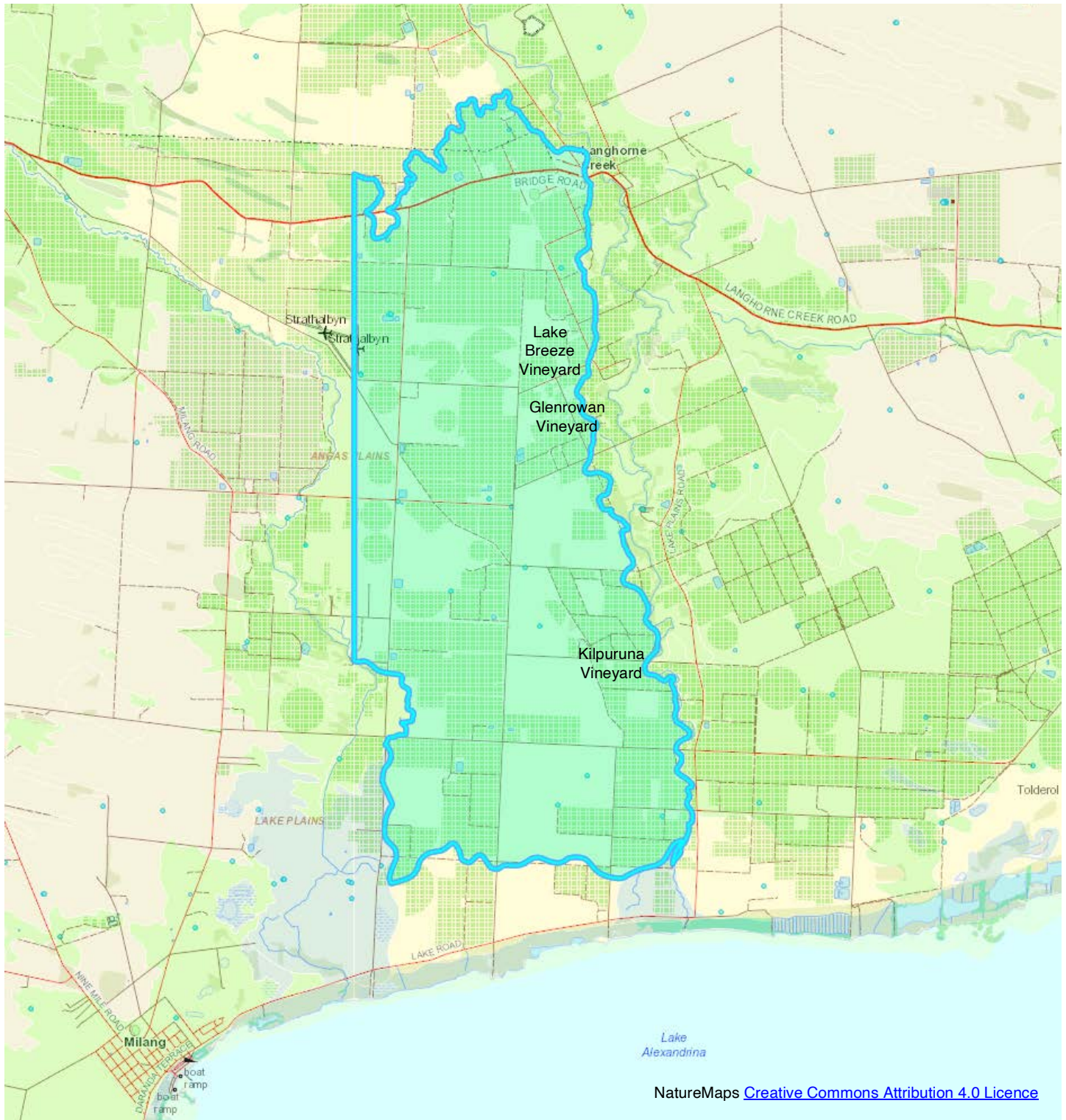
² **Buzz pollination:** Some native bees use a special pollination technique called 'buzz pollination' (sonication) i.e. the blue-banded bee, bangs its head on the flower's anthers 350 times a second to release the pollen. Plants from the Solanaceae (nightshade) family (tomatoes, capsicums and eggplants) and many Australian native plants including *Hibbertia* ssp. and *Dianella* ssp. are buzz pollinated. These plants have the capacity to boost biodiversity and support populations of native bees but their pollen resources may not be readily available to predatory arthropods.

Langhorne Creek Wine Region

Drooping sheoak, *Allocasuarina verticillata* low woodland (H22) plant species list

Description: *Allocasuarina verticillata* low woodland over an open grassy and herbaceous understorey. Typical understorey plants include *Lomandra multiflora* ssp. *dura*, *L. effusa*, *Rytidosperma* spp., *Austrostipa* spp.

EcoVineyards site: Lake Breeze Vineyard, Glenrowan Vineyard and Kilpuruna Vineyard

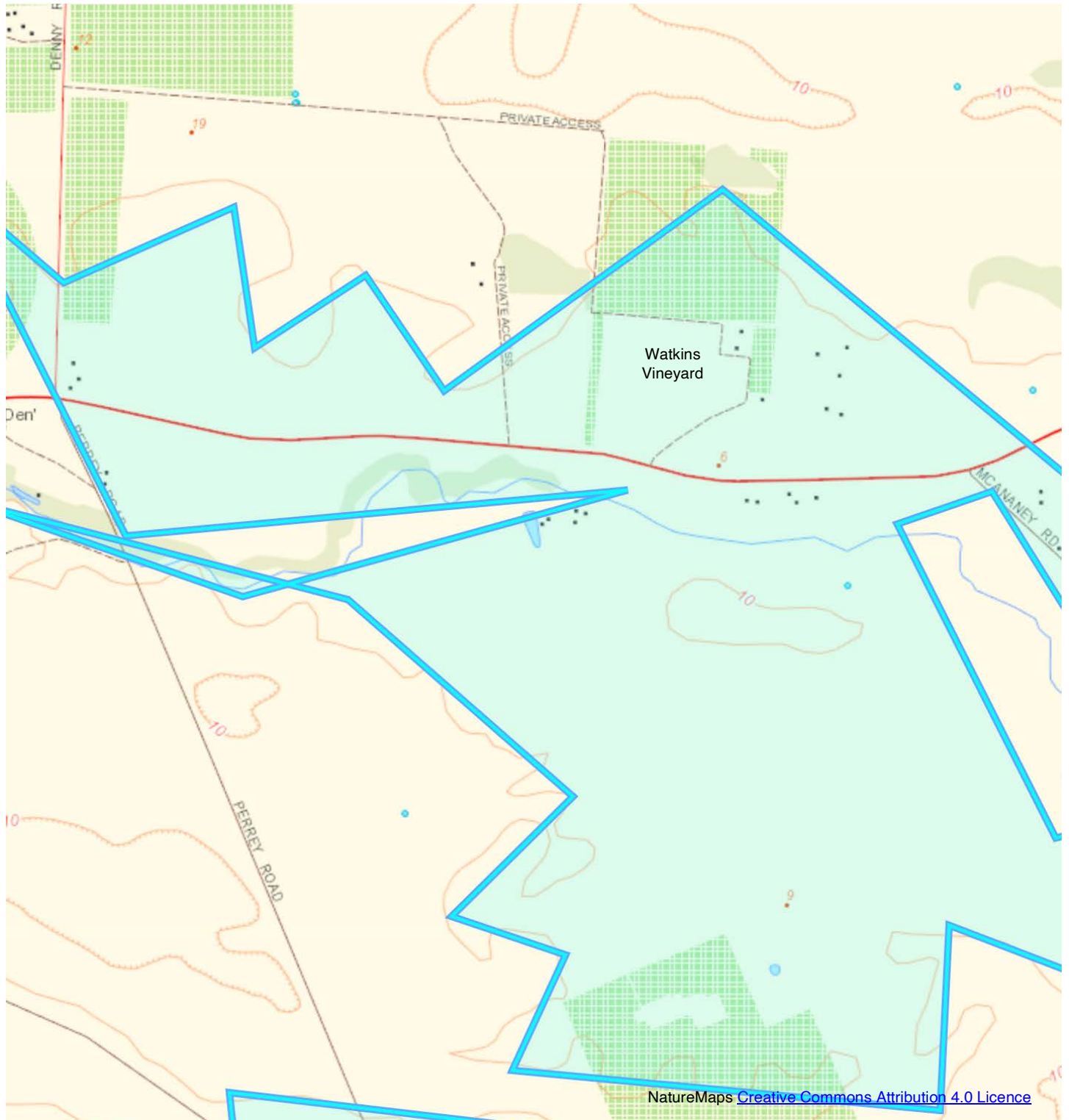


Langhorne Creek Wine Region

Drooping sheoak, *Allocasuarina verticillata* low woodland (H22) plant species list

Description: *Allocasuarina verticillata* low woodland over *Xanthorrhoea semiplana* ssp. *semiplana*.

EcoVineyards site: Watkins Vineyard



Drooping sheoak, *Allocasuarina verticillata* low woodland species list

This list may contain historical scientific or common names and includes plant species that grew naturally in this vegetation association that are commercially available. This information has been summarised from <https://www.landscape.sa.gov.au/hf/our-priorities/nature/native-plants-and-animals/native-plants/native-plant-species-lists> <https://www.stateflora.sa.gov.au/> and <http://plantselector.botanicgardens.sa.gov.au>. Information is also presented about each plant's potential to provide nectar and/or pollen to nourish predatory arthropods. This information should be used as a guide only.

| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|--------------|----------------------|--|-----------------------|--|------------------|------------|------------|----------------------|---------------|--------|----------------------------|
| | | | | Pollen | Nectar | | | | | | |
| Tree | <i>Acacia</i> | <i>pycnantha</i> | golden wattle | yes | ¹ yes | 4 to 6 | 2 to 6 | moderately sensitive | yellow | | winter to spring |
| | <i>Acacia</i> | <i>retinodes</i> var. <i>retinodes</i> | swamp wattle | yes | ¹ yes | 5 to 8 | 3 to 7 | moderately sensitive | yellow | | winter to spring |
| | <i>Allocasuarina</i> | <i>verticillata</i> | drooping sheoak | yes | no | 5 to 8 | 4 to 6 | resistant | red | | autumn to winter |
| | <i>Eucalyptus</i> | <i>fasciculosa</i> | pink gum | yes | yes | 5 to 18 | 5 to 12 | moderately sensitive | cream | | summer to autumn |
| | <i>Eucalyptus</i> | <i>microcarpa</i> | grey box | yes | yes | 6 to 20 | 8 to 20 | resistant | cream | | summer to winter |
| | <i>Eucalyptus</i> | <i>porosa</i> | mallee box | yes | yes | 5 to 14 | 5 to 12 | moderately sensitive | white | | spring |
| | <i>Melaleuca</i> | <i>lanceolata</i> | dryland tea-tree | yes | yes | 3 to 8 | 3 to 5 | resistant | cream | | spring to summer |
| | <i>Pittosporum</i> | <i>angustifolium</i> | native apricot | yes | yes | 4 to 8 | 3 to 4 | moderately sensitive | cream | | spring |
| Shrub | <i>Acacia</i> | <i>acinacea</i> | wreath wattle | yes | ¹ yes | 1 to 2 | 1 to 2 | resistant | yellow | | winter to spring |
| | <i>Acacia</i> | <i>myrtifolia</i> | myrtle wattle | yes | ¹ yes | 1 to 2 | 1 to 2 | moderately sensitive | yellow | | spring |
| | <i>Acacia</i> | <i>paradoxa</i> | prickly wattle | yes | ¹ yes | 2 to 4 | 3 to 4 | moderately sensitive | yellow | | spring |
| | <i>*Bursaria</i> | <i>spinosa</i> | Christmas bush | yes | yes | 2 to 4 | 1 to 3 | resistant | white | | late spring to late summer |
| | <i>Dodonaea</i> | <i>viscosa</i> ssp. <i>spatulata</i> | sticky hop bush | yes | | 2 to 4 | 2 to 4 | resistant | insignificant | | spring to autumn |
| | <i>Hakea</i> | <i>rugosa</i> | dwarf hakea | yes | yes | 1 to 2 | 1 to 2 | moderately sensitive | white | | winter to spring |
| | <i>Hibbertia</i> | <i>exutiacies</i> | prickly guinea flower | ² buzz pollinated (pollen only accessible to native bees) | no | 0.3 to 0.5 | 0.5 to 1 | moderately sensitive | yellow | | spring |
| | <i>Olearia</i> | <i>ramulosa</i> | twiggy daisy-bush | yes | yes | 1 to 1.15 | 1 to 2 | resistant | white | pink | spring to summer |
| | <i>Pultenaea</i> | <i>largiflorens</i> | twiggy bush-pea | yes | yes | 1 to 1.5 | 0.5 to 1.5 | moderately sensitive | white | | winter to spring |
| Strap leaved | <i>Xanthorrhoea</i> | <i>semiplana</i> ssp. <i>semiplana</i> | grass tree | yes | yes | 1 to 3 | 1 to 2 | moderately sensitive | cream | | winter to spring |
| | <i>Lomandra</i> | <i>densiflora</i> | pointed mat-rush | yes | yes | 0.2 to 0.6 | 0.2 to 0.6 | resistant | green | | winter to summer |
| | <i>Lomandra</i> | <i>effusa</i> | scented mat-rush | yes | yes | 0.2 to 0.5 | 0.2 to 0.5 | moderately sensitive | cream | yellow | winter to spring |
| | <i>Lomandra</i> | <i>multiflora</i> ssp. <i>dura</i> | hard mat-rush | yes | yes | 0.2 to 0.8 | 0.75 | resistant | cream | | winter to summer |

Drooping sheoak, *Allocasuarina verticillata* low woodland species list – continued

| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|------------------|----------------------|--|------------------------------|--|--------|-------------|------------|----------------------|---------------|--------|------------------|
| | | | | Pollen | Nectar | | | | | | |
| Ground cover | <i>Aristida</i> | <i>behriana</i> | brush wire-grass | yes | no | 0.15 to 0.3 | 0.2 to 0.3 | resistant | cream | | spring to summer |
| | <i>Austrostipa</i> | <i>elegantissima</i> | elegant spear grass | yes | no | 1 | 1 | resistant | brown | green | spring to summer |
| | <i>Carpobrotus</i> | <i>rossii</i> | native pigface | yes | yes | 0.1 | 2 to 3 | resistant | pink | | winter to summer |
| | <i>Cymbopogon</i> | <i>ambiguus</i> | lemon-scented grass | yes | | 0.3 to 1 | 0.1 to 0.5 | resistant | cream | | winter to spring |
| | <i>Chloris</i> | <i>truncata</i> | windmill grass | yes | no | 0.3 to 0.5 | 0.1 to 0.3 | resistant | cream | | spring to summer |
| | <i>Einadia</i> | <i>nutans</i> | climbing saltbush | yes | | 0.5 | 1 | resistant | insignificant | | spring |
| | <i>Elymus</i> | <i>scaber</i> var. <i>scaber</i> | native wheat grass | yes | no | 0.2 | 1 | resistant | cream | | winter to spring |
| | <i>Goodenia</i> | <i>blackiana</i> | native primrose | yes | yes | 0.1 to 0.2 | 0.2 to 0.5 | moderately sensitive | yellow | | winter to spring |
| | <i>Goodenia</i> | <i>pinnatifida</i> | cut-leaf goodenia | yes | yes | 0.4 | 0.1 | moderately sensitive | yellow | | spring to summer |
| | <i>Microlaena</i> | <i>stipoides</i> var. <i>stipoides</i> | weeping rice-grass | yes | no | 0.1 to 0.7 | 0.2 to 1 | moderately sensitive | cream | | spring to summer |
| | <i>Pultenaea</i> | <i>pedunculata</i> | matted bush-pea | yes | yes | 0.1 | 1 to 3 | moderately sensitive | yellow | orange | winter to spring |
| | <i>*Rytidosperma</i> | <i>caespitosum</i> | common wallaby grass | yes | no | 0.2 to 0.8 | 0.1 to 0.3 | resistant | cream | | spring |
| | <i>*Rytidosperma</i> | <i>pilosum</i> | velvet wallaby grass | yes | no | 0.2 to 0.9 | 0.4 | resistant | cream | | spring to summer |
| | <i>*Rytidosperma</i> | <i>setaceum</i> | small-flowered wallaby grass | yes | no | 0.2 to 0.6 | 0.1 to 0.3 | resistant | cream | | spring to summer |
| | <i>Scaevola</i> | <i>albida</i> | pale fan flower | yes | yes | 0.3 to 0.6 | 0.6 to 1 | resistant | white | | all year |
| | <i>Themeda</i> | <i>triandra</i> | kangaroo grass | yes | no | 0.4 to 1 | 0.5 to 1 | resistant | brown | | frequent |
| Bulbs and lilies | <i>Dianella</i> | <i>revoluta</i> var. <i>revoluta</i> | black-anther flax-lily | ² buzz pollinated (pollen only accessible to native bees) | no | 0.3 to 1 | 0.5 to 2 | resistant | blue | | spring to summer |

¹*Acacia* flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

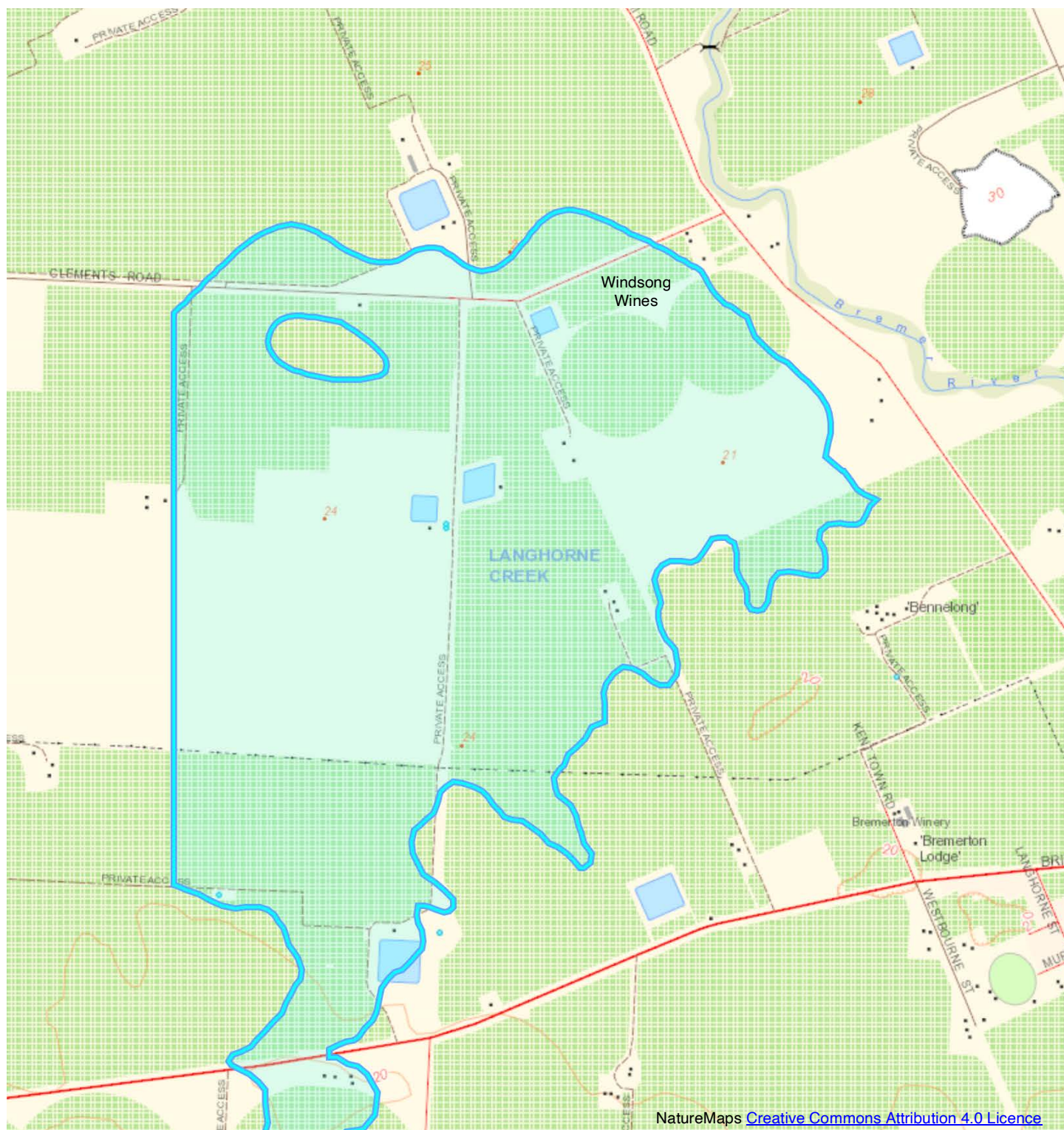
*Growers are encouraged to explore the use of *Bursaria spinosa* and *Rytidosperma* ssp. as insectary plants in and around their vineyards (Retallack et al., 2019).

² **Buzz pollination:** Some native bees use a special pollination technique called 'buzz pollination' (sonication) i.e. the blue-banded bee, bangs its head on the flower's anthers 350 times a second to release the pollen. Plants from the Solanaceae (nightshade) family (tomatoes, capsicums and eggplants) and many Australian native plants including *Hibbertia* ssp. and *Dianella* ssp. are buzz pollinated. These plants have the capacity to boost biodiversity and support populations of native bees but their pollen resources may not be readily available to predatory arthropods.

Langhorne Creek Wine Region

Scented mat-rush, *Lomandra effusa*, spear-grass, *Austrostipa* spp. and wallaby-grass, *Rytidosperma* spp. tussock grassland (H46) (WM1301PE) plant species list

EcoVineyards site: Windsong Wines



Langhorne Creek Wine Region

Scented mat-rush, *Lomandra effusa*, spear-grass, *Austrostipa* spp. and wallaby-grass, *Rytidosperma* spp. tussock grassland (H46) (WM1301PE) plant species list

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| Habit | Genus | Species | Common name | Floral resources | | Height (m) | Width (m) | Tolerance to frost | Flower colour | | Flowering time |
|--------------|----------------------|--|----------------------|------------------|--------|-------------|------------|----------------------|---------------|--------|----------------------------|
| | | | | Pollen | Nectar | | | | | | |
| Shrub | <i>*Bursaria</i> | <i>spinosa</i> | Christmas bush | yes | yes | 2 to 4 | 1 to 3 | resistant | white | | late spring to late summer |
| | <i>Enchylaena</i> | <i>tomentosa</i> var. <i>tomentosa</i> | ruby saltbush | yes | | 0.3 to 1 | 0.5 to 1.5 | resistant | white | | frequent |
| | <i>Maireana</i> | <i>brevifolia</i> | short-leaf bluebush | yes | yes | 0.5 to 1 | 0.5 to 1.5 | resistant | insignificant | | N/A |
| Strap leaved | <i>Lomandra</i> | <i>effusa</i> | scented mat-rush | yes | yes | 0.2 to 0.5 | 0.2 to 0.5 | moderately sensitive | cream | yellow | winter to spring |
| | <i>Lomandra</i> | <i>multiflora</i> ssp. <i>dura</i> | hard mat-rush | yes | yes | 0.2 to 0.8 | 0.75 | resistant | cream | | winter to summer |
| Ground cover | <i>Aristida</i> | <i>behriana</i> | brush wire-grass | yes | no | 0.15 to 0.3 | 0.2 to 0.3 | resistant | cream | | spring to summer |
| | <i>Austrostipa</i> | <i>elegantissima</i> | elegant spear grass | yes | no | 1 | 1 | resistant | green | brown | spring to summer |
| | <i>Austrostipa</i> | <i>nodosa</i> | tall spear grass | yes | no | 0.5 to 1 | 0.5 to 1 | resistant | green | brown | spring to summer |
| | <i>Austrostipa</i> | <i>scabra</i> | rough spear-grass | yes | no | 0.3 to 0.6 | 0.5 | resistant | cream | | winter to spring |
| | <i>Enneapogon</i> | <i>nigricans</i> | black-head grass | yes | no | 0.2 to 0.5 | 0.5 | resistant | brown | | spring to summer |
| | <i>Goodenia</i> | <i>pinnatifida</i> | cut-leaf goodenia | yes | yes | 0.4 | 0.1 | moderately sensitive | yellow | | spring to summer |
| | <i>*Rytidosperma</i> | <i>auriculatum</i> | lobed wallaby grass | yes | no | 0.2 to 0.7 | 0.1 to 0.2 | resistant | cream | | spring |
| | <i>*Rytidosperma</i> | <i>caespitosum</i> | common wallaby grass | yes | no | 0.2 to 0.8 | 0.1 to 0.3 | resistant | cream | | spring |
| | <i>Themeda</i> | <i>triandra</i> | kangaroo grass | yes | no | 0.4 to 1 | 0.5 to 1 | resistant | brown | | frequent |

Native insectary plants (general)

It is reported that the longevity of parasitoid wasps which predominantly feed on nectar are significantly enhanced by Australian native plants including Christmas bush, *Bursaria spinosa*, crimson bottlebrush, *Callistemon* sp., Hakea, *Hakea* sp., prickly tea-tree, *Leptospermum continentale*, woolly tea-tree, *Leptospermum lanigerum*, austral trefoil, *Lotus australis*, creeping mint, *Mentha satureioides*, dryland tea tree, *Melaleuca lanceolata*, creeping boobialla, *Myoporum parvifolium*, sticky boobialla, *Myoporum petiolatum*, and wallaby grasses, *Rytidosperma* ssp.

In addition, a recent desktop review of plants native to South Australia identified a broader suite of locally-adapted native plants which are regarded as having the capacity to provide insectary benefits and may hold widespread appeal. They include wild rosemary, *Dampiera rosmarinifolia*, clasping goodenia, *Goodenia amplexans*, hop goodenia, *Goodenia ovata*, cut-leaf goodenia, *Goodenia pinnatifida*, boobialla, *Myoporum insulare*, long-leaved bush-pea, *Pultenaea daphnoides*, twiggly bush-pea, *Pultenaea largiflorens*, blue-rod, *Stemodia florulenta*, fairy fan-flower, *Scaevola aemula*, as well as species of *Acacia* ssp., *Eucalyptus* ssp., and *Lomandra* ssp. that may be suited to a particular site. Other plants previously identified for their insectary benefits in vineyards include straw wallaby grass, *Rytidosperma richardsonii*, windmill grass, *Chloris truncata*, and creeping saltbush, *Atriplex semibaccata*.

More information?

If you would like to find out more information about individual plants. Visit the Botanic Gardens of SA 'Plant Selector' <http://plantselector.botanicgardens.sa.gov.au>. Enter your postcode and press search. View the results and export data to retain a copy. The Excel spreadsheet contains detailed notes about each plant and its suggested uses.

Useful links

| Native plant nurseries | | | | |
|---|-------------------|--|---|---|
| Company | Contact | Address | Contact details | Website |
| Goolwa to Wellington Local Action Planning Association | Ben Simon | Kessell Rd (next to council depot), Goolwa, SA | M: 0418 828 949 E: ben.simon@gwlap.org.au | http://www.gwlap.org.au/what-we-do/alexandrina-community-nursery/ |
| Barossa Bushgardens | Pam Payne | 635 Research Rd, Nuriootpa, SA | M: 0448 676 348 (Tues or Thurs) T: (08) 8563 8330 (Tues or Thurs) E: bushgardens@barossa.sa.gov.au | https://barossabushgardens.com.au/community-nursery |
| Clayton Bay Nursery and Environmental Group | Carole Richardson | 6A Alexandrina Ave, Clayton Bay, SA | M: 0459 707 876 E: claytonbayneg@gmail.com | https://www.communitywebs.org/cbneg/contact.php |
| Future Generation Natives | Kate Constable | Mount Torrens, SA | M: 0418 844 240 E: kate@futurenatives.com.au | www.futurenatives.com.au |
| Kersbrook Landcare Nursery | Heidi Pitman | 176 South Para Rd Williamstown, SA | M: 0431 989 397 E: klg@landcaregroup.org.au | www.kersbrook.landcaregroup.org.au |
| State Flora Murray Bridge | | Bremer Rd, Murray Bridge, SA | T: (08) 8539 2105 E: dewnrstateflora@sa.gov.au | www.stateflora.sa.gov.au |
| Trees for Life Westwood Nursery | Brett Oakes | 5-7 May Terrace, Brooklyn Park, SA | T: (08) 8406 0500 E: info@treesforlife.org.au | https://treesforlife.org.au |
| Suppliers of native seeds and/or native grass sowing services | | | | |
| Company | Contact | Address | Contact details | Website |
| Blackwood Seeds | Phil Druce | Inman Valley, SA | M: 0427 588 288 E: bwseeds@activ8.net.au | N/A |
| Native Seeds Pty Ltd | Darren Vincent | Great Alpine Rd Eurobin, Vic | T: 1300 473 337 E: enquiries@nativesseeds.com.au | www.nativesseeds.com.au |
| Seeding Natives Incorporated | Andrew Fairney | Mount Pleasant, SA | M: 0477 307 577 E: andrew@seedingnatives.org.au | www.seedingnatives.org.au |

You can find a local native plant grower from this native plant nurseries list
<https://cdn.environment.sa.gov.au/landscape/docs/hf/190722-native-nursery-list.pdf>

Continue your search for useful information here

- Australian National Botanic Gardens <https://www.anbg.gov.au/search/index.html>
- Backyards4Wildlife <https://www.landscape.sa.gov.au/hf/our-priorities/nature/native-plants-and-animals/native-plants/native-plant-species-lists>
- Botanic Gardens of SA plant selector <http://plantselector.botanicgardens.sa.gov.au>
- Butterfly Conservation South Australia Inc. <https://butterflyconservationsa.net.au/butterflies/attract/find-plants/>
- Kersbrook Landcare Group 'Focus on Flora' book http://kersbrook.landcaregroup.org.au/articles/about_book.html and pictures of available plants <https://my-site-105083-109812.square.site/shop/15>
- Natural Resources Adelaide and Mount Lofty Ranges Native grasses: A regional guide <https://cdn.environment.sa.gov.au/landscape/docs/hf/native-grasses-2017.pdf>
- Seeds of South Australia <https://spapps.environment.sa.gov.au/SeedsOfSA/scientificsearch.html>
- State Flora catalogue <https://www.stateflora.sa.gov.au/buy-plants/how-to-order/catalogue>

Thank you to our project partners!



Acknowledgement of country

The EcoVineyards project acknowledges Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon and we pay our respects to their Elders past, present and emerging. We acknowledge and respect the deep spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to Country.

The Ngarrindjeri people are the traditional custodians of the Langhorne Creek region and have an ongoing connection to the land.

Disclaimer

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For more info about the EcoVineyards project see <https://www.wgcsa.com.au/ecovineyards.html>