Native Vegetation Council Bushland Assessment Manual

Native Vegetation Council
1 September 2024

Government of South Australia
Department for Environment and Water

Native Vegetation Council

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and
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Acknowledgement of Country

We acknowledge and respect the Traditional Custodians whose ancestral lands we live and work upon and we pay our respects to their Elders past and present.

We acknowledge and respect their deep spiritual connection and the relationship that Aboriginal and Torres Strait Islanders people have to Country.

We also pay our respects to the cultural authority of Aboriginal and Torres Strait Islander people and their nations in South Australia, as well as those across Australia.

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1 Quick reference guide

1. **Choose relevant method**. The Bushland Assessment Method (BAM) is intended to be used over an area of 1 ha. A modified method for small sites is used for areas less than 0.5 ha.

2. **View vegetation and terrain** (NatureMaps, Google Streetview) to help estimate time for field assessment.

3. **In the field, and/or using land features (contours, watercourses) on NatureMaps**, **divide and map your application area ('Block') into vegetation associations** (= sites). Label A1, A2, A3. Complete points below for each site.

4. **Determine location of representative quadrat(s)** (shape can vary).

5. **Take representative photo and record waypoint and photo direction**. The photo should be taken in a 'due south' direction whenever practical to do so. This will prevent the sun being an issue regardless of the time of day the photo is taken.

6. **Undertake assessment**. Front of datasheet = quadrat data, back of datasheet = incidental data from elsewhere in site. Large sites may warrant two datasheets from separate locations, averaged later. Complete datasheet on site (estimate 45 min. – 1 hr for completion). Don't forget dominants and regeneration! If it's a 'naturally treeless community' do not measure the three tree attributes even if emergents are present.

7. **Assign relevant benchmark community**. This is the vegetation community within the Bushland Condition Monitoring manual for the region that most closely resembles the vegetation association under assessment. The chosen vegetation community provides 'benchmark' scores for evaluation of the site.

8. **Complete the BAM data report and excel scoresheets**. One site = one Excel file. In the excel scoresheet, the cells in light purple must be filled in with the data collected in the field (as per field datasheets) or from additional resources for conservation significance and landscape context scores (e.g. Atlas of Living Australia, EPBC Act Protected Matters Search Tool and NatureMaps). The remaining cells contain a formula and will calculate automatically. This includes benchmark community scores for vegetation condition.

9. **Submit Bushland Assessment data report, scoresheets and associated information to the NVB.** The assessment data report and scoresheets must be provided to NVB electronically. This will enable the species lists to be uploaded to the Biological Databases of South Australia (BDBSA).

2 Introduction

The methods outlined in this manual are approved by the Native Vegetation Council (NVC) to be used for assessment of vegetation for applications under the *Native Vegetation Act 1991* and the *Native Vegetation Regulations 2017*.

The Bushland Assessment Method (BAM) for native vegetation is derived from the Bushland Condition Monitoring (BCM) methodology developed by the Nature Conservation Society of SA (NCSSA) (Croft *et al,* 2005-2009; Milne, T.I. & McCallum, B. [2012]; Milne, T.I. & Croft, T. [2012]).

The BAM is suitable for assessing vegetation that is located within the agricultural region of South Australia. This includes the EP, GA, H&F, KI, LC, M&R and N&Y Landscape Board Regions plus Port Augusta City Council and the Flinders Ranges Council. For assessments of vegetation in the rangelands of South Australia (South Australian Arid Lands and Alinytjara Wilurara Landscape Board Regions excluding Port Augusta City Council and the Flinders Ranges Council), the Rangeland Assessment Method should be applied. For assessments of scattered trees, the Scattered Tree Assessment Method is applicable.

The BAM method was developed for most vegetation assessments undertaken in the Native Vegetation Branch (NVB), including clearance/regulation applications, potential Significant Environmental Benefit (SEB) areas and Heritage Agreements. However it can be used to assess any vegetation for which biological/biodiversity value needs to be determined, including revegetation. The technique uses biodiversity 'surrogates' or 'indicators' to measure biodiversity value against benchmark communities. Please note, this assessment method can be simplified for certain purposes, such as monitoring of Council reserves (for more information on a simplified version, contact the NVB).

Users of the method **will generally be NVC Accredited Consultants.** Accredited Consultants will be provided with BAM training.

Each area to be assessed is termed an **application area ('Block')**, within which different **vegetation associations ('sites')** are identified and compared to NCSSA '**benchmark**' **vegetation communities**. A representative 1 hectare quadrat is surveyed for each site.

For the BAM, three components of the biodiversity value of the site are measured and scored: *vegetation condition, conservation value* and *landscape context*. These three component scores are combined to provide **Unit Biodiversity Score (per ha)** and **then multiplied by the size (hectares) of the site to provide a Total Biodiversity** score for the site.

The NVC encourages users of this assessment method to consider if activities could impact sites of indigenous significance. Please refer to https://www.agd.sa.gov.au/aboriginal-affairs-and-reconciliation/aboriginal-heritage/aboriginal-heritage-registers-and-the-central-archive for further information.

3 Preliminary office procedure

Attempt to ascertain from aerial photography and native vegetation mapping the number of vegetation associations present to obtain a rough estimate of how long the field assessment will take. The exact number might not be evident until during or after the visit.

A site should ideally be larger than 0.5 hectares (unless the entire application area is that size or smaller). Refer to Section 7 for more information about small sites.

Large sites may warrant survey of more than one quadrat (with data averaged) to obtain an accurate data set.

Allow 45 minutes - 1 hour per standard quadrat. The time taken will vary considerably depending on the size of the site and complexity of the vegetation.

Consider viewing available information on Atlas of Living Australia or NatureMaps prior to the field visit to gain an idea of any species of conservation significance potentially present.

4 Field procedure

4.1 Equipment

You will need this manual, datasheets (Appendix 1 or 2), pencil, GPS, camera, large scale aerial photograph and plant bag.

4.2 Naming vegetation associations in the application area

You may be inspecting more than one application area (Block) on a property, for example there may be multiple clearance areas, or a clearance area and an SEB area.

1. **Label the Blocks 'A, B, C…'** (A Block being a contiguous area of vegetation under application)
2. **Divide each Block into its constituent vegetation associations as follows (remember: 'SITE' = 'VEGETATION ASSOCIATION'):**

   Firstly, divide it according to its **overstorey** structural formation[1] and dominant species[2] (e.g. *Eucalyptus fasciculosa/E. cosmophylla* Open Woodland and *Eucalyptus obliqua* Woodland). An example with six vegetation associations is given in Figures 1 to 7.

   Make further divisions according to **understorey** structure (note: this often infers condition) and species. For example, two vegetation associations may both be *E. obliqua* +/- *E. baxteri* +/- *E. cosmophylla* +/- E. *fasciculosa* Woodland, but one may be described as 'over *Hibbertia* spp. and *Xanthorrhoea semiplana* ssp. *semiplana*' and the other 'over sparse introduced grasses', reflecting different levels of degradation. The two are considered separate vegetation associations (= separate sites) (e.g. Sites A5 and A6 in Figure 1).

   Essentially what you are doing is portraying the vegetation as it **currently presents** using terminology consistent with the recognised South Australian Vegetation Structural Formations (Appendix 3). To provide another example, a Fleurieu Peninsula Swamp site in good condition dominated by sedges with scattered tea-tree may be described as a '*Machaerina rubiginosa/M. tetragona* +/- *Juncus* spp. Sedgeland with emergent shrubs' association (Site A1, Figure 1 and Figure 2) whereas the neighbouring more degraded gully may present as a '*Machaerina rubiginosa/M. tetragona* +/- *Juncus* spp Very Open Sedgeland over introduced herbs and grasses with emergent ferns[3] and shrubs' association (Site A4, Figure 1 and Figure 5), notwithstanding the fact that they were possibly once very similar.

[1] Plant life form of tallest layer plus height and projective foliage cover, e.g. Low Open Shrubland.

[2] E.g. *Melaleuca uncinata* Low Open Shrubland (only need to list dominant species).

[3] Bracken Fern resulting from drier conditions posed by artificial drainage, and hence a symptom of degradation of the original association.

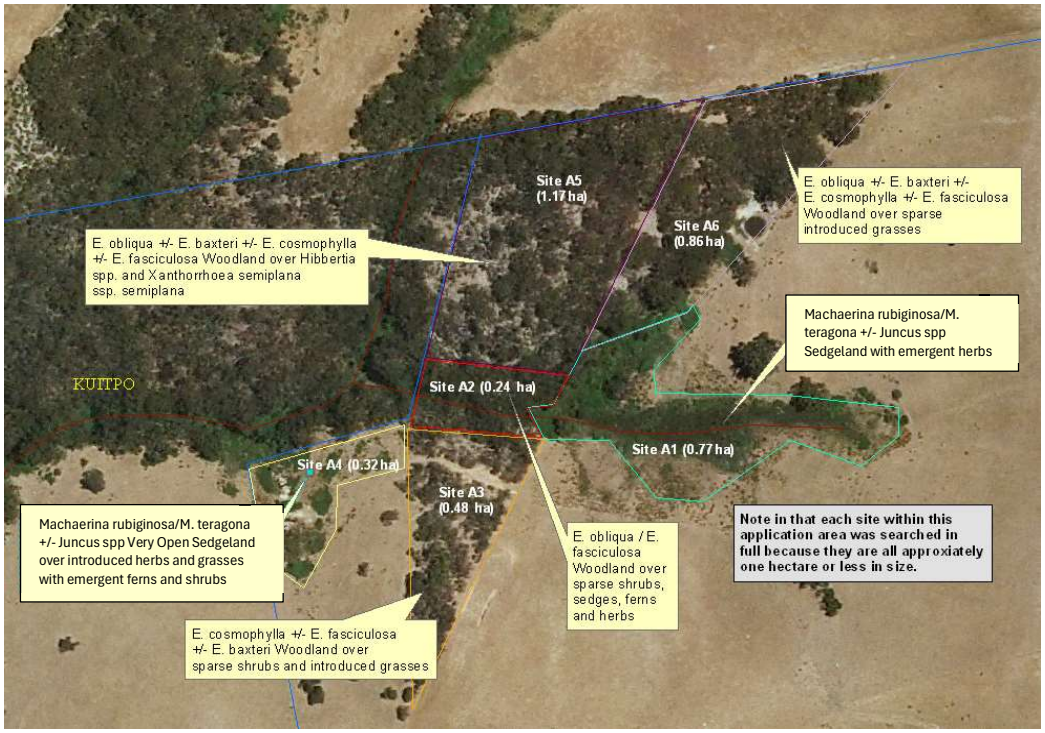
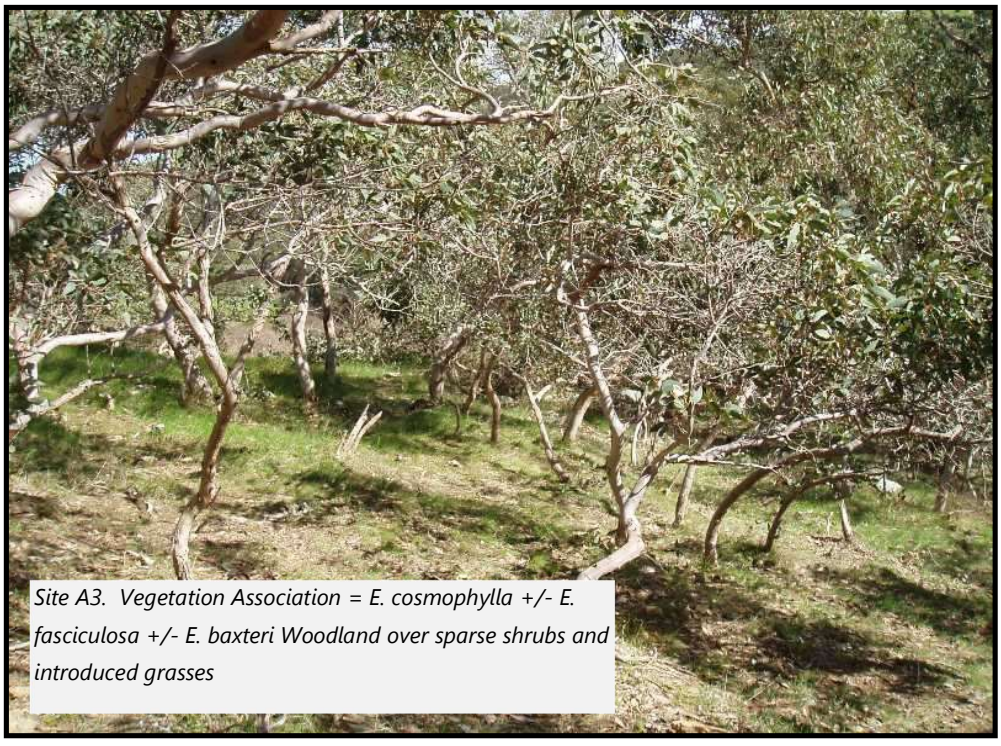


Figure 1 Example 1 of how a block might be split into vegetation associations (sites) and labelled

Figure 2 Photo representing site A1 in Figure 1

Site A2. Vegetation Association = watercourse vegetation (in this case E. obliqua +/- E. fasciculosa Woodland over sparse shrubs, sedges, ferns and herbs

Figure 3 Photo representing site A2 in Figure 1

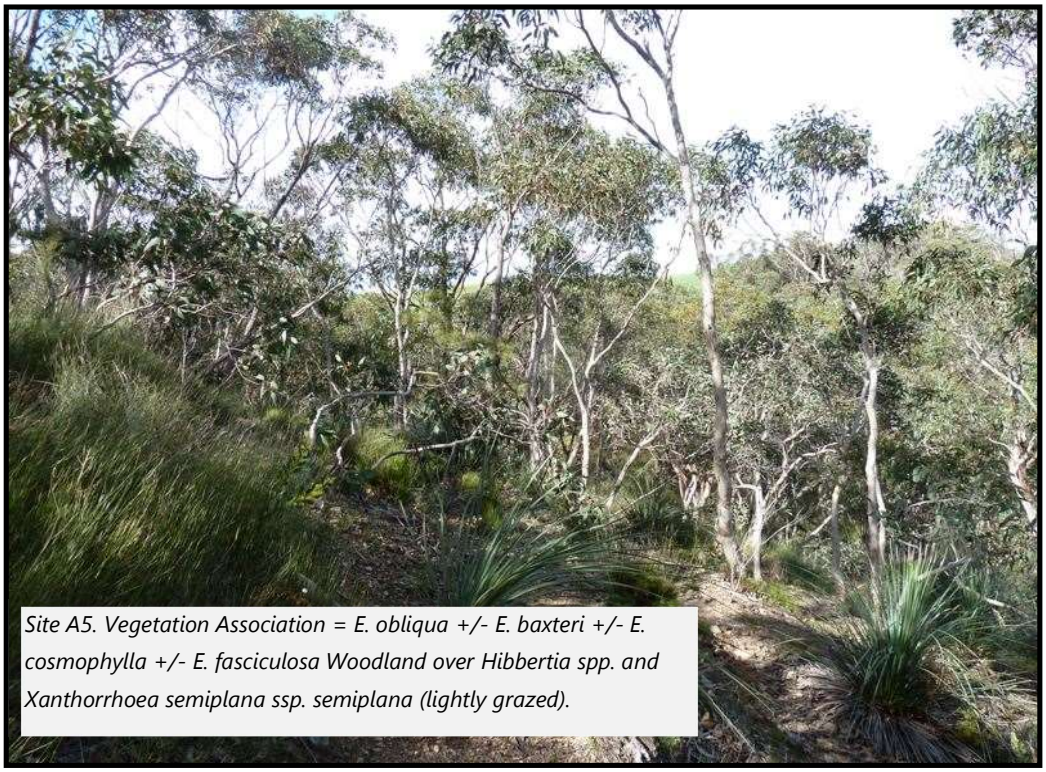


Site A3. Vegetation Association = E. cosmophylla +/- E. fasciculosa +/- E. baxteri Woodland over sparse shrubs and introduced grasses

Figure 4 Photo representing site A3 in Figure 1

Site A4. Vegetation Association = Machaerina rubiginosa +/- Juncus spp. Very Open Sedgeland over introduced herbs and grasses with emergent ferns and shrubs (foreground).

Figure 5 Photo representing site A4 in Figure 1



Site A5. Vegetation Association = E. obliqua +/- E. baxteri +/- E. cosmophylla +/- E. fasciculosa Woodland over Hibbertia spp. and Xanthorrhoea semiplana ssp. semiplana (lightly grazed).

Figure 6 Photo representing site A5 in Figure 1

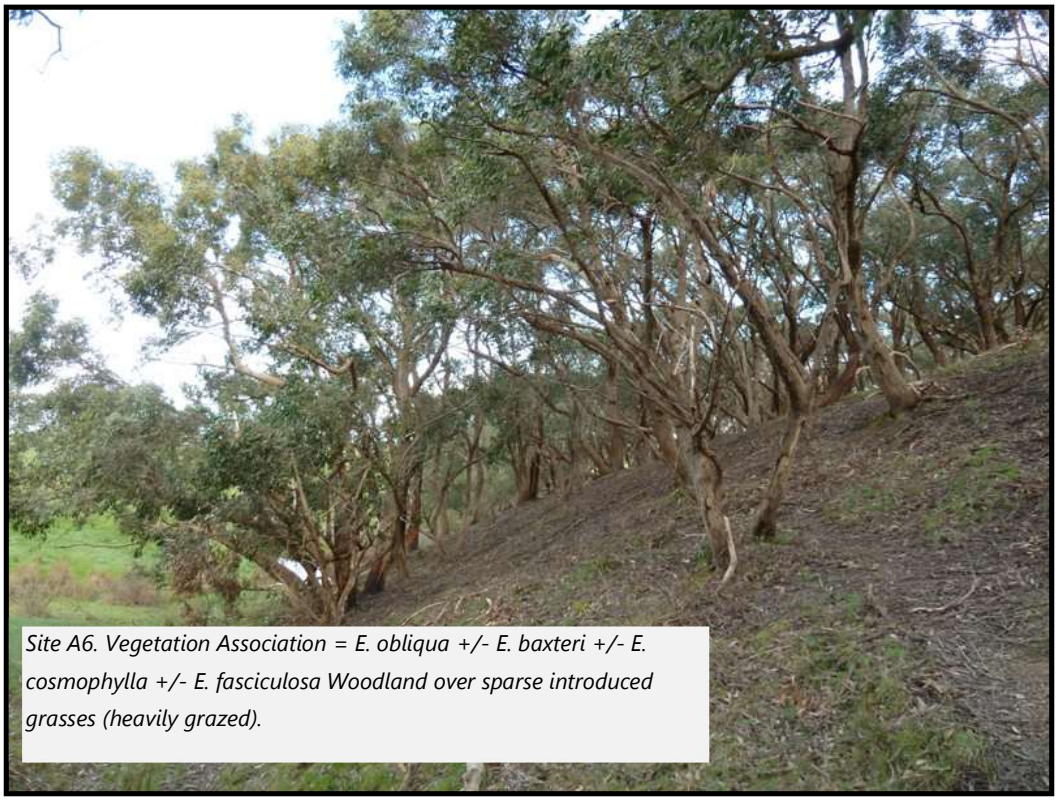


Figure 7 Photo representing site A6 in Figure 1

Some rules to ensure consistency between assessors:

a) Ensure each site is greater than 0.5 hectares. (**Exceptions** – if your entire application area is smaller than 0.5 hectares; if the site is distinct enough to warrant its own status rather than averaging the attributes into the surrounding vegetation, such as one dense patch of Oyster Bay pine within a Stringybark community.) Note that a site can be comprised of disjunct smaller pieces rather than contiguous vegetation, for example three perched bogs that are separated by woodland.

b) A **large creek or river** with a substantial riparian corridor should be considered as a separate site (Figure 8). A **small or intermittent creek** should be combined with the surrounding vegetation into one site. **Gullies that feed into creeks or rivers** could be either combined with the watercourse to form one site or combined with the surrounding vegetation. The option chosen will depend on the nature of the gully – is it deeply incised and shares species/structural features with the main watercourse? Or is it shallow and with more in common with the surrounding vegetation (compare a gully within a Stringybark forest that contains Mountain Gums and Manna Gums with one that contains Stringybarks just like the surrounding slope).

c) **Edge effects:** If your site has pronounced edge effects, then you can either map the entire edge as a separate site, or you can combine with the interior and note on the datasheet. See below for placement of a representative quadrat for a site like this.

3. **Number each vegetation association:** 'Sites A1, A2, A3...B1, B2, B3....'

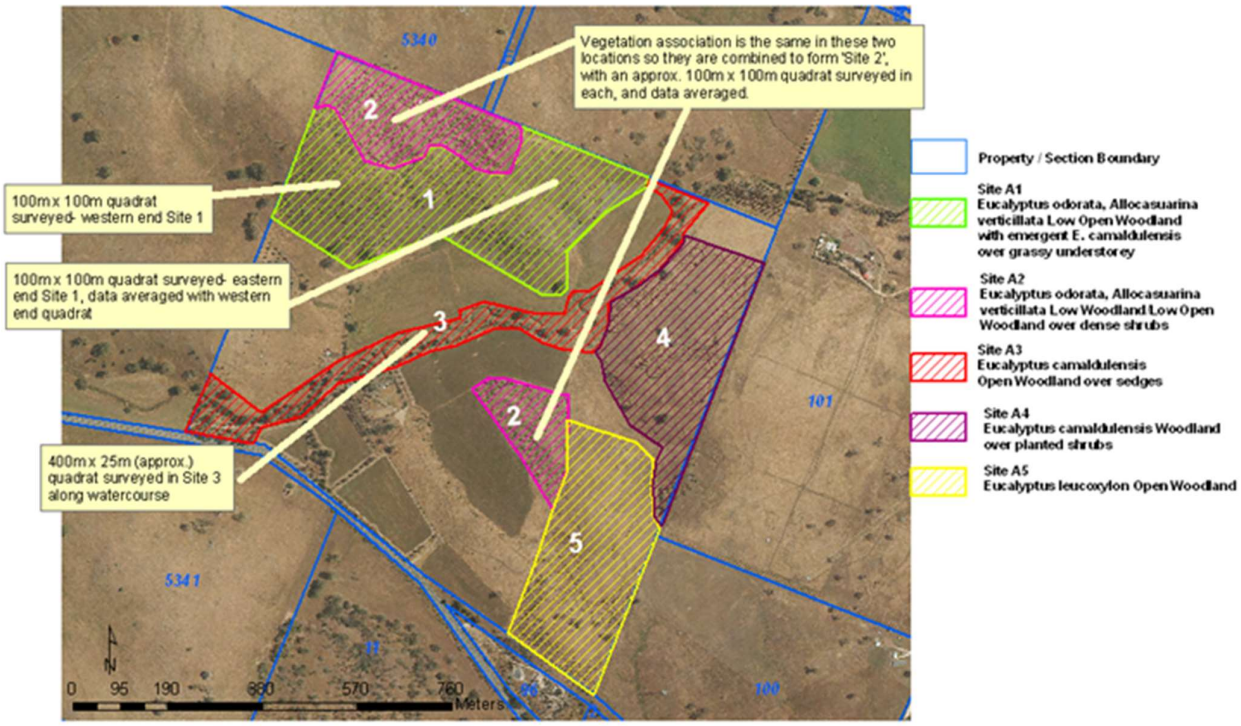


Figure 8 Example of how a block might be split into vegetation associations (sites) and labelled

4. **Map the boundaries of the vegetation associations:** Map using either a GPS, by drawing lines on your aerial photo, or a combination of both. You can use NatureMaps layers (contours, watercourses) to help determine boundaries.
5. **Label your first datasheet 'A1':** 'A' refers to the first application area/Block and '1' refers to the first vegetation association surveyed within it.
6. **Determine one representative 1 hectare quadrat within A1**: (Exception - large sites may warrant two or more quadrats unless exceptionally uniform. In this case one datasheet is completed for each quadrat, which should be located some distance apart, and the quadrat data is averaged to represent the site. Label the two quadrats A1a and A1b. Record a GPS point (from which a photo will be taken) for your quadrat. The quadrat does not need to be 100 m x 100 m and does not need to be mapped or marked on the ground (unless you wish to), although the general shape can be noted. The quadrat should be placed in an area that represents the majority of the site. This may mean including one or more patches of variant vegetation if your site is uniform in a 'patchy' kind of way (see box below on 'lumping' and 'splitting'), or placing the quadrat such that it includes some edge vegetation.

   Note that a 1 hectare sample size is much larger than what is statistically required for most of the measures recorded. therefore even if a site being assessed is slightly less than 1 ha in size, the results will still be statistically valid.

   An example of the site labelling hierarchy is shown in Figure 9.

   Deriving the 'benchmark' vegetation community for the vegetation association is described in Section 5.

7. **Write a name for A1** (e.g. 'Mallee Box Open Woodland over sedges, grasses and sparse shrubs') next to 'Vegetation Association Description'. If a more detailed name/description is required for your later reporting you will be able to draw upon the data from the data sheet to help write it, as you will have detail on dominant understorey species, ground cover elements, habitat features, etc.

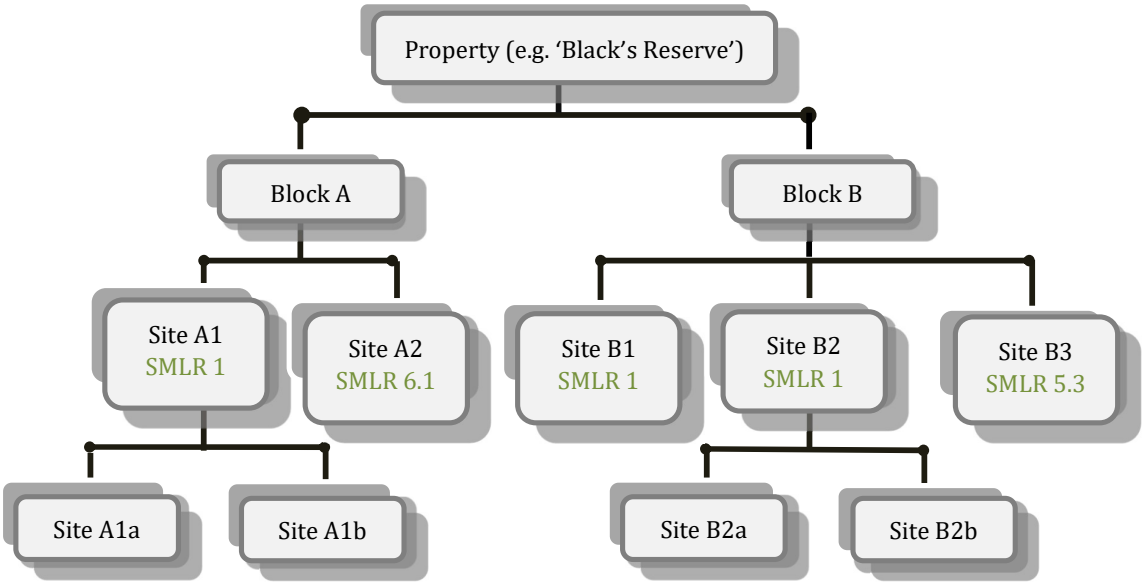


Figure 9 Bushland assessment site labelling ('benchmark' vegetation communities in green text)

DIVIDING YOUR APPLICATION AREA INTO SITES - 'LUMPING' VERSUS 'SPLITTING'

At what scale can the vegetation be considered 'uniform'?

Patchiness can be uniform if the 'patches' are small but regular (e.g. small patches of Native Pine scattered amongst mallee). But patchiness on a larger scale should be separated out into different associations (for example, repeating dune/swale/dune/swale vegetation would be separated into two sites [Site A1 = dune, Site A2 = swale]).

Try to calibrate the nature of your lumping/splitting with other Bushland assessors. Note that keeping your vegetation associations broad or general (i.e. lumping) may save time because fewer datasheets will be required. However, you could then have trouble filling in the boxes on the datasheet because effectively you are trying to average data in your head from non-uniform vegetation. 'Splitting' will result in lower scores for each individual site with respect to attributes such as plant species diversity than if the sites were lumped together. However, the impact of splitting on the Unit Biodiversity and Total Biodiversity Scores is minimal.

4.3 Completing the bushland assessment field inspection

4.3.1 General information about the datasheet

Remember: SITE = VEGETATION ASSOCIATION

For your 1 hectare quadrat you will need to obtain:

- a species list
- a photograph with waypoint
- scores for a number of attributes.

The scores are supposed to reflect observations averaged over the entire quadrat so the multiple boxes next to some attributes on the data sheet are there for you to adjust scores if they change as the inspection progresses.

The attributes in the boxes at the top of the datasheet can be filled in at any time, once you have a feel for the site. Weed cover rating and regeneration attributes, scored alongside the species in the species list, can be recorded and adjusted continually from the start of the inspection if that is easiest. The 'notes' section at the bottom asks for information that does not contribute to scores but may help score interpretation.

The front of the datasheet is only for observations pertaining to the quadrat. There is space on the back of the datasheet for general or incidental site observations (outside of quadrats) that may assist in the preparation of a written site description or assessment report. There is also space for notes relating to fencing, exclusions, additional photos, etc.

Relating each vegetation association to an NCSSA 'Benchmark' Vegetation Community can be done back in the office. Refer to Section 5.

4.3.2 Listing plant species

- Record all native and introduced plants that occur within the 1 ha quadrat. Record native species in the left column and weed species in the right. The centre column can be used when either column is filled.
- ***Survey for and record any threated plant species found within the site, including outside of the quadrat.*** Note, threatened species located outside the quadrat will not contribute to plant species diversity scores, but it will contribute to the Conservation Significance score of the site.
- Include annual species even when died back (if recognisable). Mark annuals that are not in full foliage with a #. Note there will be certain times of year when some species are not visible at all. For natives, this is corrected for in the Native Plant Species Diversity scoring. It is not necessary to include dead perennials, but if you do, note that they are dead.
- Mark dominant species 'd' = dominant. This will assist with any written vegetation association description.
- Collect plant species for which identification is uncertain, and mark 'v' = voucher. Be sure to give the plant a recognisable substitute name on your species list pending correct identification.
- Note 'p' for species that you can recognise as having been planted.

- Note 'R'[4] next to all perennial native species for which you observe seedling or juvenile individuals (i.e. individuals that are not yet reproductive), **with the exception of grasses, sedges and forbs. This noting of 'R' is important because it is used to calculate a regeneration score. It is also important to include planted seedlings.** You may not be able to tell the difference between planted and naturally-regenerated plants, but that will not matter. If a particular species or location is displaying a very high number of regenerated individuals this can be commented on in the 'notes' section.

4.3.3 Estimating cover of weeds and plant life forms

Cover estimates (as per the 'cover rating' table - top centre of datasheet) are required for weed species and native plant life forms. Cover is estimated as 'percent projective foliage cover (PFC)'. This is the percentage of the site that would be shadowed by the foliage of the weed species or life form if the sun is shining directly overhead (Appendix 4).

- The diagrams in Appendix 4 may assist in estimating cover of canopy trees, but remember that the final figure has to account for the gaps between the trees. Covers of most species and life forms will be much lower than the figures presented in the appendix.
- Where a weed species is annual but visible at the time of inspection (e.g. Bridal Creeper), estimate the cover **as it appears** but mark with a # if the foliage is part annual dieback. This will assist future scoring and monitoring when undertaken at a different time of year, allowing better interpretation of changes in weed cover over time.

4.3.4 Native plant life forms

- **For native species only**, record PFC ratings as per the cover rating table. Record a dash for absent life forms and a # if a life form is represented substantially by species that are annual and not in full foliage. Total the numbers at the end and write at the bottom of the box.

Bear in mind that one species of plant may present as a different life form at various stages of its growth, e.g. what looks like a shrub now may eventually become a tree.

- **You should record the plant life form as it appears at the time of your survey, unless it is a species listed in Appendix 5 (Life Forms).**

Appendix 5 has been created because it is important that there is consistency in life form categorisation for commonly encountered species, yet there are some species on which people can't agree even when looking at the same specimen and referring to a definitive set of characters for all available life forms. Species in Appendix 5 are to be *always* categorised as instructed, regardless of presentation or stage of development. The appendix *only* includes plants which have a debatable life form *and* are commonly encountered (for example, Golden Wattle should *always* be listed as a tree.)

Importantly, Appendix 5 lists which Eucalypt species should be considered 'trees' and which should be considered 'mallee', regardless of form.

- **Height categories of life forms include the flowering heads and dead branches.**

[4] Use a capital, rather than a lower case 'r' which can be confused with a 'v'.

- **The term 'sedge' is used to represent all non-grass species of tussock form, not just species within the family Cyperaceae, e.g. *Dianella revoluta* (Black-anther Flax-lily) and *Lomandra* spp. (Iron-grasses), *Typha* sp..**
- **Forbs are herbs that are not grasses or sedges.**
- **Include tree or shrub life forms in your plant life form list even when they have been identified as an 'emergent' life form and not scored for hollows and dieback.**

4.3.5 Native:exotic understorey biomass

- Estimate the percentage of the total vegetative biomass of shrub and groundcover plants that is native, and select the appropriate category. Only include the parts of plants that are less than 2 m above the ground (i.e. ignore any biomass higher than 2 m above the ground).
- **The measure of native:exotic biomass is not projective foliage cover** but rather an estimate of the relative volume of native versus exotic understorey plant material (i.e. extent of bare ground is not taken into account).
- **Do** incorporate dead plant material, where attached to the ground, **if recognisable** as weed or native, but include a note on your datasheet to that effect. You may even like to note species to assist interpretation and ensure consistency with any return visits.
- **Do not** include leaf litter (plant matter no longer attached to the ground).
- **Do** include microphytic crust. Judgement is required in cases where native foliage overlaps exotic, for example an area of dense bracken fern over a ground layer of weedy grasses.

4.3.6 Hollow-bearing trees

Record the number of trees that contain small or large and small hollows within the 1 hectare quadrat.

- Use the hollow size/number categories on the datasheet to score this attribute.

4.3.7 Fallen timber/debris

Use the fallen timber matrix on the datasheet to assign scores for the two size classes of fallen timber and the leaf litter, then total these.

The size refers to that of the canopy trees. For example, where large Eucalypts occur over a subcanopy of Sheoak it refers to the size of the Eucalypt logs. In a shrubland with emergent trees (where the community is **not** considered 'naturally treeless'[5]), it refers to the size of the emergent trees, not the dominant shrubs.

If logs are present on the ground but there are no trees remaining, record this feature in the notes section – it may indicate a vegetation association that has undergone a major change from being treed to treeless, such as a Sheoak Open Woodland to a Grassland.

[5] If naturally treeless then fallen timber would not be scored at all.

4.3.8 Mature Trees

Use the Mature Trees matrix on the datasheet to assign a score for the density and health of mature trees.

The density of mature trees is an estimate of the percentage of mature trees present within the site as a proportion of what would be expected within the selected benchmark community. This only relates to trees species that constitute the canopy (being the upper most stratum of woody vegetation) in that community, not subcanopy species. In general, the name of the benchmark community lists the species and genera that typically form part of the tree canopy cover for that community. Include dead trees as part of the estimate of mature tree density.

Mature Trees are considered trees that are a minimum of 80% of the expected height of that species at maturity within that community.

Tree health is only assessed for mature trees and is represented by an assessment of the amount of canopy dieback, where 'dieback' refers to the proportion of the total possible canopy volume that is missing or is 'dead' (not just affected by lerp or other temporary condition). The following points, and photographs in Figure 10, may help in the estimation of dieback:

- When visualising the total possible tree volume, imagine the extent of the canopy if all branches and branchlets had foliage extending to their extremities.
- Be aware that some trees have a naturally sparse canopy cover, and are not necessarily any less healthy than a tree with a dense canopy cover.
- Lack of foliage on the lowest branches can be due to natural shading as the tree grows older and is considered to be normal if the tree is otherwise healthy, so do not include.
- If large dead stags are present on the tree (indicative of trunk/large branch failure at some time in the past) do not count this as dieback.
- Include total mistletoe biomass as dieback. When mistletoe is present, assume that the mistletoe has caused the death of an equivalent amount of host foliage. Although this is not always the case, it is considered that over the whole canopy it will average out to be roughly equal. Note that the part of the host branch terminal to the mistletoe attachment generally dies shortly after the mistletoe becomes established.
- Attempt to determine whether dieback is permanent or temporary by checking for the presence of insects and epicormic growth. Lerp, grasshoppers, drought and fire are usually temporary. Scratch the bark to look for green cambium and consider bark condition. Only apparently permanent dieback should be taken into account.

No dieback

20% dieback

40% dieback

60% dieback

80% dieback

Figure 10 Examples of trees with different percentages of dieback

4.3.9 Tree Canopy Cover Score

- Estimate the percentage of the area covered by the canopy of tree species that form part of the canopy or subcanopy of the vegetation community. This represents all the area that is immediately below the canopy of the trees and includes all the area within the canopy. This relates to any plants of the species of the canopy or subcanopy, irrespective of age. This is different to Projected foliage cover, in that all the gaps within the canopy are included as part of the canopy cover. Figure 11 shows an example of approximately 50% Tree Canopy Cover.

Figure 11 Example of approximately 50% tree canopy cover

4.3.10 Naturally treeless sites

- Where a site is identified as 'naturally treeless', do not score the tree attributes (Tree Health, Hollow-bearing Trees and Fallen Timber/Debris), even when emergent trees are present. Naturally treeless sites are defined as those which match to a 'naturally treeless' benchmark community in Appendix 6 – the communities listed in BLUE. The species diversity and lifeforms scores will still benefit from the presence of emergent trees.
- For naturally treeless sites, to compensate for the exclusion of tree attributes, a correction factor is applied (the score is multiplied by 1.29).

5 Assigning a 'benchmark' vegetation community

A **Vegetation Community** for the purposes of this method is a broadly defined vegetation type, grouped mainly by overstorey and understorey structural formation[6], that includes a number of more specific vegetation associations under its 'umbrella'.

The Benchmark Vegetation Communities used in NVC Bushland Assessment have been adopted from NCSSA's Bushland Condition Monitoring manuals. They have been described as 'intact' or 'pre-European' communities, next to which we can compare our sites, hence the term **'benchmark'**. It is acknowledged that vegetation is in a state of flux, therefore a 'benchmark state' should not be thought of as an 'end point', but rather a more stable state against which to make comparisons.

There are currently five hard copy **Bushland Condition Monitoring Manuals[7]**:

- Southern Mount Lofty Ranges (SMLR)
- SMLR supplement 'Coastal Vegetation Communities of the Southern Mt Lofty Ranges'
- Northern Agricultural and Yorke Peninsula (NA & YP)
- Murray-Darling Basin (MDB) and
- Eyre Peninsula (EP)

There are two additional electronic manuals: South East (SE) and Kangaroo Island (KI).

The regions represented by the manuals are described in each manual and approximately as represented in Figure 12. Shapefiles are available from NVB to help determine boundaries.

Sites located close to manual boundaries may correspond equally well (or better) with a benchmark from another manual.

After examining the site, use the manuals to assign a Vegetation Community Type, and record it on the **Bushland Assessment Data Report** and in the relevant Excel Scoresheet.

Note: do not use the benchmark figures in the NCSSA manuals as they relate to 30m x 30m quadrats rather than 1 hectare.

[6] Note that the terminology and way of grouping vegetation communities differs from that under the National Vegetation Information System (NVIS). NVIS is not used in the BAM.

[7] Available from the Nature Conservation Society of SA (note: some editions may be out of print)

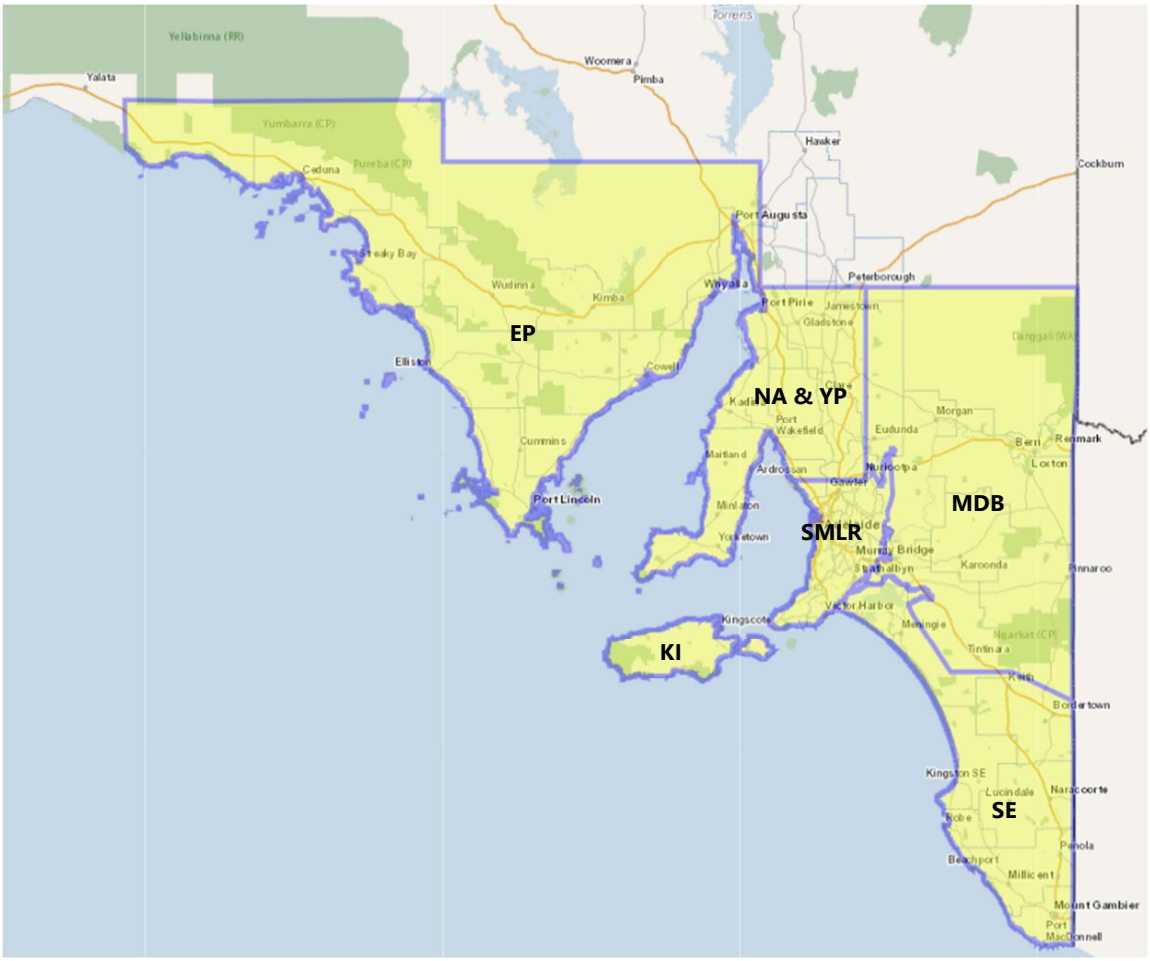


Figure 12 Approximate areas covered by Bushland Condition Monitoring manuals, as described in text

6 Filling in the bushland assessment scoresheet

6.1 Introduction

BAM data is entered into a Bushland Assessment Excel scoresheet (workbook) which consists of several worksheets relating to landscape context, vegetation condition and conservation status, plus current and proposed protection and management of the site. There is a scoresheet for the standard BAM (Appendix 7) and another for small sites as per Section 7 (Appendix 8).

The scoresheet can be used to assess a clearance area or a proposed SEB area. For example, for an assessment for a clearance application, the scoresheet will calculate the SEB points that need to be provided to offset the clearance. If the assessment is for a proposed SEB area, then the scoresheet will calculate the SEB points of gain provided by the site as per formulas outlined in the NVC's Guide to Calculating a Significant Environmental Benefit ('SEB Guide') (NVC 2024).

The cells in light purple must be filled in with the data collected in the field (as per field datasheets) or from geographic mapping tools. After filling in these cells, excel automatically calculates the scores, including benchmark scores.

Each application area (Block) will require the completion of a Bushland Assessment Scoresheet for each vegetation association present.

6.2 Landscape context scores

The Landscape Context Score is determined from values associated with the entire Block and is completed in the first Excel worksheet titled '**Block'**. Each subsequent worksheet within the scoresheet relates to values of the relevant site within the Block. The overall Landscape Context Score for a site will be auto filled from the values entered into the 'Block' worksheet.

It is necessary to fill out all fields and insert the map into each scoresheet used for an application.

Landscape context scoring has been adapted from NCSSA's Rapid Assessment version of BCM, based upon Oliver and Parkes (2003). Landscape context is included to allow remnants that are large, well-buffered and/or are providing important corridor habitat to be recognised as important, regardless of condition. The Landscape Context Scores pertain to the block that is under application and must be an area of contiguous vegetation. Note that 'contiguous' is defined as 'within 30m'.

A Block may include one or more sites (vegetation associations), in which case each site will receive the same Landscape Context Score (Figure 13). If vegetation that is being assessed involves separate disconnected areas of vegetation (separate Blocks), then the Landscape Context Score will be assessed separately for each (Figure 14).

The following information in the following sections can be entered directly into the Block worksheet and the scores will be automatically calculated.

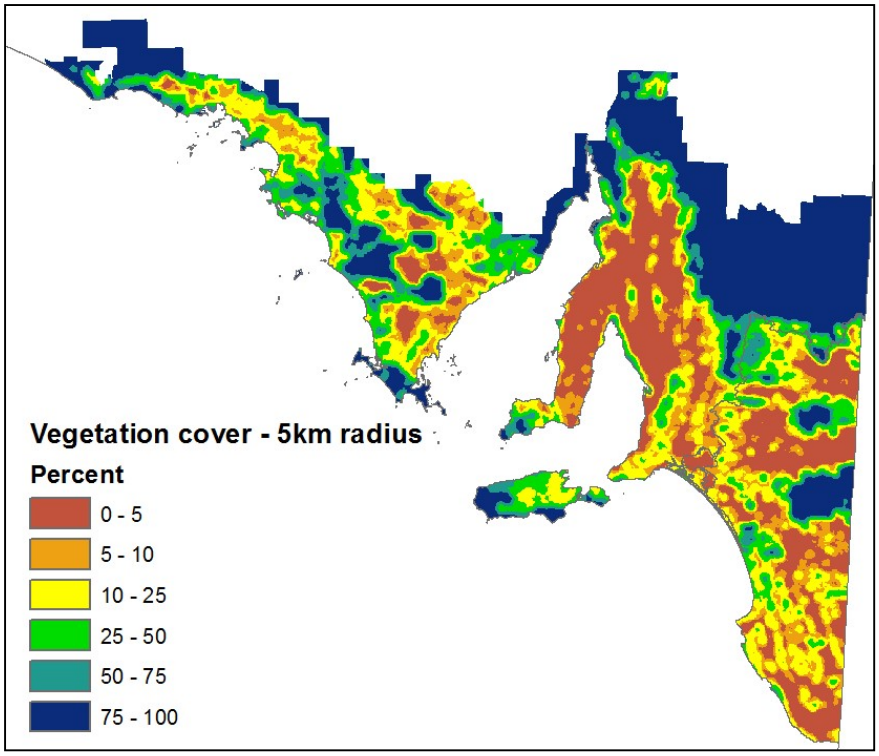
Figure 13 Example Block A contains two sites (vegetation associations) which have the same landscape context score

Figure 14 Example of application area with two distinct Blocks (LC score assessed separately for each Block)

6.2.1 Percent vegetation cover

The percent vegetation cover is a surrogate for connectivity by measuring the amount of remnant vegetation that is left in the local landscape. This has been determined by measuring the percentage of vegetation that is contained within a 5km radius of any one point. Higher scores are given to areas of vegetation that are in parts of the landscape with intermediate levels of vegetation cover. It's these areas in the landscape that are likely to be most impacted by any changes in vegetation cover.

Use the layer – ***Native Vegetation Areas – Mean Patch Area within a 5 km Radius*** on NatureMaps. Determine the percent of vegetation that occurs within a 5km radius of the site, this value is taken from the centre of the Block.



6.2.2 Block shape score

This is a measure of **cleared** perimeter to area ratio. Determine the perimeter (metres) of the Block of vegetation for which adjacent land is cleared of native vegetation. Then determine the area of the Block (ha). The perimeter measurement is converted into kilometres by dividing by 1000 and the area is converted into square kilometres by dividing by 100. The cleared perimeter (km) is divided by the area (km^2) to provide the ratio. These measurements can be determined using NatureMaps.

An example is given in Figure 15. The cleared perimeter is 577 m (=0.577 km). The red polygon represents the area of Block A and is 3.9 ha (0.039 km^2) in size. Therefore the 'cleared area to perimeter ratio' is 0.577 divided by 0.039 =14.79.

The cleared perimeter estimate should be verified on ground, to ensure that adjoining land is not native grasslands.

Figure 15 Example of cleared perimeter (yellow broken line) is 577 m of the total block perimeter (red line)

6.2.3 Remnancy and % native vegetation protected in IBRA association

Identify the IBRA Association in which the Block is located. NatureMaps contains a layer labelled ***IBRA Association SA 7.0*** which provides the name and geographic extent of each IBRA Association (Figure 16).

In some northern areas of SA, the IBRA associations were not updated in version 7.0. For these areas, use Version 6.1 which is available as a downloadable layer here: https://data.environment.sa.gov.au/NatureMaps/Documents/LANDSCAPE_IBRAAssociation61_shp.zip

Entering the IBRA Association name into the Block worksheet automatically shows the value for % native vegetation remaining and % vegetation protected in the IBRA Association. Alternatively, IBRA Associations and the corresponding figures are contained in Appendix 9 of this manual. They are also shown in the Naturemaps layer labelled ***Association Veg Cover SA 7.0***.

6.2.4 Wetland or riparian habitat present

Record if a site contains a riparian zone or swamp and/or wetland. In some cases the riparian zone or corridor will comprise the entire site. In others it will be a very small part of a larger site.

6.3 Vegetation condition scores

Vegetation condition is scored against benchmarks, with the highest vegetation score possible being 80 points. The score is derived from factors such as species diversity, native plant form diversity and biomass, regeneration, habitat features and weed threat. The following information can be entered directly into the scoresheet and the Vegetation Condition Score for the site will be automatically calculated.

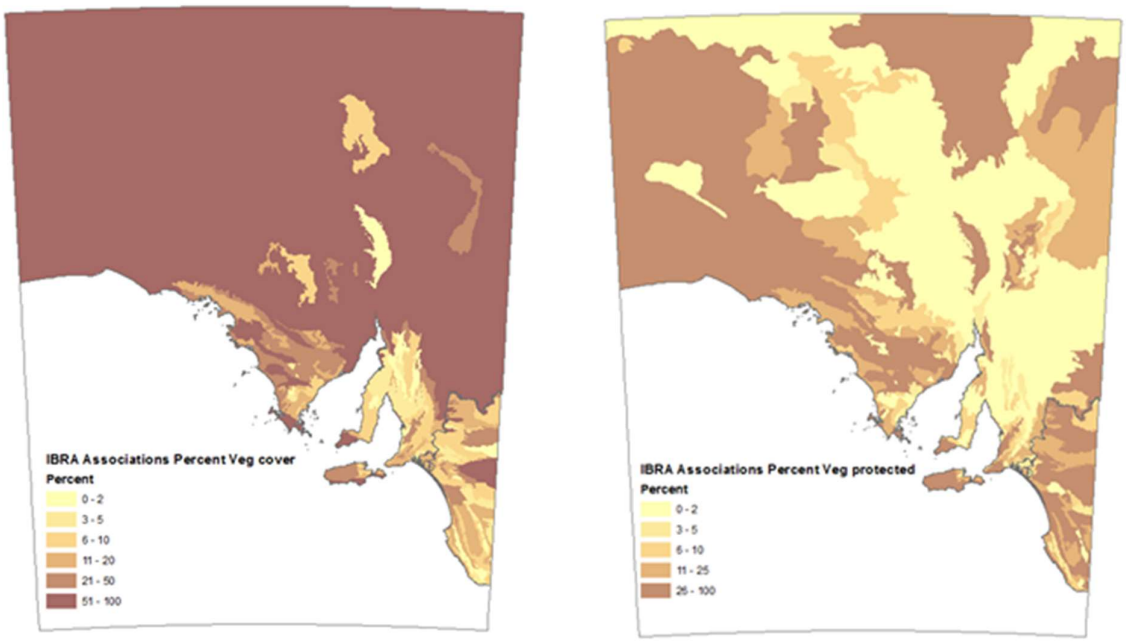


Figure 16 Examples of % veg remaining and % veg protected in SA IBRA Associations

6.3.1 Native plant species diversity score

On the **Flora** and **Fauna** worksheets respectively, enter all flora species (both native and introduced) and fauna species that are threatened or introduced that are found in the relevant vegetation association. For each native perennial species that was recorded as regenerating within the quadrat, mark as 'yes' in the 'Regen' column (see also the 'Regeneration Score' section).

Only the number of native plants recorded in the quadrat will be counted to determine plant species diversity. If you have surveyed in Spring, record which are annual herbaceous species that are only present and observable during spring. These species will not count towards species diversity. This is in recognition of the fact that annuals may have been counted that would not be visible at other times of the year.

Given the variation in climatic conditions in different regions, when determining if the survey has been undertaken during Spring time, the following should be applied:

- SMLR1-SMLR7 - Sept 1 to Nov 30
- SMLR8 Sept 1 to Nov 30
- KI7.7 - Sept 1 to Nov 30, KI all other communities- Sept 1 to Nov 30
- SE6.8 - Sept 1 to Nov 30, SE all other communities- Sept 1 to Nov. 30
- NA1, NA2, NA4, NA5, NA6, NA7, YP3 - mid-June to mid-Sept
- NA3, EP5, EP6, EP7, EP8, EP9, EP10, EP11, mid Aug to late Oct
- NA8, NA9, NA10, YP5, YP7, YP8 mid-June to mid-Sept
- YP1, YP2, YP4, YP6, EP1, EP2, EP3, EP4, all MDB, NA2 in MDB region mid-June to mid-Sept
- EP12, EP13 mid-Aug to mid-Oct

On the fauna sheet, ensure that either 'past record' or 'observed' is marked 'yes', which allows new observations to be loaded into the BDBSA.

6.3.2 BCM community

Values will not calculate unless the relevant BCM Community is chosen from the drop down list on the 'Site – Scores' worksheet in the Vegetation Condition Scores section.

6.3.3 Native plant life forms score

Enter the Native Plant Life Form values from the field datasheet into the scoresheet. The total will be automatically calculated.

6.3.4 Weed score

Using the weed covers that you wrote next to each weed species on the datasheet, and the list of Weed Threat Ratings for each region in Appendix 10, select the five weeds that score the highest combination of cover and invasiveness (i.e. highest Cover x Threat) and type them into the scoresheet. The scoresheet will calculate a Weed Cover x Threat total from your figures.

In many cases there will be a number of weeds that score the **same** Cover x Threat total and you will need to choose which to include in the 'Top 5'. **Choose perennials over annuals or note any reason for preferentially listing an annual** (i.e. it could be a Weed of National Significance or one that is the focus of management for the site).

6.3.5 Naturally treeless communities

If the community is **naturally** treeless or is not benchmarked for regeneration, tick the checkbox to make the necessary adjustment to the score.

6.3.6 Regeneration score

If the community has no benchmark figure for regeneration, a correction factor of 1.24 will be applied. For example, there is no regeneration benchmark for communities that depend on river or tidal flows to regenerate.

Note that in a revegetation setting, your plantings 'mimic' regeneration and are thus included in the count if they are not yet mature. It is recognised that these plantings **may not be self-perpetuating,** and ongoing regeneration may not occur. This will be reflected in future scoring as the plantings become mature and the seedling/juvenile count diminishes.

Remember that planting is equivalent to weed control – each is a way of trying to progress the vegetation toward its benchmark community and therefore needs to be scored as if it was a naturally-occurring process. **The scores reflect the current state of the vegetation –** the **explanations for the scores** changing (or not changing) might include reference to planting or other management (or non-management).

6.3.7 Other vegetation condition indicators

The values for native: exotic understorey biomass, fallen timber/debris, hollow-bearing trees, mature tree score and tree canopy cover score can be entered directly into the scoresheet from the field datasheet.

6.4 Conservation significance score

6.4.1 Threatened community score

Refer to the DEW provisional list (Appendix 11) and the *Environment Protection & Biodiversity Conservation* (EPBC) *Act 1999* to decide if the site contains a state or national 'threatened ecosystem' or 'threatened ecological community'.

See map of South Australia for information on areas that may contain an EPBC Act Threatened Ecological Community at http://www.environment.gov.au/biodiversity/threatened/communities/sa). You may need to refer to EPBC criteria. Note that the state listings do not specify a minimum size for a remnant to be classified.

This score refers to the site as it currently presents, not its benchmark state. A site that is in poor condition in comparison to its benchmark state may not qualify even if it supports the listed overstorey and/or key species. If an endangered or vulnerable ecosystem or ecological community is present, tick the appropriate checkbox in the 'Site – Scores' worksheet in the Conservation Significance Score section.

6.4.2 Threatened flora score

All plant species of National and State conservation significance **observed within the site during the inspection (not just the quadrat)** are used to calculate the Threatened Flora Score. Historical records cannot be used because the score is supposed to reflect the state of the site **at the time of the inspection**. Note: if a plant species has both a State and National rating, only the National rating is counted.

To assist field data collection, it is recommended that a search of historical plant species records for the property and its surrounds is carried out using NatureMaps (Appendix 12) and/or Atlas of Living Australia. This will alert you to the potential presence of plant species of conservation significance in the quadrat before the field visit is undertaken. Depending on the purpose of the assessment, it may also help with reporting of potential impacts on the site and surrounds.

6.4.3 Threatened fauna score

The fauna species score is based on direct observations plus 'habitat suitable'.

Direct observations – Use the fauna species **observed during the inspection** to identify species of conservation significance that use the site (this includes any observation within the site even if not within the quadrat).

Records – Identify any observations of species of conservation significance that have been recorded in the past within a close proximity to the site. Use the Biological Database of South Australia (BDBSA), Nature Maps (Appendix 12) or Atlas of Living Australia (ALA) records as well as the EPBC Act Search Tool (Appendix 13) to identify threatened species that have been recorded within a 5km radius of the site. For BDBSA, NatureMaps or ALA, only use records that were recorded during or after 1995, within 5 km of the site and locational reliability <1 km. For EPBC Act Search Tool, only record species that states ***"species or species habitat known to occur within area"***. This information can be further supplemented where appropriate with **expert opinion** and **local knowledge**.

Excluding species - If a site is in close proximity to a water body (ocean, lake or river), then species that occur only in or on the water should not be included it in the list of threatened fauna species.

If the occurrence of a species is determined to be unlikely for vegetation being assessed and the Native Vegetation Branch supports this assessment, then these species can also be excluded.

Assigning a score – if a fauna species has both a State and National rating, it will only receive as score for the National rating.

6.5 Total site scores

6.5.1 Unit biodiversity score

The scores that a site receives for Vegetation Condition, Conservation Significance and Landscape Context are multiplied together in order to provide a Unit Biodiversity Score (UBS) for the site. This should be considered a per hectare score. The formula that is applied is as follows:

Unit Biodiversity Score = Vegetation Condition x Landscape Context x Conservation Significance

This formula ensures sites that are of conservation significance receive a proportionately greater score. This is intended to recognise the importance of these areas for conservation and the increased risk of decline and extinction as a result of any permitted impact. It also recognises the difficulty in replacing such areas, species and communities given that they are often scarce or in decline.

6.5.2 Total biodiversity score

Given that the Unit Biodiversity Score is a per hectare score, in order to determine the Total Biodiversity Score, the UBS is multiplied by the area (in hectares) of the site.

6.6 Completing the scoresheet

Ensure the photo of the site is inserted into the worksheet and that the GPS reference is accurate.

6.6.1 Clearance site assessment

In order to complete the Bushland Assessment Scoresheet for the purposes of assessing a proposed clearance application and determining the SEB points required, the following values need to be entered in the 'Clearance Assessment Summary' worksheet (refer to the SEB Guide):

- Loss Factor
- Loadings for clearance of protected areas
- Reductions for rehabilitation of impact site
- Economies of Scale Factor and
- Mean Annual rainfall for the site (mm).

For the relevant information to complete these attributes, refer to the SEB Guide.

6.6.2 Proposed SEB site assessment

When using the BAM method to evaluate the SEB points provided by a proposed offset (SEB) site, the assessment should indicate whether the level of protection and management of the site differs from standard expectations as outlined in the SEB Guide.

Answer the list of questions on the 'SEB Assessment Summary' tab. Answering 'no' to a question indicates that a site meets standard assumptions about protection and management. Answering 'yes' to a question means that the site is not 'standard' and the values will be adjusted as per the section in the SEB Guide titled 'Step 4 Adjust SEB points of gain'.

Questions relate to the site level, not the block level (although some will be answered the same for every site within a block). Consult with the NVB if you are unsure how to answer a question for a site.

7 Modified BAM for small sites

7.1 Rationale

The standard Bushland Assessment method becomes less applicable and more difficult to apply for smaller sites (less than 0.5 ha) or for long narrow sites (less than 5 m wide). In such situations the benchmarked communities, which is based on a 1 hectare site, becomes less comparable. Additionally for long narrow sites, vegetation can be highly variable over the length of the site and it is difficult to survey a quadrat that is of a sufficient size (e.g. for a site that is 2.5 m wide, the quadrat would need to be 2 km long in order to survey an area of half a hectare). Accordingly, a "Modified Bushland Assessment Method" has been developed for sites <0.5 ha.

The method follows the same principles as the Bushland Assessment method, however for the purpose of the vegetation condition component of the assessment, rather than applying a quantitative benchmarking approach, or more subjective expert opinion-based approach is used. The scores are still determined relative to what would be expected in vegetation of that community in good condition (as per the benchmarked community condition), but based on the assessor's opinion rather than comparing it to a defined benchmarked score.

7.2 Modified assessment method

7.2.1 Assessment of small sites adjoining other vegetation

For small application areas of <0.5 ha, first attempt to use the standard Bushland Assessment Method if there is similar *contiguous adjacent* vegetation available to make the site up to 1 ha (subject to access if on an adjoining property). Adjoining vegetation may be present where the assessment area is part of a larger vegetation patch, or where it adjoins a road reserve etc.

7.2.2 Single assessment for multiple small sites

If an application contains several sites of varying size, then depending on the size of the sites, the application may consist of both a standard assessment and a small site assessment (Figure 17).

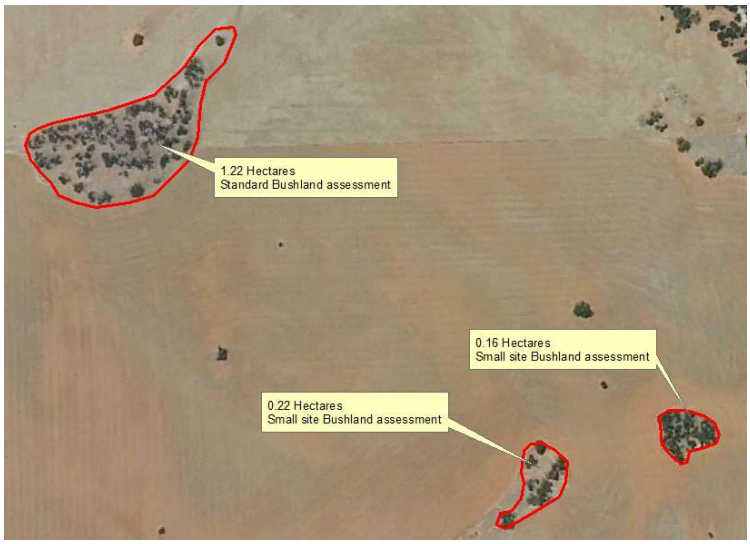


Figure 17 Example of combining standard BAM with small site assessment method

If there are multiple small sites (each less than 0.5 ha) within a close proximity and they are in similar vegetation condition, then the sites can be aggregated and assessed with just the one assessment (Figure 18).

In such a circumstance, the attributes can be determined by combining the features of all the sites together. For example, the species list and species diversity, native plant life form, regeneration, etc., the assessment can determine the values based on all the small patches combined together, rather than assessing each individually.

Figure 18 Example where aggregation of small site data is possible

7.2.3 Modified bushland assessment scoresheet

Data collected as part of a small site assessment should be entered into the 'Modified Bushland Assessment (less than 0.5 ha) Scoresheet'.

7.2.4 Landscape context and conservation significance

The assessments of Landscape Context and Conservation Significance are undertaken as per the standard Bushland Assessment.

In relation to landscape context, the size of the **Block** and **cleared perimeter** can be determined by adding the area and perimeter of all the individual sites together if data for several small sites are being aggregated.

7.2.5 Vegetation condition

Native: Exotic understorey biomass, Falling Timber/debris, Hollow bearing trees, Mature Tree and Canopy Cover are assessed as per Bushland Assessment and as described in the small site datasheet (Appendix 2).

Plant species diversity, Native Plant life forms, Regeneration and Weed Scores are assessed as described in the Modified Bushland Assessment (less than 0.5 ha) Scoresheet (Appendix 8) and in accordance with the following:

- Plant Species diversity – Once a species list is complete for the site and the number of plant species is known, estimate as a proportion of the number of flora species present relative to the number that would be expected in vegetation of that community in good condition (the benchmarked community).
- Native Plant Life forms – Select the category that most closely represents the vegetation within the site. In particular, giving consideration to the level of structural diversity that would be expected in vegetation of that community in good condition.
- Regeneration - Select the category that most closely represents the vegetation within the site. In particular, giving consideration to the level of regeneration that would be expected in vegetation of that community in good condition.
- Weed Scores – Record the presence of any weeds declared under the *Landscape SA Act 2019* within the site and assign a cover rating as per the field datasheet as an aggregate of all the declared weeds recorded.

Record the presence of any environmental weeds within the site and assign a cover rating as per the field datasheet as an aggregate of all the environmental weeds recorded. Environmental weeds are considered introduced plants with the capacity to invade and exclude native species from bushland. This typically includes species with a BCM weed threat rating of 3, 4 or 5 as per Appendix 10.

8 Submission of data

8.1 Applications for clearance or SEB area

If you are using the BAM as part of an application to the Native Vegetation Council, the excel scoresheets should be provided along with a Data Report (in relevant NVC template) that interprets the data and resultant scores. The template will outline what information needs to be provided and in what format.

Ensure you are using the most up to date templates and scoresheets as some calculation factors change annually.

8.2 Bushland assessment data storage

Scoresheet data will be stored within DEW information systems including the BDBSA. Information about the BDBSA is available on the DEW website:

https://www.environment.sa.gov.au/topics/science/information-and-data/biological-databases-of-south-australia

9 Monitoring using BAM sites

9.1 Bushland assessment versus BCM

The BAM and Bushland Condition Monitoring method both include condition scores that are measured against NCSSA benchmarks. Bushland Assessment uses an informal 1-hectare sample quadrat, whereas BCM uses a permanently marked 30m x 30m quadrat. A different set of benchmark scores was developed for each sample size. While BCM and BAM both recognise the relevance of conservation and landscape context attributes to overall biodiversity value, BAM differs from BCM in that it more formally integrates these into the scoring system. BAM uses some less precise vegetation condition measures than BCM as a trade-off for available assessment time. BCM includes a section on individual tree measurements.

For general projects where the most appropriate assessment method is to be determined, a consideration of the *purpose* of the assessment will govern whether BAM, BCM, or another assessment method will be the most suitable. BCM may be more appropriate for tracking revegetation progress and the success of certain management techniques.

9.2 Revisiting the BAM site

If revisiting a BAM site for monitoring or other purposes, consider the following when locating the quadrat.

Each datasheet is supposed to cover an approximate 1 hectare quadrat, with the dimensions of that hectare governed by the nature of the vegetation combined with practical considerations such as access. Each quadrat is considered to represent the entire site, so theoretically return visits do not have to traverse the exact area of the original survey. It is recommended, however, that the original waypoint is used as a reference when planning a return visit, and repeat searches are undertaken in the vicinity of this waypoint where possible.

An application area should not be re-mapped into a different combination of sites to the original mapping, even when the vegetation has changed significantly e.g. where a previously grazed site now resembles its neighbouring ungrazed area after stock has been excluded for ten years. Re-mapping takes away the opportunity to measure change from the originally-surveyed condition.

9.3 Timing of repeat survey

Ideally a revisit should occur at a similar time of year to previous surveys. This will not always be possible, so data should be recorded on datasheets to help interpret changes that may be due to rainfall.

9.4 Retaking photopoint photos

The photopoint photo must be re-taken in the same location and in the same direction as for the original survey. This will illustrate change over time.

Photopoints should be set up to be taken in a ‘due south’ direction whenever practical to do so. This will prevent the sun being an issue regardless of the time of day the photo is taken.

9.5 Interpretation of scores

Notes should be taken (as discussed throughout this manual) of the presence of annual weeds and their possible influence on the Weed, Unit Biodiversity and Total Biodiversity Scores. Assessors may need to refer back to the datasheets from previous visits to assist with interpretation of changes in weed cover, regeneration/replanting and other monitoring data, particularly where the associated scores are going to be guiding management.

While Bushland Assessment condition scores are presented as scores against a benchmark (i.e. the higher the score, the closer the vegetation resembles the benchmark community condition), it does not mean that all low scoring sites have low value. Measurement against a benchmark is a general concept that allows for comparisons of different vegetation types and monitoring of success against benchmarked-derived goals. There will be cases where other factors may influence biodiversity value, e.g. a grassland community modified from its original woodland and scoring low against benchmark scores but now providing important habitat for grassland birds. In a management sense, the modified goal state for this community, based on the intended purpose of conserving and managing it into the future, needs to be defined so that any moderating factors on the score and its progression over time can be considered.

10 Appendices

Appendix 1 Standard bushland assessment field datasheet (front and back)

Native Plant Life Forms	Cover Rating		
include height of flowering head & dead branches, # = life form rep'd largely by annuals not in full foliage			
Trees >15 m			
Trees 5 – 15 m			
Trees < 5m			
Mallee > 5m			
Mallee ≤ 5m			
Shrubs > 2 m			
Shrubs 0.5–2m			
Shrubs < 0.5 m			
Forbs			
Mat Plants			
Grasses >0.2m			
Grasses ≤ 0.2m			
'Sedges' > 1m			
'Sedges' ≤ 1m			
Hummock grass			
Vines,scramblers			
Mistletoe			
Ferns			
Grass-trees			
Total			

Cover Rating	
not many, cover <1%	1
Covering 1 - 5%	2
Covering 6 – 25%	3
Covering 26 –50%	4
Covering 51 – 75%	5
Covering > 75%	6

Fallen Timber/debris (log size = that of canopy species (+ emergent species if present)				
Log diameter	None	<1 per 10 canopy trees	≥1 per 10 canopy trees	Score
Trunk sized	0	2	3	
Branch-sized	0	0.5	1	
Litter	Little or none	Sparse and/or patchy litter layer	Dense and more or less continuous litter layer	Score
Litter	0	0.5	1	

Native:exotic Understorey Biomass	
include dead material if attached & recognisable as native	
% native	
80%+	5
40-80	4
20-40	3
10-20	2
5-10	1
<5	0

Hollow-bearing Trees (sm hollows = <5cm, large hollows = >5cm)	
None	0
Sm hollows only	1
Large +/- sm hollows in <=5 trees/ha	2
Large +/- sm hollows in 6-10 trees/ha	3
Large +/- sm hollows in 11-20 trees/ha	4
Large +/- sm hollows in >20 trees/ha	5

Mature Tree Score			
Mature Trees density (trees per ha)	% Tree Canopy dieback		
	<30 %	30 – 70 %	>70 %
None present	0	0	0
0 - 25%	2	1	0
25 – 50%	4	3	2
50 – 75%	6	5	4
75 – 100%	8	7	6

'Treeless' in its natural state (refer to manual)? Y/N

Tree Canopy Cover	
50%+	5
25 - 50	4
10 -25	3
5 - 10	2
2.5 - 5	1
<2.5	0

Soil Type: .... **Aspect:** .... **O/S Ave. Ht:** ....

Vegetation Association Description: ....

....

Recorder/s: .... **Reference No.** ....

Bushland Assessment **Site:** .... **Date:** .... **Zone:** ...... **Datum:** .... **E:** .... **N:** .... **Ph dir'n:** .....

d=dominant, o=outside quadrat, v=voucher, p=planted, R=regen (**perennials**).

Native spp. (cover categories not required, but optional for dominants)				c	c			**Weed spp.** (cover category required for all)	c	c		
			Substantial rock outcrop or cover Y/N									
			Substantial moss and/or lichen Y/N									
			Are long-dead trees present? Y/N									
			Optional tree health information: Dieback estimates species by species:									

The tables below are for data pertaining to the **site in general** (i.e. can be **external** to the surveyed quadrat, such as species only encountered when moving between quadrats. Note, weed covers are not required.

Native spp								Weed spp			

Photographs		
No.	Description	Waypoint
1	Photo representative of surveyed quadrat	

Notes (fencing/exclusions/other issues)

Appendix 2 Bushland assessment <0.5 ha (small site) field datasheet (front and back)

Native Plant life form	
All strata of vegetation heavily impacted and native vegetation represented by only scattered plants	☐
All strata of vegetation impacted with limited structural diversity, largely uniform age classes and reduced vegetation cover	☐
At least one strata of vegetation has been impacted, with reduced structural diversity, elements may be missing (such as plant species that provide specific structural features e.g. sedges or mid layer shrubs) and reduce vegetation cover	☐
Limited impacts on native vegetation, with a diversity of structural features and a varied age class, with only a minor loss in structurally diversity, vegetation cover or structural elements	☐
All strata of vegetation present, little or no sign of disturbance. A variety of life forms and associated age classes present. Vegetation cover near complete	☐

Regeneration	
No regeneration present	☐
Very low regeneration, consisting of highly scattered juvinile plants of a limited number of species	☐
Regeneration present, consisting of multiple individual juvinile plants but a limited number of species	☐
Multiple species regenerating, but low numbers of juvenile plants	☐
Multiple species regenerating with multiple individual juviniles present with varying age classes	☐

Bushland assessment for small sites (<0.5 ha) or narrow linear sites (<5m wide)

'Treeless' in its natural state (refer to manual)? Y/N	

Fallen Timber/debris (log size – that of canopy species (+ emergent species if present)				
Log diameter	None	Limited and sparse	Numerous	Score
Trunk sized	0	2	3	
Branch-sized	0	0.5	1	
Litter	Little or none	Sparse and/or patchy litter layer	Dense and more or less continuous litter layer	Score
Litter	0	0.5	1	

Hollow-bearing Trees (sm hollows – <5cm, large hollows – >5cm)	
None	0
Sm hollows only	1
Large +/- sm hollows in very small proportion of trees	2
Large +/- sm hollows scattered but not common	3
Large +/- sm hollows common in trees	4
Large +/- sm hollows in a large majority of trees	5

Mature Tree Score			
Mature Trees density (trees per ha)	% Tree Canopy dieback*		
	<30 %	30 – 70 %	>70 %
None present	0	0	0
0 - 25%	2	1	0
>25 – 50%	4	3	2
>50 – 75%	6	5	4
>75 – 100%	8	7	6

Native:exotic Understorey Biomass include dead material if attached & recognisable as native	
% native	
>80%+	5
>40-80	4
>20-40	3
>10-20	2
5-10	1
<5	0

Tree Canopy Cover	
>50%+	5
>25 - 50	4
>10 -25	3
>5 - 10	2
2.5 - 5	1
<2.5	0

Weed Scores	
Does the site contain plant species declared under the *NRM Act 2004*	☐
Cover rating for all declared weeds	
Does the site contain environmental weeds (introduced plants with the capacity to invade and exclude native species from bushland. This typically includes species with a BCM weed threat rating of 3, 4 or 5).	☐
Cover rating for all environmental weeds	

Cover Rating	
not many, cover <1%	1
Covering 1 - 5%	2
Covering 6 – 25%	3
Covering 26 –50%	4
Covering 51 – 75%	5
Covering > 75%	6

Vegetation Association Description: ………………………………………………………………………………

Recorder/s: ……………………………………………………………………………………………………

Bushland Assessment **Site:** ………… **Date:** ……… **Zone:** ….. **Datum:** ……. **E:** ………. **N:** ………. **Ph dir'n:** …..

d=dominant, v=voucher, p=planted, R=regen (**perennials**).

Native spp.						Weed spp.		

Native spp						Weed spp		

Photographs		
No.	Description	Waypoint
1	Photo representative of surveyed quadrat	

Notes (fencing/exclusions/other issues)

Appendix 3 South Australian vegetation structural formations

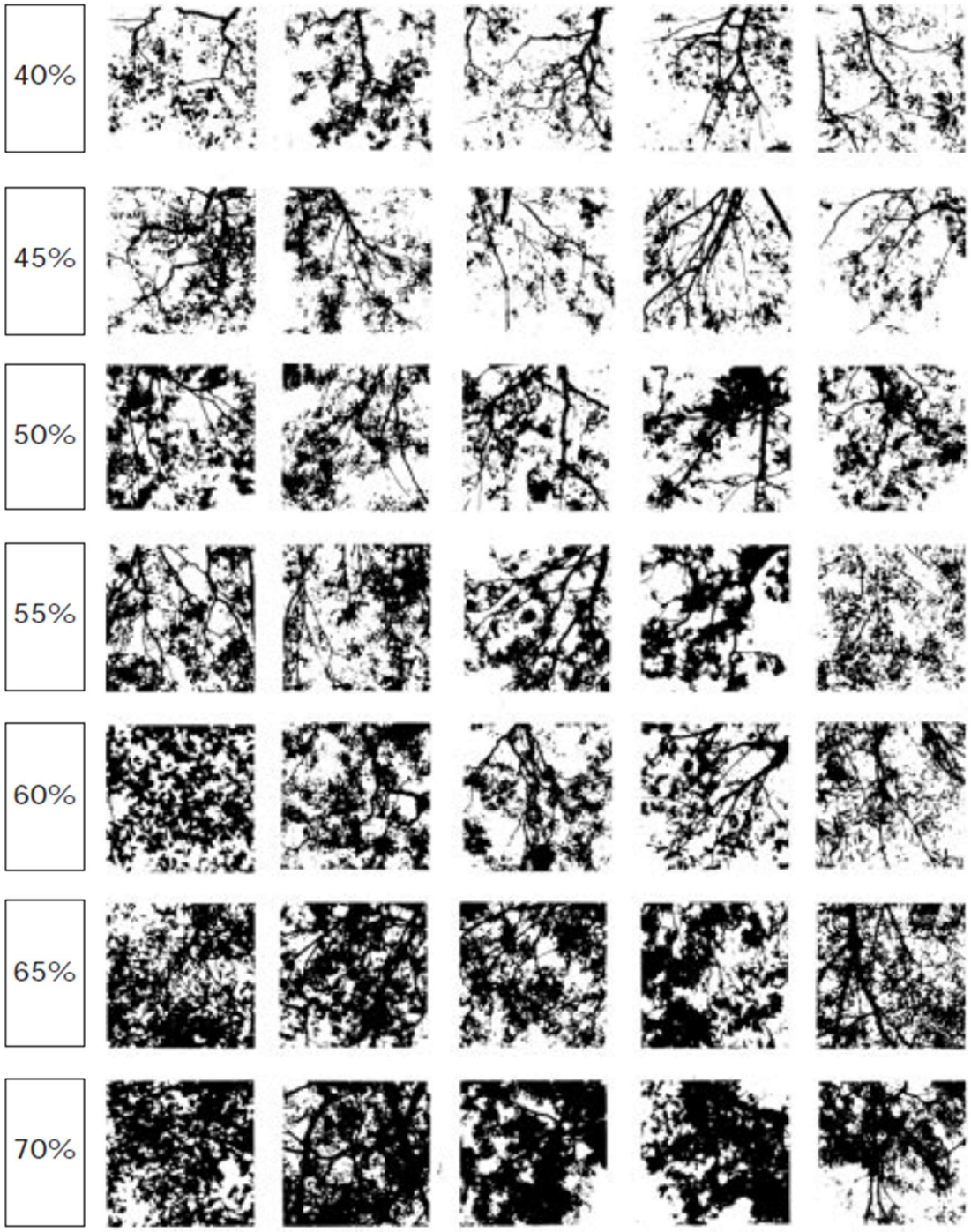
Table below taken from Heard and Channon (1997).

LIFE FORM/ HEIGHT CLASS	PROJECTIVE FOLIAGE COVER OF TALLEST STRATUM			
	Dense (70-100%)	Mid-dense (30-70%)	Sparse (10-30%)	Very sparse (<10%)
Trees > 30m	Tall closed forest	Tall open forest	Tall woodland	Tall open woodland
Trees 10-30m	Closed forest	Open forest	Woodland	Open woodland
Trees 5-10m	Low closed forest	Low open forest	Low woodland	Low open woodland
Trees <5m	Very low closed forest	Very low open forest	Very low woodland	Very low open woodland
Mallee (>3m)	Closed mallee	Mallee	Open mallee	Very open mallee
Low Mallee (<3m)	Closed low mallee	Low mallee	Open low mallee	Very open low mallee
Shrubs > 2m	Tall closed shrubland	Tall shrubland	Tall open shrubland	Tall very open shrubland
Shrubs 1-2m	Closed shrubland	Shrubland	Open shrubland	Very open shrubland
Shrubs < 1m	Low closed shrubland	Low shrubland	Low open shrubland	Low very open shrubland
Mat plants	Closed mat plants	Mat plants	Open mat plants	Very open mat plants
Hummock grasses	Closed Hummock grassland	Hummock grassland	Open hummock grassland	Very open hummock grassland
Tussock grasses	Closed (tussock) grassland	(Tussock) grassland	Open (tussock) grassland	Very open (tussock) grassland
Sedges	Closed sedgeland	Sedgeland	Open sedgeland	Very open sedgeland
Herbs	Closed herbland	Herbland	Open herbland	Very open herbland
Ferns	Closed fernland	Fernland	Open fernland	Very open fernland

[Note: Table originally derived from Specht (1972) and Muir (1977)]

Appendix 4 Cover diagrams

Figure below taken from Heard and Channon (1997)



Appendix 5 Plant life forms

The list below includes plants for which life form categorisation is both important but ambiguous, i.e. plants that are commonly encountered **and** their life form is not always obvious, such as *Acacia pycnantha*. The BAM life forms below may differ from those listed in NCSSA Bushland Condition Monitoring manuals, however BAM assessment data collection should always align with this list.

Family, Genus or Species	Life Form Notes
Acacia spp. – southern regions	Some may be **Tree** form but the distinction not obvious, hence for simplicity call all *Acacia* spp. **Shrub** at all life stages except *A. mearnsii, A. melanoxylon, A. pycnantha* and *A. provincialis* which should be called **Tree** at all life stages.
Acacia spp. – mallee and northern areas	**Trees** include *A. cambagei, A. estrophiolata, A. aneura* and *A. georginae*. Those that could be **either** form (but for which the choice should be obvious) **include** *A. calcicola, A. gillii, A. cibaria, A. loderi, A. murrayana, A. oswaldii, A. papyrocarpa, A. salicina*, & *A. stenophylla*.
Acaena novae-zelandiae	Forb
Acrotriche spp.	Shrub
Alectryon oleifolius ssp. *canescens*	Shrub **or** Tree - look at the branching habit
Allocasuarina spp.	All Shrub **except** *A. leuhmannii, A. verticillata, A striata*
Alternanthera denticulata	Mat Plant
Astroloma humifusum	There are two distinct forms, so it should be obvious whether to list as Shrub **or** Mat plant.
Banksia marginata	Tree
Banksia ornata	Shrub
Bauera rubioides	Shrub **or** Vine/Scrambler – look at the habit
Boerhavia sp.	Vine/Scrambler
Bossiaea prostrata	Vine/Scrambler
Bursaria spinosa ssp. *lasiophylla*	Shrub
Bursaria spinosa ssp. *spinosa*	Shrub **or** Tree – look at the branching habit
Callistemon rugulosus	Shrub **or** Tree – look at the branching habit
Callistemon sieberi	Shrub **or** Tree – look at the branching habit
Callistemon teretifolius	Shrub
Capparis mitchellii	Tree
Carpobrotus spp.	Mat Plant
Cyperaceae spp.	All Sedge/Tussock – even though not all have tussock form, e.g. *Eleocharis gracilis*
Centella spp.	Forb **or** Vine/Scrambler – look at the habit
Centipeda spp.	Forb, **except** *Centipeda minima* ssp. *minima* = Mat Plant
Centrolepidaceae spp.	All Sedge/Tussock
Chamaesyce spp.	*C. drummondii* = Mat Plant, *C. coghlanii* = Shrub, rest are obvious
Cheiranthera alternifolia	Forb
Chenopodium spp.	Mat, Forb **or** Shrub, depending on species. Look at the habit.
Codonocarpus spp.	Shrub **or** Tree – look at the branching habit
Crassula spp.	Forb
Cullen spp.	Forb, Shrub, Mat **or** Vine/Scrambler, depending on species
Dichondra repens	Forb
Disphyma crassifolium ssp. clavellatum	Mat Plant
Drosera spp.	Forb, **except** *D. macrantha* ssp. *planchonii* **=** Vine/Scrambler
Duma florulenta	Shrub
Einadia spp.	Vine/Scrambler
Enchylaena tomentosa	Shrub **or** Vine/Scrambler
Eucalyptus spp.	Tree or Mallee. Include all Box species as Tree. For *E. diversifolia*, place single-stemmed colonies in Tree, multi-stemmed in Mallee.

Family, Genus or Species	Life Form Notes
Euphorbia spp.	Forb
Euromyrtus ramosissima ssp. *ramosissima*	Shrub
Exocarpos aphyllus	Shrub **or** Tree – look at the branching habit
Exocarpos cupressiformis	Shrub **or** Tree – look at the branching habit
Exocarpos sparteus	Shrub
Exocarpos strictus	Shrub **or** Tree – look at the branching habit
Exocarpos syrticola	Shrub **or** Tree – look at the branching habit
Gonocarpus spp.	All Forb except *G. micranthus* ssp. *micranthus* = Mat Plant
Gratiola spp.	Forb
Halosarcia spp.	Shrub **or** Forb, depending on species
Hibbertia spp.	All Shrub **except** *H. empetrifolia* ssp. *radians* = Vine/Scrambler
Hydrocotyle spp.	Forb
Isoetes spp.	Fern
Kennedia spp.	Vine/Scrambler
Kunzea pomifera	Mat Plant
Lawrencia spp.	Forb **or** Shrub
Lipocarpha microcephala	Sedge/Tussock
Liliaceae spp.	Forb, some are Sedge/Tussock (e.g. *Dianella* spp., *Patersonia* spp.)
Luzula spp.	Sedge/Tussock
Lycopodiella lateralis	Forb
Lycopodiella serpentina	Mat Plant
Lycopodium deuterodensum	Fern
Mimulus spp.	Some are Forb, some are Mat Plants, some can be either but should be obvious if you look at habit
Maireana spp.	All Shrub except *M. enchylaenoides* = Forb
Montia australasica	Mat Plant
Montia fontana ssp. *chondrosperma*	Forb
Nitraria billardierei	Shrub
Orchidaceae spp.	Forb, including *Dipodium* sp.
Ophioglossum spp.	Fern
Osteocarpum spp.	Forb
Ottelia ovalifolia ssp. ovalifolia	Forb
Pachycornia triandra	Shrub
Peplidium spp.	Mat Plant
Phragmites australis	Grass
Pittosporum angustifolium	Tree
Pratia spp.	Forb **or** Mat Plant
Restionaceae spp.	All Sedge/Tussock, **except** *Empodisma minus* = Vine/Scrambler
Rhyncharrhena linearis	Shrub **or** Vine/Scrambler
Roepera spp.	Shrub
Santalum spp.	Shrub **or** Tree – look at the branching habit
Sarcocornia spp.	Shrub
Sarcozona spp.	Shrub
Sclerolaena spp.	Shrub **or** Forb, depending on species
Sclerostegia spp.	Shrub
Selaginella spp.	Fern
Suaeda spp.	Shrub **or** Forb, depending on species
Tetragonia implexicoma	Mat Plant, Forb **or** Vine/Scrambler, look at the habit
Typha spp.	include in Sedge/Tussock
Villarsia spp.	Forb
Viminaria juncea	Shrub
Vittadinia spp.	List as Forb unless of a form or age that has woody stems, in which case list as Shrub

Family, Genus or Species	Life Form Notes
Wilsonia backhousei	Shrub
Wilsonia humilis var. *humilis*	Mat Plant
Wilsonia rotundifolia	Mat Plant
Xyris operculata	Sedge/Tussock
Water plants	Many water plants, such as Lemnaceae, *Azolla* spp., *Wolffia* spp. & *Rorippa* spp. can be classified as mat plants, some (e.g. *Lepilaena* spp., *Ruppia* spp., *Triglochin* spp.) are forbs, some genera include both (e.g. *Myriophyllum* spp.). Look at the habit.

Appendix 6 Benchmark scores for 1 ha quadrat

DNS = Do not score; SNB = Can score but no benchmark for this community
Communities coloured **blue** are considered to be **'naturally treeless'**, with scores corrected for absence of tree attributes.

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SMLR 1 - Forests & Woodlands with a Dense Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-4	5-7	8-9	10-11	12-13	14-16	17-20	21-23	24-27	28-30	31-34	35-41	42-48	49-55	56+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-6	7-8	9	10-12	13-14	15-17	18-19	20-22	23-24	25+					
	Regeneration		0	1	2	3-4	5	6	7-8	9-10	11+							
SMLR 2 - Forests and Woodlands with an Open Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-27	28-30	31-36	37-42	43-48	49+
	Weeds		48+	44-47	39-43	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
SMLR 3.1 - Smooth Barked Gum Woodlands with an Open Shrub and Grassy Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
SMLR 3.2 - Box-Bark Gum and Small Tree Woodlands with an Open Shrub and Grassy Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0		1	2	3	4	5-6	7	8+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SMLR 3.3 – Grasslands +/- Emergent Trees & Shrubs	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-12	13-14	15-16	17-18	19-20	21-24	25-29	30-33	34+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0			1	2		3	4	5+							
SMLR 4 - Gully Forests	Plant Species Diversity		0	1-2	3	4	5-6	7	8-10	11-12	13-15	16-18	19-22	23-25	26-31	32-37	38-43	44+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-7	8-9	10	11-12	13-14	15-16	17-18	19-21	22-23	24+					
	Regeneration		0		1	2-3	4	5	6-7	8-9	10+							
SMLR 5.1 - Drainage Line in Grassy Woodland	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21-24	25-29	30-33	34+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-14	15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
SMLR 5.2 - Steep Creekline in Stringybark Forest	Plant Species Diversity		0	1-4	5-6	7-8	9	10-11	12-13	14-15	16-17	18-19	20-22	23-24	25-28	29-33	34-37	38+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-6	7-8	9	10-12	13-14	15-17	18-19	20-22	23-24	25+					
	Regeneration		0	1	2	3-4	5	6	7-8	9-10	11+							
SMLR 5.3 - Deep Channel with Red Gum Woodland	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21-24	25-29	30-33	34+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-14	15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SMLR 6.1 - Shrubland, Sedgeland & Woodland Swamps & Bogs (note only 'naturally treeless if not a Woodland Swamp)	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		48+	44-47	39-43	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-14	15-16	17-19	20-21	22+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
SMLR 6.2 - Common Reed, Bulrush & Lignum Swamps	Plant Species Diversity		0		1	2		3	4	5	6	7	8	9	10-11	12-13	14-15	16+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SMLR 6.3 - Cutting Grass Swamp	Plant Species Diversity		0	1	2	3		4	5	6	7	8	9-10	11	12-13	14-16	17-18	19+
	Weeds		48+	44-47	39-43	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-2	3-4	5-6	7	8	9	10	11-13	14-15	16+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SMLR Co 7.1 - Coastal Tussock Grasslands	Plant Species Diversity		0		1		2		3		4	5		6	7	8-9	10	11+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SMLR Co 7.2 - Coastal Shrublands & Tall Shrublands	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SMLR Co 7.31 - Non-eucalypt Coastal Low Woodlands	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12-14	15-16	17-18	19-21	22-23	24-28	29-32	33-37	38+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
SMLR Co 7.32 - Non-eucalypt Coastal Low Woodlands (Dryland Teatree sole dominant)	Plant Species Diversity		0		1	2		3	4	5	6	7	8	9	10-11	12-13	14-15	16+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1	2	3	4	5	6-7	8	9-11	12-13	14+					
	Regeneration		0		1	2	3		4	5	6+							
SMLR Co 7.4 - Coastal Cliff Low Shrublands, Hummock Grasslands & Very Low Open Woodlands	Plant Species Diversity		0	1-3	4-5	6	7-8	9	10-11	12	13-14	15-16	17	18-19	20-22	23-26	27-29	30+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							
SMLR Co 8.1 - Coastal Samphire Shrublands with Tidal Inundation/Hypersaline	Plant Species Diversity			0			1			2			3		4		5	6+
	Weeds		17+	15-16	14	12-13	10-11	9	8	7	6	5	4		3	2	1	0
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		0			1	2		3	4	5+							
SMLR Co 8.2 – Coastal Samphire +/- Saltbush, Bluebush Shrublands with Infrequent Inundation/Lower Salinity	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0-1	2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SMLR Co 8.3 – Coastal Swamp Paperbark Low Open Forests & Tall Shrublands of Saline Swamps	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0		1	2	3		4	5	6+							
SMLR Co 9 - Mangroves	Plant Species Diversity		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB
	Weeds		17+	15-16	14	12-13	10-11	9	8	7	6	5	4		3	2	1	0
	Native Plant Life Forms		0	1	2		3	4	5		6-8	9-10	11+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SMLR Co Community 1.2 - Coastal Very Low Woodlands with Heath Understorey	Plant Species Diversity		0	1-4	5-7	8-9	10-11	12-13	14-16	17-20	21-23	24-27	28-30	31-34	35-41	42-48	49-55	56+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-6	7-8	9	10-12	13-14	15-17	18-19	20-22	23-24	25+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
SMLR Co Community 2 - Forests & Woodlands with an Open Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-27	28-30	31-36	37-42	43-48	49+
	Weeds		48+	44-47	39-43	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
SMLR Co Community 6.2 - Common Reed, Bulrush & Lignum Swamps	Plant Species Diversity		0		1	2		3	4	5	6	7	8	9	10-11	12-13	14-15	16+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NA 1 - Open Forests & Woodlands with a Dense Shrub Understorey	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-6	7-8	9	10-12	13-14	15-17	18-19	20-22	23-24	25+					
	Regeneration		0	1	2	3-4	5	6	7-8	9-10	11+							
NA 2 - Open Forests & Woodlands with a Mid-dense Shrub & Grassy Understorey	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		48+	44-47	39-43	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
NA 3.1 - Woodlands with an Open Grassy Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
NA 3.2 - Grasslands	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-12	13-14	15-16	17-18	19-20	21-24	25-29	30-33	34+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0			1	2		3	4	5+							
NA 4 - Low Woodlands & Open Mallee with Dense to Mid-dense Shrub & / or Spinifex and Sedge Understorey	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-3	4-6	7-8	9-10	11-12	13-15	16-17	18-20	21-22	23+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NA 5 - Mallee & Woodlands with Open Chenopod & Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0		1	2	3		4	5	6+							
NA 6 - Inland Tall Shrublands	Plant Species Diversity		0	1-3	4-5	6	7	8	9	10	11	12-13	14	15-16	17-19	20-21	22-24	25+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-3	4-5	6	7	8	9	10	11-13	14-15	16+					
	Regeneration		0		1	2	3		4	5	6+							
NA 7.1 - Riparian Woodlands	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-20	21+					
	Regeneration		0		1	2	3		4	5	6+							
NA 7.2 - Common Reed & / or Bulrush Dominated Sedgelands	Plant Species Diversity		0		1	2		3	4	5	6	7	8	9	10-11	12-13	14-15	16+
	Weeds		54+	49-53	45-48	40-44	35-39	32-34	28-31	25-27	22-24	20-21	17-19	15-16	12-14	10-11	7-9	0-6
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		DNS	DNS	DNS	DNS	DNS	DNS	DNS	DNS	DNS							
NA 8 - Coastal Plain Shrublands	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NA 9.1 - Shrublands & Low Shrublands on Coastal Dunes & Shell-grit Ridges	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							
NA 9.2 - Low Woodlands on Coastal Dunes & Shell-grit Ridges	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10	11-12	13-14	15-17	18-19	20-23	24-27	28-31	32+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-4	5-6	7-8	9-10	11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
NA 10.1 - Low Samphire Shrublands with Tidal Inundation / Hypersaline	Plant Species Diversity			0			1			2			3		4		5	6+
	Weeds		17+	15-16	14	12-13	10-11	9	8	7	6	5	4		3	2	1	0
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		0			1	2		3	4	5+							
NA 10.2 - Samphire Shrublands with Infrequent Inundation / Lower Salinity	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0		1	2	3		4	5	6+							
NA 11 - Mangroves on Intertidal Mudflats	Plant Species Diversity		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB
	Weeds		17+	15-16	14	12-13	10-11	9	8	7	6	5	4		3	2	1	0
	Native Plant Life Forms		0	1	2		3	4	5		6-8	9-10	11+					
	Regeneration		DNS	DNS	DNS	DNS	DNS	DNS	DNS	DNS	DNS							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
YP 1 - Woodlands with a Shrub Dominated Understorey	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
YP 2 - Woodlands & Tall Shrublands with Shrub & Sedge Dominated Understorey	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
YP 3.1 - Mallee Box or Red Gum Woodland with an Open Grassy Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11	12-13	14-15	16-18	19-20	21-24	25-28	29-32	33+
	Weeds		48+	44-47	39-42	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
YP 3.2 - Dryland Tea-tree or Drooping Sheoak Low Woodland with an Open Grassy Understorey	Plant Species Diversity		0	1-2	3	4	5-6	7	8	9-10	11	12-13	14	15-16	17-19	20-22	23-25	26+
	Weeds		48+	44-47	39-42	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11-12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							
YP 3.3 - Southern Cypress Pine Woodland with an Open Grassy Understorey	Plant Species Diversity		0	1-2	3	4	5-6	7	8	9-10	11	12-13	14	15-16	17-19	20-22	23-25	26+
	Weeds		48+	44-47	39-42	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11-12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
YP 4 - Mallee with a Sclerophyll Shrub Understorey with Broombush and/or Mallee Honey-myrtle	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3-4	5	6	7-8	9-10	11+							
YP 5 - Mallee with an Open Chenopod & Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0		1	2	3		4	5	6+							
YP 6 - Coastal & Sub-coastal Mallee with a Dense Shrub Understorey	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
YP 7.1 - Coastal Tussock Grasslands of Dunes & Cliffs	Plant Species Diversity		0		1		2		3		4	5		6	7	8-9	10	11+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
YP 7.2 - Coastal Shrublands of Dunes & Cliff-tops	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
YP 7.3 - Coastal Low Woodlands of Dunes & Cliff-top Dunes	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
YP 7.4 - Coastal Very Low Open Woodlands & Low Open Shrublands of Cliffs	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11	12-13	14-15	16-18	19-20	21-24	25-28	29-32	33+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							
YP 8.1 - Low Samphire Shrublands with Tidal Inundation / Hypersaline	Plant Species Diversity			0			1			2			3		4		5	6+
	Weeds		17+	15-16	14	12-13	10-11	9	8	7	6	5	4		3	2	1	0
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		0			1	2		3	4	5+							
YP 8.2 - Samphire Shrublands with Infrequent Inundation/ Lower Salinity	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0		1	2	3		4	5	6+							
YP 8.3 - Swamp Paperbark or Dryland Tea-tree Low Forest Shrublands	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
YP 8.4 - Thatching Grass Sedgelands of Saline Swamps	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		33+	30-32	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	7	5-6	4	3	0-2
	Native Plant Life Forms		0	1-2	3	4	5	6	7	8	9	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
EP 1 - Open Forests & Woodlands with Dense Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-6	7-8	9	10-12	13-14	15-17	18-19	20-22	23-24	25+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
EP 2 - Open Forests & Woodlands with Mid-dense Shrub & Grassy Understorey	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-5	6-7	8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
EP 3.1 - Woodlands with Grassy or Low Sedge Understorey	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-21	22-24	25-29	30-34	35-39	40+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9-10	11-12	13-14	15-17	18-19	20+					
	Regeneration		0		1	2	3		4	5	6+							
EP 3.2 - Grasslands	Plant Species Diversity		0	1-2	3	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11-12	13-15	16-17	18+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EP 4 - Mallee with Dense Sclerophyll Shrub Understorey & Sclerophyll Shrublands	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-28	29-31	32-37	38-43	44-49	50+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-17	18-20	21-22	23+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
EP 5.1 - Mallee on Inland Sand Dunes and Deep Sands	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-21	22-24	25-29	30-34	35-39	40+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9-10	11-12	13-14	15-17	18-19	20+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 5.2 - Mallee on Sandy Loams of Inland Swales and Low Dunes	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 6.1 - Mallee with Open Shrub Understorey on Heavy Clay Soil Flats	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0		1	2	3		4	5	6+							
EP 6.2 - Mallee with Open Shrub Understorey on Clay-loam Soil Flats	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EP 7.1 - Woodlands & Mallee with Mid-dense Sclerophyll Shrub Understorey	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-21	22-24	25-29	30-34	35-39	40+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9-10	11-12	13-14	15-17	18-19	20+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 7.2 - Broombush Closed Shrubland	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-2	3-4	5	6-7	8	9	10	11-13	14-15	16+					
	Regeneration		0		1	2	3		4	5	6+							
EP 8.1 - Mallee & Low Woodlands with Open Sclerophyll Shrub & Chenopod Understorey	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-21	22-24	25-29	30-34	35-39	40+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0		1	2	3		4	5	6+							
EP 8.2 - Mallee & Low Woodlands with Sclerophyll & Chenopod Understorey Dominated by Boree	Plant Species Diversity		0	1-2	3	4	5	6	7	8	9	10	11	12	13-14	15-16	17-18	19+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							
EP 9.1 - Open Mallee & Low Open Woodlands with a Chenopod Shrub Understorey	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EP 9.2 - Chenopod Open Shrublands	Plant Species Diversity		0	1-2	3	4	5	6	7	8	9	10	11	12	13-14	15-16	17-18	19+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							
EP 10.1 - Open Woodlands with Open Sclerophyll Shrub Understorey on Heavy Soil Plains	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							
EP 10.2 - Open Shrublands on Heavy Soil Plains	Plant Species Diversity		0	1-2	3	4	5	6	7	8	9	10	11	12	13-14	15-16	17-18	19+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
EP 11.1 - Inland Mallee & Low Woodland with Mid Dense Sclerophyll Shrub Understorey on Limestone Soils	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-28	29-31	32-37	38-43	44-49	50+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-17	18-20	21-22	23+					
	Regeneration		0		1	2	3		4	5	6+							
EP 11.2 - Sub-coastal & Coastal Low Mallee with Mid Dense Sclerophyll Shrub Understorey on Limestone Soils	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0		1	2	3	4	5-6	7	8+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EP 12.1 - Coastal Tussock Grasslands & Low Open Shrubland of Dunes & Cliffs	Plant Species Diversity		0		1		2		3		4	5		6	7	8-9	10	11+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
EP 12.2 - Coastal Shrublands of Stable Dunes & Cliff-top Dunes	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 12.3 - Coastal Low & Very Low Woodlands or Mallee of stable Dunes & Cliff-top Dunes	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 12.4 - Coastal Very Low Open Woodlands & Low Open Shrublands of Cliffs	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-18	19-20	21-24	25-28	29-32	33+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0			1	2		3	4	5+							
EP 13.1 - Low Samphire Shrublands with Tidal Inundation /Hypersaline Soils	Plant Species Diversity		0				1			2			3		4		5	6
	Weeds		24+	22-23	20-21	17-19	15-16	14	12-13	11	10	8-9	7	6	5	4	3	0-2
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EP 13.2 - Samphire or Chenopod Shrublands with Infrequent Inundation /Saline Soils	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							
EP 13.3 - Swamp Paperbark Low Forest & Tall Shrubland of Saline & Brackish Swamps	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
EP 13.4 - Short-leaf Honey-myrtle Tall Shrubland of Saline & Brackish Swamps, Watercourses	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-2	3-4	5	6-7	8	9	10	11-13	14-15	16+					
	Regeneration		0			1	2		3	4	5+							
EP 13.5 - Thatching Grass Sedgelands of Saline & Brackish Swamps	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
EP 13.6 - Cutting Grass & Other Sedgelands of Brackish & Freshwater Swamps, Watercourses	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EP 13.7 - Woodlands & Tall Shrublands of Brackish & Freshwater Swamps	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10	11-12	13-14	15	16-17	18-20	21-24	25-27	28+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 13.8 - Woodlands & Shrublands of Brackish & Freshwater Watercourses	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0		1	2	3	4	5-6	7	8+							
EP 14 - Mangroves on Intertidal Mudflats	Plant Species Diversity		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB
	Weeds		16+	15	13-14	12	10-11		9	8	7	6	5		4	3	2	0-1
	Native Plant Life Forms		0	1	2		3	4	5		6-8	9-10	11+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 1.1 - Open Woodland with Open Arid-adapted Shrub Understorey on Limestone Plains	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4	5	6	7	8-9	10	11-13	14-15	16+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 1.2 - Tall Shrubland with Open Arid-adapted Understorey on Limestone Plains	Plant Species Diversity		0	1-2	3	4	5	6	7	8	9	10	11-12	13	14-15	16-18	19-20	21+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 1.3 - Grasslands of Arid Open Limestone Plains	Plant Species Diversity		0	1	2	3	4	5	6	7	8	9		10	11-12	13	14-15	16+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-2	3		4	5	6	7	8-10	11-12	13+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 2.1 - Open Mallee / Low Open Woodland with Chenopod Shrub Understorey	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 2.2 - Chenopod Open Shrublands	Plant Species Diversity		0	1-2	3	4	5	6	7	8	9	10	11	12	13-14	15-16	17-18	19+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 3.1 - Mallee with Very Open Sclerophyll / Chenopod Shrub Understorey	Plant Species Diversity		0	1-2	3	4	5-6	7	8	9-10	11	12-13	14	15-16	17-19	20-22	23-25	26+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 3.2 - Mallee with Open Sclerophyll / Chenopod Shrub Understorey	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12	13-14	15-16	17-19	20-21	22-23	24-26	27-28	29+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 3.3 - Mallee with Open Sclerophyll / Chenopod shrub Understorey +/- Triodia Sandy Loam Flats/Swales	Plant Species Diversity		0	1-2	3	4	5-6	7	8	9-10	11	12-13	14	15-16	17-19	20-22	23-25	26+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 4.1 - Mallee with Open Shrub Understorey on Tall Red-sand Dunes/Deep Sand Flats	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10	11-12	13-14	15	16-17	18-20	21-24	25-27	28+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-4	5	6	7-8	9-10	11-13	14-15	16-18	19-20	21+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 4.2 - Mallee with Understorey Dominated by Triodia on Mod/Low Red-sand Dunes /Flats	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 4.3 - Shrublands on Low &/or Isolated Red-sand Dunes	Plant Species Diversity		0	1-2	3	4	5	6	7	8	9	10	11	12	13-14	15-16	17-18	19+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 5.1 - Open Mallee with Open Sclerophyll Shrub Understorey on Clay/Clay-loam Flats	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12	13-14	15-16	17-19	20-21	22-23	24-26	27-28	29+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 5.2 - Mallee with Very Sparse Sclerophyll Shrub Understorey on Clay/Clay-loam Flats	Plant Species Diversity		0	1	2	3		4	5	6	7	8		9	10-11	12	13-14	15+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 6.1 - Open Mallee with Mid-dense Shrub/Tussock Understorey on Limestone Soils	Plant Species Diversity		0	1-3	4-5	6-7	8	9-10	11-12	13-15	16-17	18-20	21-22	23-25	26-30	31-35	36-40	41+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-12	13-14	15-18	19-21	22+					
	Regeneration		0		1	2	3		4	5	6+							
MDBSA 6.2 - Tall Shrublands on Limestone Soils	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21-23	24-28	29-32	33-37	38+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0		1	2	3		4	5	6+							
MDBSA 7.1 - Mallee/Low Woodland with Dense Sclerophyll Understorey on Deep White Sand Dunes	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-18	19-21	22-23	24+					
	Regeneration		0		1	2	3		4	5	6+							
MDBSA 7.2 - Shrublands with Dense Sclerophyll Understorey on Deep White Sand Dunes	Plant Species Diversity		0	1-3	4-5	6-7	8	9-10	11-13	14-15	16-18	19-21	22-24	25-27	28-33	34-38	39-44	45+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-17	18-20	21-22	23+					
	Regeneration		0		1	2	3		4	5	6+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 7.3 - Mallee with Dense Broombush Dominated Understorey on White Sand	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-4	5-6	7	8	9	10	11	12-14	15-16	17+					
	Regeneration		0		1	2	3		4	5	6+							
MDBSA 7.4 - Broombush Tall Shrublands on White Sand Flats	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-4	5-6	7	8	9	10		11-13	14-15	16+					
	Regeneration		0		1	2	3		4	5	6+							
MDBSA 8 - Mallee / Closed Mallee with Dense Shrub Understorey on Shallow Calcareous Sands / Sandy Loam	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0		1	2	3		4	5	6+							
MDBSA 9.1 - Woodlands with an Open Grassy Understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
MDBSA 9.2 - Grass & Mat-rush Sedgelands	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-12	13-14	15-16	17-18	19-20	21-24	25-29	30-33	34+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 10.1 - Freshwater / Brackish Tall Sedgelands +/- Emergent Lignum, Red Gum & Cooba	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-2	3	4	5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 10.2 - Freshwater / Brackish Sedgelands +/- Emergent Lignum, Red Gum & Cooba	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 10.3 - Freshwater / Brackish Tall Herblands +/- Emergent Shrubs & Trees	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 10.4 - Red Gum Woodlands with Dense Lignum Shrub Understorey	Plant Species Diversity		0	1	2	3	4	5	6	7	8	9	10	11	12-13	14-15	16-17	18+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 10.5 - Red Gum Forests / Woodlands with Open Shrub, Herb Grassy Understorey	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-11	12-13	14-15	16-17	18-19	20-23	24-27	28-31	32+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9-10	11-12	13	14-16	17-18	19+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 10.6 - Lignum Shrublands +/- Red Gum, River Box, Cooba	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-3	4-5	6	7	8	9	10	11-13	14-15	16+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 10.7 - River Box Woodlands with Open Shrub, Herb and Grassy Understorey	Plant Species Diversity		0	1-2	3-4	5-6	7	8-9	10-11	12	13-14	15-16	17-19	20-21	22-23	24-26	27-28	29+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-3	4-5	6	7-8	9-10	11-12	13	14-16	17-18	19+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 10.8 - River Box Woodlands with Saline Tolerant Chenopod Understorey	Plant Species Diversity		0	1-2	3	4	5-6	7	8	9-10	11	12	13	14	15-16	17-19	20-21	22+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-4	5-6	7	8	9	10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 10.9 - Mallee Box Woodlands on Inland Depressions	Plant Species Diversity		0	1	2	3		4	5		6	7		8	9	10-11	12	13+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 10.10 - Black Oak Open Forests of Inland Depressions & Drainage Lines	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-3	4-5	6	7	8	9	10	11-13	14-15	16+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 10.11 - Low Woodlands/ Shrublands of River Terraces /Inland Drainage Lines	Plant Species Diversity		0	1	2	3	4	5	6	7-8	9	10	11-12	13	14-16	17-18	19-21	22+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1	2	3	4-5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 11.1 - Low Samphire Shrublands with Tidal Inundation /Hypersaline Soils	Plant Species Diversity		0				1			2			3		4		5	6+
	Weeds		24+	22-23	20-21	17-19	15-16	14	12-13	11	10	8-9	7	6	5	4	3	0-2
	Native Plant Life Forms		0	1	2	3	4	5	6	7	8-10	11-12	13+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 11.2 - Samphire or Chenopod Shrubland with Infrequent Inundation/ Saline Soils	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 11.3 - Swamp Paper-bark Low Forests/ Tall Shrublands Saline/ Brackish Swamps	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Native Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2		3	4	5+							
MDBSA 11.4 - Short-leaf Honey-myrtle Tall Shrubland Saline/ Brackish Swamp/ Watercourse	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-2	3-4	5	6-7	8	9	10	11-13	14-15	16+					
	Regeneration		0			1	2		3	4	5+							

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MDBSA 11.5 - Cutting Grass / Other Sedgelands Saline/ Brackish Swamp/ Watercourse	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Native Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
MDBSA 11.6 - Semi-saline Shrubland River Cliffs, Floodplain/ Depressions/ Drainage Lines	Plant Species Diversity		0	1	2	3		4	5	6	7	8	9	10	11-12	13-14	15-16	17+
	Weeds		39+	36-38	32-35	29-31	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Native Plant Life Forms		0	1-2	3	4	5	6	7	8	9-11	12-13	14+					
	Regeneration		0			1	2		3	4	5+							
NA 2 in MDBSA - Open Forests /Woodlands with Mid-dense Shrub & Grassy Understorey	Plant Species Diversity		0	1-3	4-5	6-7	8-10	11-12	13-15	16-17	18-20	21-23	24-26	27-29	30-35	36-40	41-46	47+
	Weeds		48+	44-47	39-43	35-38	30-34	27-29	23-26	20-22	18-19	15-17	13-14	11-12	10	8-9	5-7	0-4
	Native Plant Life Forms		0	1-5	6-7	8	9-11	12-13	14-16	17-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
KI 1.1 - Woodlands, low woodlands and mallee with dense sclerophyll shrub understorey	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-18	19-21	22-23	24+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
KI 1.2 - Dense sclerophyll shrublands	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-17	18-20	21-22	23+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 2 - Open forests and woodlands with an open sclerophyll shrub understorey	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
KI 3 - Open Forests with a sparse shrub and herbaceous understorey	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 4 - Mallee and woodlands with a mid-dense shrub and sedge understorey on limestone based soils	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 5.1 - Mallee with an open to very open shrub understorey on clay based soils	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1		2	3		4	5	6+							
KI 5.2 - Tall Shrublands with an open to very open shrub understorey on clay based soils	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0			1	2	3		4	5+							
KI 6 - Mallee and closed mallee with a very open understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1		2	3	4		5	6+							
KI 7.1 - Riparian woodlands with an open shrub understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 7.2 - Riparian open forests and woodlands with dense shrub understorey	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
KI 7.3 - Freshwater swamp woodlands and low woodlands	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 7.4 - Freshwater swamp shrublands	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1		2	3		4	5	6+							
KI 7.5 - Sedgelands of Brackish & Freshwater Swamps and Watercourses	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
KI 7.6 - Brackish to Saline Tall Shrublands and Low Open Forest	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		40+	36-39	33-35	29-32	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2	3		4	5+							
KI 7.7 - Samphire low shrublands	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		0			1	2	3		4	5+							
KI 8.1 - Coastal Tussock Grasslands & Low Open Shrublands of Dunes & Cliff-top dunes	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
KI 8.2 - Coastal Shrublands of stable Dunes & Cliff-top Dunes	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 8.3 - Coastal Low & Very Low Woodlands or Mallee of stable Dunes & Cliff-top Dunes	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
KI 8.4 - Coastal Cliff Very Low Open Woodlands & Low Open Shrublands	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0			1	2	3		4	5+							
KI 8.5 - Low Shrublands of Cliff-faces	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
KI 8.6 - Coastal Very Low Woodlands and Low Mallee with mid-dense sclerophyll understorey	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		40+	36-39	33-35	29-32	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
KI 8.7 - Coastal open forests and woodlands with an open shrub understorey	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1		2	3		4	5	6+							
SE 1.1 - Low Woodlands with a dense heath understorey on deep white sands	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-18	19	20-23	24+					
	Regeneration		0	1		2	3		4	5	6+							
SE 1.2 - Shrublands with a dense heath understorey on white sands	Plant Species Diversity		0	1-3	4-5	6-7	8	9-10	11-13	14-15	16-18	19-21	22-24	25-27	28-33	34-38	39-44	45+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-17	18-20	21-22	23+					
	Regeneration		0	1		2	3		4	5	6+							
SE 1.3 - Open Mallee and Mallee with a dense heath understorey on sandy/loam soils	Plant Species Diversity		0	1-4	5-6	7-9	10-11	12-14	15-17	18-20	21-23	24-27	28-30	31-34	35-41	42-47	48-54	55+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6-7	8	9-10	11-12	13-15	16-18	19	20-23	24+					
	Regeneration		0	1		2	3		4	5	6+							
SE 2.1 - Low woodlands over open sclerophyll shrub understorey on sandy loam soils	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
SE 2.2 - Open Forests with open shrub ± bracken understorey on sandy to terra rossa soils	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1		2	3	4	5-6	7	8+							
SE 3.1 - Grassy woodlands on sandy loams/loams	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
SE 3.2 - Grassy woodlands on cracking clay soils	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
SE 4.1 - Poa and Spear Grass Grasslands on heavy grey-black soils	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 4.2 - Kangaroo Grass Grasslands on heavy grey-black soils	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-11	12-13	14-15	16-17	18-19	20-23	24-27	28-31	32+
	Weeds		53+	49-52	44-48	40-43	35-39	32-34	29-31	26-28	23-25	21-22	18-20	16-17	13-15	11-12	7-10	0-6
	Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 5.1 - Woodlands with a seasonally inundated grass and sedge understorey	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1	2	3	4	5	6-7	8	9+							
SE 5.2 - Open Forests and Woodlands with a seasonally inundated shrub and sedge understorey on sandy soils	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
SE 5.3 - Seasonally inundated wet heath shrublands	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1		2	3	4		5	6+							
SE 6.1 - Freshwater Shrublands	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-11	12-13	14-15	16-17	18-19	20-23	24-27	28-31	32+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0			1	2	3		4	5+							
SE 6.2 - Freshwater to Brackish Tall Sedgelands – Bulrush and Common Reed	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-2	3	4	5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 6.3 - Freshwater to Brackish Closed Low sedgelands	Plant Species Diversity		0	1-2	3	4	5-6	7	8-9	10-11	12-13	14-15	16-17	18-19	20-23	24-27	28-31	32+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 6.4 - Freshwater to Brackish Cutting Grass Sedgelands	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 6.5 - Brackish to saline Thatching Grass Sedgelands	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-2	3	4	5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 6.6 - Brackish to Saline Tall Shrublands and Low Open Forest	Plant Species Diversity		0	1-2	3	4	5	6	7	8-9	10	11	12-13	14	15-17	18-19	20-22	23+
	Weeds		40+	36-39	33-35	29-32	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Plant Life Forms		0	1-3	4	5	6-7	8	9-10	11	12-14	15-16	17+					
	Regeneration		0			1	2	3		4	5+							
SE 6.7 - Saline Herblands	Plant Species Diversity		0	1	2	3		4	5		6	7	8	9	10-11	12	13-14	15+
	Weeds		40+	36-39	33-35	29-32	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		DNS	DNS	DNS	DNS	DNS	DNS	DNS	DNS	DNS							
SE 6.8 - Saline samphire low shrublands	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		32+	29-31	26-28	23-25	20-22	18-19	16-17	14-15	12-13	11	9-10	8	6-7	5	3-4	0-2
	Plant Life Forms		0	1-2	3	4	5	6	7-8	9	10-12	13-14	15+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0			1	2	3		4	5+							
SE 7.1 - Coastal Dune Grasslands and Low Open Shrublands	Plant Species Diversity		0		1	2		3	4		5	6		7	8	9-10	11	12+
	Weeds		25+	23-24	20-22	18-19	15-17	13-14	12	10-11	9	7-8	6	5	4	3	2	0-1
	Plant Life Forms		0	1	2	3	4-5	6	7	8	9-11	12-13	14+					
	Regeneration		SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB	SNB							
SE 7.2 - Coastal Dune Shrublands	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		40+	36-39	33-35	29-32	25-28	22-24	20-21	17-19	15-16	13-14	11-12	9-10	8	6-7	4-5	0-3
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12	13-15	16-17	18+					
	Regeneration		0	1		2	3	4		5	6+							
SE 7.3 - Coastal and sub-coastal low woodlands with open grassy understorey	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14-15	16-18	19-20	21+					
	Regeneration		0	1		2	3	4	5-6	7	8+							
SE 7.4 - Coastal mallee and closed mallee with a very open understorey on sandy soils	Plant Species Diversity		0	1-2	3	4-5	6	7-8	9-10	11-13	14-15	16-18	19-21	22-24	25-29	30-35	36-40	41+
	Weeds		40+	36-39	33-35	29-32	25-28	23-24	20-22	18-19	16-17	14-15	12-13	10-11	9	7-8	5-6	0-4
	Plant Life Forms		0	1-4	5-6	7	8-9	10-11	12-13	14	15-17	18-19	20+					
	Regeneration		0	1		2	3	4		5	6+							
SE 7.5 - Coastal, Sub-coastal and Inland Mallee with mid-dense shrub and sedge understorey on calcareous dunes	Plant Species Diversity		0	1-4	5-6	7-8	9-11	12-13	14-16	17-18	19-21	22-24	25-26	27-29	30-34	35-40	41-45	46+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-5	6	7	8-9	10-11	12-14	15-16	17-19	20-22	23+					

Community	Attribute		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Regeneration		0	1		2	3	4		5	6+							
SE 8 - Mallee with an open shrub understorey on poorly drained clay loam to clay soils	Plant Species Diversity		0	1-2	3-4	5	6-7	8	9-10	11	12-13	14-15	16-17	18-19	20-23	24-26	27-30	31+
	Weeds		47+	43-46	39-42	34-38	30-33	27-29	24-26	21-23	19-20	16-18	14-15	12-13	11	9-10	6-8	0-5
	Plant Life Forms		0	1-3	4-5	6	7-8	9	10-11	12-13	14-16	17-18	19+					
	Regeneration		0	1		2	3	4		5	6+							

Appendix 7 Standard BAM scoresheet

'Block' worksheet data applies to the Block of vegetation being assessed

Bushland Assessment Scoresheet (Version - 1 September 2024)

Block	
Size of Block (Ha)	
Landscapes Region	
BCM Region	
IBRA Association	
IBRA Subregion	

ASSESSOR(S)	
DATE OF ASSESSMENT	

Map of the Block (Including the Sites)

Landscape Context Scores

% native veg. remaining in IBRA Assoc.	
% native veg. remaining in IBRA subregion	
0 - 10% = 0.05 pts; >10-20% = 0.04 pts; >20-30% = 0.03 pts; >30-60% = 0.02 pts; > 60 = 0 pts — Score	0

Score received for both IBRA assoc. and subregion then summed

Percent Vegetation Cover (5km radius) (%)	
0-5% = 0 pts; >5-10% = 0.02 pts; >10-25% = 0.04 pts; >25-50% = 0.06 pts; >50-75% = 0.03 pt; >75-100% = 0 pts — Score	0

% native veg. protected IBRA Assoc.	
0-10% = 0.03 pts; >10-20% = 0.02 pts; >20-40% = 0.01 pt; >40% = 0 — Score	0

Block Shape Cleared perimeter:Area (km/km2)	
Cleared Perimeter (m) =	
Cleared Perimeter to area ratio	0.00
<6 = 0.03 pts; 6 to <12 = 0.02 pts; 12 to <18 = 0.01 pt — Score	0

Wetland or Riparian Habitat present	
Riparian zone present (Yes/No) = 0.02 pt	
Swamp/wetland present (Yes/No) = 0.03 pts	
(Swamp/wetland may be +/- riparian zone) — Score	0

Note; Blocks will score a minimum Landscape Context Score of 1	**LANDSCAPE CONTEXT SCORE (max 1.25)** — 1

'Site -Flora Sp.' worksheet, this data applies to the site

Plant Species Recorded (Native and Introduced)		Listed Species			Natives only		
Species	Common Name	EPBC	SA	Not in quadrat	Regen	Annual Herbs Spring survey	Introduced Species

'Site – Fauna Sp.' worksheet, this applies to the site

Threatened or Introduced Animal Species Recorded or Observed (Native and Introduced)		Threatened Species				Introduced Species
Species	Common Name	EPBC	SA	Past Record	Observed	

'Site – Scores' worksheet, this applies to the site (in the example below, the **vegetation association includes trees**)

Vegetation Condition Scores

SITE:	
BCM COMMUNITY	
VEGETATION ASSOCIATION DESCRIPTION	
SIZE OF SITE (Ha)	

Benchmarked attributes
(Scores determined by comparing to a Benchmark community)

Number of Native Species (Minus herbaceous annuals for spring Surveys)	0
Native Plant Species Diversity Score (max 30) from benchmark score *weighted by a factor of 2*	#N/A
Number of regenerating native species	0
Regeneration Score (max 12) from benchmark community weighted by a factor of 1.5	#N/A

Weed species (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I
			0
			0
			0
			0
			0
	Cover x Threat		0
Weed Score (max 15) from benchmark community			#N/A

Native Plant Life Forms	**Cover rating**
Trees > 15m	
Trees 5 - 15 m	
Trees < 5m	
Mallee > 5m	
Mallee < 5m	
Shrubs > 2m	
Shrubs 0.5 - 2m	
Shrubs <0.5m	
Forbs	
Mat Plants	
Grasses > 0.2m	
Grasses < 0.2m	
Sedges > 1m	
Sedges < 1m	
Hummock grasses	
Vines, scramblers	
Mistletoe	
Ferns	
Grass-tree	
Total	0

Native Plant Life Forms (max 20) from benchmark score *weighted by a factor of 2* — #N/A

Non-Benchmarked Attributes
(Scores determined from direct field observations)

Native:exotic Understorey biomass Score (max 5)	

Is the community naturally treeless?	☐
Fallen Timber/Debris (max 5)	
Hollow-bearing trees Score (max 5)	
Mature Tree Score (max 8)	
Tree Canopy Cover Score (max 5)	

Vegetation Condition Score calculation

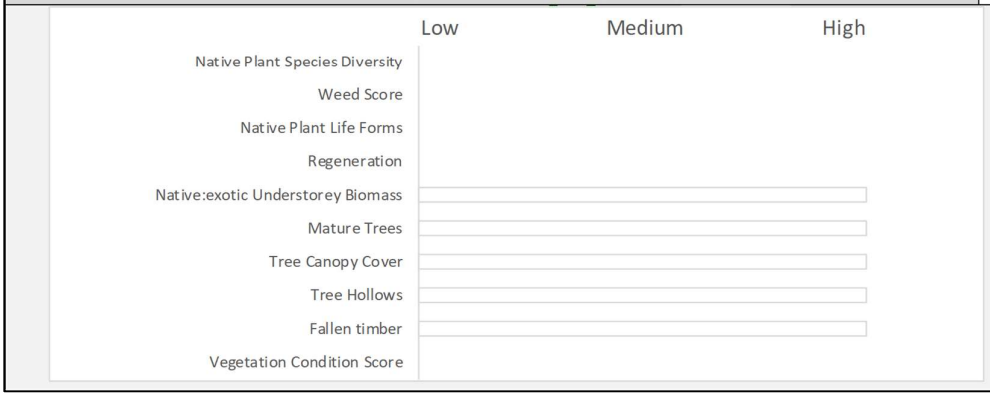
Positive Vegetation Attributes Score = Native species diversity + Regeneration + Native Plant Life Forms Fallen timber/debris + Hollow-bearing trees

- If the community Score is Not Benchmarked (SNB) for regeneration this score is multiplied 1.24

- If the community is naturally treeless this score is multiplied by 1.29 — #N/A

Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2) — #N/A

VEGETATION CONDITION SCORE (Positive veg attributes x ((80 - Negative vegetation attributes) / 80)) — **#N/A**



'Site – Scores' worksheet, this applies to the site (in the example below, the **vegetation association is treeless**)

Vegetation Condition Scores

SITE:	
BCM COMMUNITY	
VEGETATION ASSOCIATION DESCRIPTION	
SIZE OF SITE (Ha)	

Benchmarked attributes
(Scores determined by comparing to a Benchmark community)

Number of Native Species (Minus herbaceous annuals for spring Surveys)	0
Native Plant Species Diversity Score (max 30) from benchmark score *weighted by a factor of 2*	#N/A
Number of regenerating native species	0
Regeneration Score (max 12) from benchmark community weighted by a factor of 1.5	#N/A

Weed species (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I
			0
			0
			0
			0
			0
	Cover x Threat		0
Weed Score (max 15) from benchmark community			#N/A

Native Plant Life Forms	**Cover rating**
Trees > 15m	
Trees 5 - 15 m	
Trees < 5m	
Mallee > 5m	
Mallee < 5m	
Shrubs > 2m	
Shrubs 0.5 - 2m	
Shrubs <0.5m	
Forbs	
Mat Plants	
Grasses > 0.2m	
Grasses < 0.2m	
Sedges > 1m	
Sedges < 1m	
Hummock grasses	
Vines, scramblers	
Mistletoe	
Ferns	
Grass-tree	
Total	0

Native Plant Life Forms (max 20) from benchmark score *weighted by a factor of 2* — #N/A

Non-Benchmarked Attributes
(Scores determined from direct field observations)

Native:exotic Understorey biomass Score (max 5)	

Is the community naturally treeless?	☑
Tree attributes not scored for treeless	
communities or communities with only	
emergent trees	

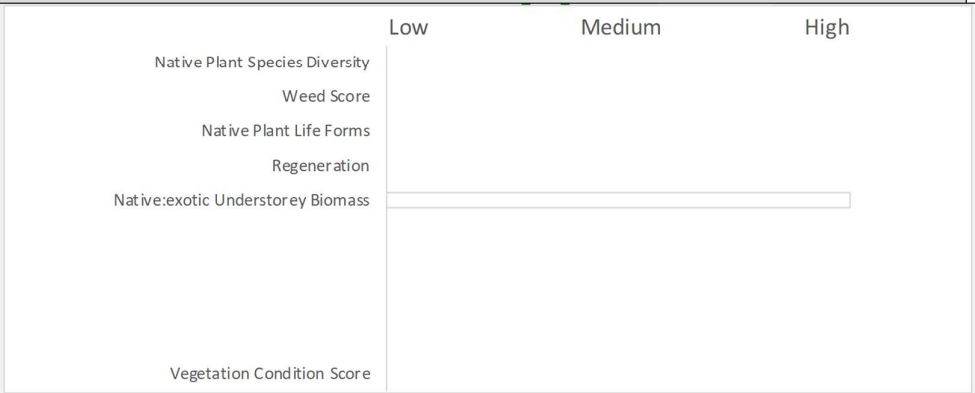
Vegetation Condition Score calculation

Positive Vegetation Attributes Score = Native species diversity + Regeneration + Native Plant Life Forms Fallen timber/debris + Hollow-bearing trees

- *If the community Score is Not Benchmarked (SNB) for regeneration this score is multiplied 1.24*
- *If the community is naturally treeless this score is multiplied by 1.29* — #N/A

Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - (Biomass score x 2))exp2/2) — #N/A

VEGETATION CONDITION SCORE (Positive veg attributes x ((80 - Negative vegetation attributes) / 80)) — #N/A



'Site – Scores' worksheet, this applies to the site

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Yes/No
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Threatened Community Score**	1

Number of Threatened Flora Species recorded for the site (within the site)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Threatened Flora Score	0

Potential habitat for Threatened Fauna Species (number observed or previously recorded)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	0
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**0**
Threatened Fauna Score	0

CONSERVATION SIGNIFICANCE SCORE	**1**

Total Scores for the Site

	Score
LANDSCAPE CONTEXT SCORE	**1.00**
VEGETATION CONDITION SCORE	**#N/A**
CONSERVATION SIGNIFICANCE SCORE	**1.00**

Vegetation Condition x Landscape Context x Conservation Significance =	
UNIT BIODIVERSITY SCORE	#N/A
Total Biodiversity Score (Biodiversity Score x hectares)	#N/A

Photo Point and Vegetation Survey Location	Direction of the Photo
Insert Photopoint Photo	
	GPS Reference
	Datum
	Zone (52, 53 or 54)
	Easting (6 digits)
	Northing (7 digits)
	Description

'Clearance Assessment Summary' worksheet, this applies to the site when assessing for a clearance application (figures are relevant for period starting 1 Sept 2024)

SEB Offset Calculations (when assessing a proposed clearance site)	
SEB Points required for offset	
Loss Factor	
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**#N/A**

SEB - Payment in the Native Vegetation Fund	
SEB Points of Gain/ha Factor	7.5
Approximate SEB hectares required	#N/A
Management Cost Factor ($/ha)	$24,764
Economies of Scale Factor	
Mean annual rainfall for the site (mm)	
Payment into the Fund (GST exclusive)	#N/A
Administration fee (GST inclusive)	#N/A
Total Payment Required	**#N/A**

'SEB Assessment Summary' worksheet, this applies to the site when assessing a proposed SEB area; questions adjust the SEB points provided for sites with non-standard protection or management

SEB Points Provided Calculations

Answer these questions when assessing a site within a proposed SEB area

Refer to the SEB Guide (section on 'Adjust the SEB Points of Gain') for more information

Assessment of SEB site - On ground		
What is the risk of decline or loss of vegetation in the next 20 years?		
Has stock grazing been absent from the site for 10 or more years (and cannot be introduced without approval from the NVC)?		
Is the land subject to zoning or a dedication that is generally restrictive of development activities (e.g. conservation zone, recreation or open space zoning or crown land dedication)?		
There are no, or only very minimal, threats identified that would result in the decline of the vegetation condition (excluding threats beyond the control of the SEB offset provider such as climate change).		
Is the land subject to legally binding obligations (contractual or legislated) that provide an existing level of protection for the native vegetation (e.g. restricts the use of the land or prevents the vegetation from being harmed) that is additional to the protections provided by the Native Vegetation Act 1991?		
Likely % Loss	#N/A	Standard
Will the proposed SEB area be subject to management actions that are clearly and significantly in excess of the standard requirements as set out in the SEB Policy?		
Will a very high standard of revegetation be conducted, including the establishment of a very high proportion of the species diversity which would be expected within the relevant vegetation community, and all strata (which should be present) represented including grasses, sedges, herbs and ground cover plants?		
Will fencing be installed (in excess of the standard stock exclusion fencing) in order to exclude introduced species or excessive herbivory by native and introduced fauna?		
Will intensive and substantial management of threatened flora or fauna be undertaken which is not required in association with the proposed clearance for which the SEB is being provided?		
Are the proposed management actions and their scale of impact already required by duty of care or legislation?		
Only minimal management actions have been committed to in the proposed SEB management plan, such as minimal control of species declared for control under the *Landscapes SA Act 2019*.		
Are the management interventions practically difficult to achieve or is the recovery of the vegetation likely to be inhibited in some way?		
Are there management issues, beyond the control of the SEB offset provider, that are technically or practically difficult to address preventing them from being managed to their fullest possible extent (e.g. weed infestations within difficult to access terrain)?		
Are there physical or environmental constraints which are likely to significantly impede the rehabilitation of vegetation and slow the rate of recovery? This may include compacted soils or altered soil chemistry (e.g. high nutrients/salinity issues) where the issue will continue or increase, significant erosion that cannot be controlled without impacting native vegetation or extensive die-back or plant diseases.		
Likely Improvement Due to Management	#N/A	Standard
In relation to sites requiring substantial revegetation, is it highly likely that a good outcome will be achieved?		
Does the applicant (or site manager/contractor) have significant experience and capability with sufficient resources in delivering habitat reconstruction (revegetation) projects?		
Are there other risk factors which make the outcome uncertain? ***NVB assessment only***		
Is the applicant proposing novel management actions and the outcomes are uncertain? Are there other issues that pose risks to the delivery of the offset that are not already addressed by the above questions?		
Likelihood of Achieving the Outcome	#N/A	Standard

Future Negative UBS Score	#N/A
Future Positive UBS Score	#N/A
UBS Gain Score	#N/A
Estimate of SEB Points provided	**#N/A**

This is an estimate only and will be subject to review and verification by the Native Vegetation Council.

If you answered 'yes' to any question, provide justification in the Data Report

Appendix 8 Modified BAM <0.5 ha (small sites) scoresheet

'Block' worksheet applies to the Block of vegetation (this may include multiple small sites in close proximity).

Bushland Assessment Scoresheet (Small Sites) (Version - 1 Sept 2024)

Block	
Size of Block (ha)	
Landscapes Region	
IBRA Association	
IBRA Subregion	

ASSESSOR(S)	
DATE OF ASSESSMENT	

Map of the Block (Including the Sites)

Landscape Context Scores

Percent Vegetation Cover (5km radius) (%)	
0-5% = 0 pts; >5-10% = 0.02 pts; >10-25% = 0.04 pts; >25-50% = 0.06 pts; >50-75% = 0.03 pt; >75-100% = 0 pts	
Score	0

Block Shape Cleared perimeter:Area (km/km2)	
Cleared Perimeter (m) =	
Cleared Perimeter to area ratio	0.00
<6 = 0.03 pts; 6 to <12 = 0.02 pts; 12 to <18 = 0.01 pt	
Score	0

Note; Blocks will score a minimum Landscape Context Score of 1

% native veg. remaining in IBRA Assoc.	
% native veg. remaining in IBRA subregion	
0 - 10% = 0.05 pts; >10-20% = 0.04 pts; >20-30% = 0.03 pts; >30-60% = 0.02 pts; > 60 = 0 pts	
Score	0

Score received for both IBRA assoc. and subregion and summed

% native veg. protected IBRA Assoc.	
0-10% = 0.03 pts; >10-20% = 0.02 pts; >20-40% = 0.01 pt; >40% = 0	
Score	0

Wetland or Riparian Habitat present	
Riparian zone present (Yes/No) = 0.02 pt	
Swamp/wetland present (Yes/No) = 0.03 pts	
(Swamp/wetland may be +/- riparian zone)	
Score	0

LANDSCAPE CONTEXT SCORE (max 1.25)	1

'Site - Flora Sp.' worksheet applies to the site

Plant Species Recorded (Native and Introduced)		Threatened Sp.		
Species	Common Name	EPBC	SA	Introduced Species

'Site - Fauna Sp.' worksheet applies to the site

Threatened or Introduced Animal Species Recorded or Observed		Threatened Species				Introduced Species
Species Name	Common Name	EPBC	SA	Past Record	Observed	

'Site – Scores' worksheet – this applies to the site level (or multiple small sites in close proximity) where the **vegetation association includes trees**

Vegetation Condition Scores

SITE:	
VEGETATION ASSOCIATION DESCRIPTION	
SIZE OF SITE (Ha)	

Native Plant species diversity	
Score the diversity of species present in the site as a proportion to what would be expected in a vegetation of that community in very good condition (approaching a pre-European state)	
<5% (3 Points)	☐
5-10% (6 Points)	☐
11 - 20% (9 Points)	☐
21 - 30% (12 Points)	☐
31 - 40 % (15 Points)	☐
41 - 50% (18 Points)	☐
51 - 60% (21 Points)	☐
61 - 70% (24 Points)	☐
71 - 80% (27 Points)	☐
>80% (30 Points)	☐
Native Plant species diversity score (max score of 30)	0

Weed Scores	
Does the site contain plant species declared under the *Landscape SA Act 2019* (1.5 points)	☐
Cover rating for all declared weeds (max of 6)	
Does the site contain environmental weeds (introduced plants with the capacity to invade and exclude native species from bushland. This typically includes species with a BCM weed threat rating of 3, 4 or 5). (1 Point)	☐
Cover rating for all environmental weeds (max of 6)	
Weed Score (max score of 15)	15

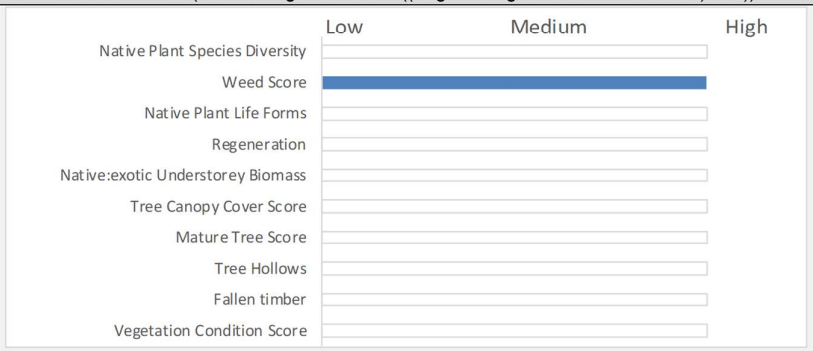
Is the community naturally treeless?	☐
Mature Tree Score (max 8)	
Fallen timber/debris (max 5)	
Hollow-bearing trees Score (max 5)	
Tree Canopy Cover Score (max 5)	
Native:exotic Understorey biomass score (max 5)	

Regeneration	
No regeneration present (0 Points)	☐
Very low regeneration, consisting of highly scattered juvenile plants of a limited number of species (3 points)	☐
Regeneration present, consisting of multiple individual juvinile plants but a limited number of species (6 points)	☐
Multiple species regenerating, but low numbers of juvenile plants (9 points)	☐
Multiple species regenerating with multiple individual juviniles present with varying age classes (12 points)	☐
Regeneration Score (Max 12)	0

Native Plant life form	
All strata of vegetation heavily impacted and native vegetation represented by only scattered plants (4 points)	☐
All strata of vegetation impacted with limited structural diversity, largely uniform age classes and reduced vegetation cover (8 points)	☐
At least one strata of vegetation has been impacted, with reduced structural diversity, elements may be missing (such as plant species that provide specific structural features e.g. sedges or mid layer shrubs) and reduce vegetation cover (12 points)	☐
Limited impacts on native vegetation, with a diversity of structural features and a varied age class, with only a minor loss in structurally diversity, vegetation cover or structural elements (16 points)	☐
All strata of vegetation present, little or no sign of disturbance. A variety of life forms and associated age classes present. Vegetation cover near complete (20 points)	☐
Native Plant life form score (max 20)	0

Vegetation Condition Score calculation

Positive Vegetation Attributes Score = Native species diversity + Regeneration + Native Plant Life Forms + Mature Trees + Fallen timber/debris + Hollow-bearing trees	
If the community is naturally treeless this score is multiplied by 1.24	0.00
Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2)	50.00
VEGETATION CONDITION SCORE (Positive veg attributes x ((Negative vegetation attributes + 60) / 80))	**0.00**



'Site – Scores' worksheet, this applies to the site (or multiple small sites in close proximity) where the **vegetation association is naturally treeless**

Vegetation Condition Scores

SITE:	
VEGETATION ASSOCIATION DESCRIPTION	
SIZE OF SITE (Ha)	

Native Plant species diversity	
Score the diversity of species present in the site as a proportion to what would be expected in a vegetation of that community in very good condition (approaching a pre-European state)	
<5% (3 Points)	☐
5-10% (6 Points)	☐
11 - 20% (9 Points)	☐
21 - 30% (12 Points)	☐
31 - 40 % (15 Points)	☐
41 - 50% (18 Points)	☐
51 - 60% (21 Points)	☐
61 - 70% (24 Points)	☐
71 - 80% (27 Points)	☐
>80% (30 Points)	☐
Native Plant species diversity score (max score of 30)	0

Weed Scores	
Does the site contain plant species declared under the *Landscape SA Act 2019* (1.5 points)	☐
Cover rating for all declared weeds (max of 6)	
Does the site contain environmental weeds (introduced plants with the capacity to invade and exclude native species from bushland. This typically includes species with a BCM weed threat rating of 3, 4 or 5). (1 Point)	☐
Cover rating for all environmental weeds (max of 6)	
Weed Score (max score of 15)	15

Is the community naturally treeless?	☑
Tree attributes not scored for	
treeless community	
Native:exotic Understorey biomass score (max 5)	

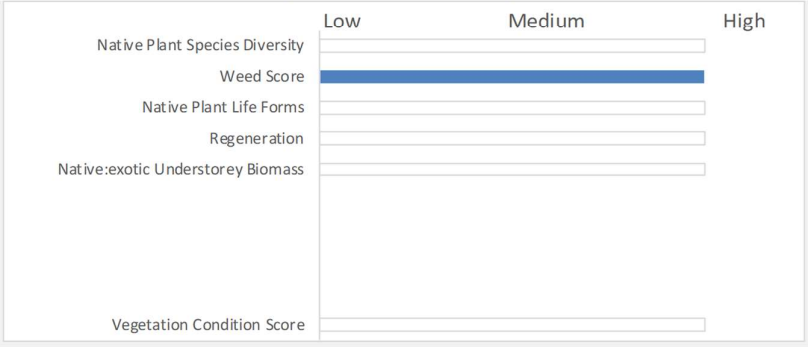
Regeneration	
No regeneration present (0 Points)	☐
Very low regeneration, consisting of highly scattered juvenile plants of a limited number of species (3 points)	☐
Regeneration present, consisting of multiple individual juvinile plants but a limited number of species (6 points)	☐
Multiple species regenerating, but low numbers of juvenile plants (9 points)	☐
Multiple species regenerating with multiple individual juviniles present with varying age classes (12 points)	☐
Regeneration Score (Max 12)	0

Native Plant life form	
All strata of vegetation heavily impacted and native vegetation represented by only scattered plants (4 points)	☐
All strata of vegetation impacted with limited structural diversity, largely uniform age classes and reduced vegetation cover (8 points)	☐
At least one strata of vegetation has been impacted, with reduced structural diversity, elements may be missing (such as plant species that provide specific structural features e.g. sedges or mid layer shrubs) and reduce vegetation cover (12 points)	☐
Limited impacts on native vegetation, with a diversity of structural features and a varied age class, with only a minor loss in structurally diversity, vegetation cover or structural elements (16 points)	☐
All strata of vegetation present, little or no sign of disturbance. A variety of life forms and associated age classes present. Vegetation cover near complete (20 points)	☐
Native Plant life form score (max 20)	0

Vegetation Condition Score calculation

Positive Vegetation Attributes Score = Native species diversity + Regeneration + Native Plant Life Forms + Mature Trees + Fallen timber/debris + Hollow-bearing trees

If the community is naturally treeless this score is multiplied by 1.24	0.00
Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - (Biomass score x 2))exp2/2)	50.00
VEGETATION CONDITION SCORE (Positive veg attributes x ((Negative vegetation attributes + 60) / 80))	**0.00**



'Site – Scores' worksheet, this applies to the site (or multiple small sites in close proximity)

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Yes/No
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Threatened CommuntiyScore**	1

Number of Threatened Flora Species recorded for the site (within the site)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16pts; 20 or > = 0.2 pts	**0**
Threatened Flora Score	0

Potential habitat for Threatened Fauna Species (number observed or previously recorded)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	0
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**0**
Threatened Fauna Score	0

CONSERVATION SIGNIFICANCE SCORE	1

Total Scores for the Site

	Score
LANDSCAPE CONTEXT SCORE	1.00
VEGETATION CONDITION SCORE	0.00
CONSERVATION SIGNIFICANCE SCORE	1.00

Vegetation Condition x Landscape Context x Conservation Significance =	
UNIT BIODIVERSITY SCORE	0.00
Total Biodiversity Score (Biodiversity Score x hectares)	0.00

Photo Point and Vegetation Survey Location	Direction of the Photo
Insert Photo Here	
	GPS Reference
	Datum
	Zone (52, 53 or 54)
	Easting (6 digits)
	Northing (7 digits)
	Description

'Clearance Assessment Summary' worksheet, this applies to the site (or multiple small sites in close proximity) when assessing a clearance application

SEB Offset Calculations (when assessing a proposed clearance site)	
SEB Points required for offset	
Loss Factor	
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**0.00**

SEB - Payment in the Native Vegetation Fund	
SEB Points of Gain/ha Factor	7.5
Approximate SEB hectares required	0.00
Management Cost Factor ($/ha)	$24,764
Economies of Scale Factor	
Mean Annual rainfall for the site (mm)	
Payment into the Fund (GST exclusive)	$0.00
Administration fee (GST inclusive)	$0.00
Total Payment Required	**$0.00**

'SEB Assessment Summary' worksheet, this applies to the site (or multiple small sites in close proximity) when assessing a proposed SEB area

SEB Points Provided Calculations

Answer these questions when assessing a site within a proposed SEB area

Refer to the SEB Guide (section on 'Adjust the SEB Points of Gain') for more information

Assessment of SEB site - On ground		
What is the risk of decline or loss of vegetation in the next 20 years?		
Has stock grazing been absent from the site for 10 or more years (and cannot be introduced without approval from the NVC)?		
Is the land subject to zoning or a dedication that is generally restrictive of development activities (e.g. conservation zone, recreation or open space zoning or crown land dedication)?		
There are no, or only very minimal, threats identified that would result in the decline of the vegetation condition (excluding threats beyond the control of the SEB offset provider such as climate change).		
Is the land subject to legally binding obligations (contractual or legislated) that provide an existing level of protection for the native vegetation (e.g. restricts the use of the land or prevents the vegetation from being harmed) that is additional to the protections provided by the Native Vegetation Act 1991?		
Likely % Loss	7.5%	Standard
Will the proposed SEB area be subject to management actions that are clearly and significantly in excess of the standard requirements as set out in the SEB Policy?		
Will a very high standard of revegetation be conducted, including the establishment of a very high proportion of the species diversity which would be expected within the relevant vegetation community, and all strata (which should be present) represented including grasses, sedges, herbs and ground cover plants?		
Will fencing be installed (in excess of the standard stock exclusion fencing) in order to exclude introduced species or excessive herbivory by native and introduced fauna?		
Will intensive and substantial management of threatened flora or fauna be undertaken which is not required in association with the proposed clearance for which the SEB is being provided?		
Are the proposed management actions and their scale of impact already required by duty of care or legislation?		
Only minimal management actions have been committed to in the proposed SEB management plan, such as minimal control of species declared for control under the *Landscapes SA Act 2019*.		
Are the management interventions practically difficult to achieve or is the recovery of the vegetation likely to be inhibited in some way?		
Are there management issues, beyond the control of the SEB offset provider, that are technically or practically difficult to address preventing them from being managed to their fullest possible extent (e.g. weed infestations within difficult to access terrain)?		
Are there physical or environmental constraints which are likely to significantly impede the rehabilitation of vegetation and slow the rate of recovery? This may include compacted soils or altered soil chemistry (e.g. high nutrients/salinity issues) where the issue will continue or increase, significant erosion that cannot be controlled without impacting native vegetation or extensive die-back or plant diseases.		
Likely Improvement Due to Management	16.0	Standard
In relation to sites requiring substantial revegetation, is it highly likely that a good outcome will be achieved?		
Does the applicant (or site manager/contractor) have significant experience and capability with sufficient resources in delivering habitat reconstruction (revegetation) projects?		
Are there other risk factors which make the outcome uncertain? ***NVB assessment only***		
Is the applicant proposing novel management actions and the outcomes are uncertain? Are there other issues that pose risks to the delivery of the offset that are not already addressed by the above questions?		
Likelihood of Achieving the Outcome	10.0%	Standard

Future Negative UBS Score	0.00
Future Positive UBS Score	1.60
UBS Gain Score	1.60
Estimate of SEB Points provided	**0.00**

This is an estimate only and will be subject to review and verification by the Native Vegetation Council.

If you answered 'yes' to any question, provide justification in the Data Report

Appendix 9 Remnancy and % native vegetation protected values

Statistics are by IBRA Association. These statistics were derived by combining the IBRA layers with existing DEW spatial datasets from EGIS SDE. Figures have been calculated with zero decimal places. Areas which are less than one hectare or percentages less than one may have been subject to rounding and will appear as 0.

Note: IBRA Associations in **red** are from version 7, while IBRA Associations in black are version 6 for areas not updated in version 7

IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected
Acraman	92	23	Cooper Creek	100	42	Keith	3	39	Mundawatana	100	0	Stony Desert	100	0
Adelaide Foothills	1	32	Coorangie	9	60	Kerby Hill	13	0	Mungerowie	87	25	Streaky Bay	35	15
Aldinga	3	44	Coorong	26	82	Kimba	16	31	Murtho	32	3	Strzelecki Desert	100	21
Allendale	3	9	Cooryanna	99	0	Kiona	25	0	Musgrave	100	17	Stuart Creek	100	0
Alma	3	7	Coranda	28	17	Konetta	2	9	Nangwarry	13	63	Sundown	100	0
Amberley	21	8	Corkscrew	100	58	Kongal	3	3	Naracoorte	18	51	Sutherlands	47	0
Ammaroodinna	100	5	Corny	15	6	Koolcutta	100	0	Naranga	6	18	Tarcowie	26	1
Anabama	100	0	Corrabinnie	92	92	Koonamore	100	0	Narina	100	0	Tarlee	5	10
Andamooka	98	0	Cortina	21	33	Koongawa	35	49	Narrung	12	18	Tarracalena	100	0
Angas Plains	5	9	Cradock	65	0	Kooree	100	0	NCP02-Naracoorte	17	56	Tartwaup	1	9
Angle Rock	5	15	Crystal Brook	2	1	Kroonilla	99	72	NCP03-Naracoorte	18	49	Terowie	86	1
Apoinga	19	0	Culburra	1	0	Kunlara	9	37	Neales Flat	8	6	The Big Desert	71	92
Appila	1	0	Cummins	4	0	Kyancutta	17	0	Nene Valley	39	33	Thurlga	93	0
Arden	95	2	Curnamona	100	0	Kybunga	1	0	Newland	52	77	Tilley Swamp	33	60
Arkaba	64	1	Cygnet	27	2	Kybybolite	4	15	Noolook	17	19	Tintinara	6	0
Arthurton	2	2	Darke Peak	23	39	Labyrinth	93	0	Nullarbor	100	68	Tiverton	100	0
Avenue Plains	10	18	Davenport	100	0	Lake Alexandrina	11	3	Numulta	17	10	Tooligie	3	0
Avoid Bay	71	87	Deep Creek	35	62	Lake Eyre	9	43	Nurom	5	0	Torrens	2	51
Bagot	100	44	Dingo	100	21	Lake Frome	44	15	Nurrari	88	0	Towitta	7	0
Balcanoona	100	10	Dismal Swamp	8	51	Lake George	11	35	Oakden	100	0	Tregolana	96	2
Bald Hill	30	0	Douglas	99	0	Lake Gilles	85	56	Officer	100	0	Triple Hill	30	0
Bamboo Swamp	100	0	Drummond	44	19	Lake Hawdon	8	23	Okaralnga	100	62	Uno Range	100	0
Bandon	5	28	Duck Island	29	56	Lake Leake	17	0	Old Telechie	100	0	Uraidla	26	20
Bangham	17	45	Eden Valley	6	3	Lake Phillipson	99	0	Oolarinna	100	0	Urania	6	6
Bare Hill	25	27	Ediacara	100	2	Lake Wright	100	88	Orama	99	0	Uro	99	0
Barilla	100	0	Edillie	13	17	Lincoln	84	77	Oraparinna	100	18	Victoria Desert	100	39
Barossa	7	9	Erragoona	100	91	Lock	5	22	Outouie	100	13	Walalkaranya	100	29
Barrata	96	0	Evelyn Creek	100	10	Lower Murray	8	0	Pallamana	6	19	Walatajaranja	100	47
Barung	4	0	Everard	12	66	Loydella	9	37	Palthrubie	98	1	Walgidya	100	1
Beachport	43	63	Faraway Hill	100	0	Lucindale	17	31	Para	31	38	Wallabyng	99	0
Benagerie	100	0	Finke	100	34	Mabel Creek	99	4	Parcoola	86	7	Walloway	69	0

IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected
Benda Range	100	0	Fleurieu	19	43	Macfarlane	22	0	Parham	44	7	Wandery Hill	99	1
Bight	78	100	Florieton	99	0	MacGillivray	26	39	Parlue	100	0	Warburton	100	0
Billiatt	44	77	Fords Lagoon	100	0	Magnacowie	100	0	Parndana	52	68	Waretta	13	0
Bimbowrie	100	0	Freeling	3	0	Mahanewo	99	0	Pata	7	9	Warraweena	100	26
Birthday Dam	100	0	Fyne	95	33	Malata	27	1	Patchawara	100	93	Warrida	100	0
Blanchetown	67	22	Gairdner	9	73	Mallala	3	2	Peake Bay	16	6	Waulalumbo	98	0
Bleasdale	3	13	Gairloch Dam	100	1	Manarrina	100	0	Peake Creek	100	0	Weetulta	10	1
Blue Range	47	68	Gammon	100	90	Mann Range	99	7	Peaked Hill	100	0	Wellington	4	7
Bob Tiers	29	33	Gantheaume	88	76	Maralinga	100	0	Pendleton	10	9	Wharminda	9	3
Bookabie	58	54	Gawler	100	9	Marble Range	41	40	Penola Station	5	1	White Elephant	92	0
Bool Lagoon	8	56	Giddi Giddinna	82	0	Marree	99	1	Pernatty	24	0	Whyalla	95	3
Boor Plain	3	5	Giles	100	79	McLochlan	68	61	Petermorra	99	0	Wiawera Creek	100	0
Boowillia	3	0	Glencoe	0	15	Merna Mora	93	0	Pine Lodge	100	55	William Creek	98	2
Bordertown	4	6	Glendamboo	96	0	Merninie	100	100	Pine Valley	100	2	Willochra	58	0
Brachina	97	0	Glendella	28	13	Messenger	32	50	Piniewirie	100	0	Willouran	100	0
Breakaway	100	9	Glenroy	0	0	Messent	34	68	Pinkawillinie	42	54	Wilpena	96	39
Brimpton	16	0	Goolwa	9	6	Middleback Range	96	5	Pinnaroo	1	23	Wilyunpa	100	0
Buckalowie	100	0	Greenly	31	12	Midgee	61	56	Polda	45	16	Wipipipee	99	0
Buckaringa	98	5	Hahndorf	8	6	Mongalata	90	12	Polda	46	17	Wirrabara	9	1
Buckleboo	99	12	Hambidge	28	74	Moochra	93	0	Pootkamaunta	99	4	Wirrangula	100	0
Bull Knob	21	21	Hansen	3	1	Mooloolo	100	0	Port Macdonnell	14	65	Wirrealpa	100	0
Bumbunga	17	0	Harper	99	0	Moondiepitchnie	100	0	Port Pirie	51	3	Wirreanda	4	14
Bunda	99	99	Hesso	97	0	Moorlands	5	26	Punthari	18	13	Wirrula	18	14
Bundara	99	0	Hincks	82	92	Mopami	6	2	Purananja	100	100	Woakwine	7	21
Burra Hill	45	5	Holder	18	31	Morambro	0	0	Purndu	100	44	Wokurna	3	19
Butler	7	0	Hopeless	100	0	Mt Burr	13	85	Quorn	71	1	Wood Hill	9	23
Byilcaoora	100	0	Hypurna	99	100	Mt Compass	13	27	Red Rock	100	3	Woolawae	12	0
Callendale	14	21	Ilkina	76	19	Mt Cooper	20	7	Reedbeds	0	0	Woomera	98	0
Cannawigara	10	41	Illbillee	100	0	Mt Dampier	20	26	Renmark	58	32	Worumba	95	0
Canopus	100	45	Inakoo Hill	100	0	Mt Davies	100	100	Rosedale	5	11	Wychinga	100	0
Cantana	17	59	Inkster	58	33	Mt Desperate	38	16	Rufus	9	0	Yacka	3	1
Carcuma	48	78	Inman Valley	11	28	Mt Gambier	1	0	Ruthven	8	46	Yalarna	68	82
Caroline	7	83	Innes	52	49	Mt Gawler	9	2	Salt Creek	53	0	Yalata	100	100
Cave Hill	100	19	Iron Knob	100	0	Mt Margaret	100	0	Sandergrove	11	26	Yalunda	20	9
Ceduna	46	23	Ironstone Hill	99	4	Mt Marsden	26	2	Sandleton	24	6	Yarra Wurta	99	0
Chintumba	96	91	Irrapatana	96	0	Mt Mary	75	1	Sarah	99	0	Yarramba	100	0
Chitaminga	99	1	Isabella	16	8	Mt Misery	12	12	Scotts Hill	10	5	Yeelanna	2	0

IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected	IBRA Association Name	% Veg Cover	% Veg Protected
Clare	8	3	Jacks Hill	27	88	Mt Rapid	9	7	Scrubby Peak	72	38	Yellabina	99	57
Clarendon	34	27	Jarret	100	0	Mt Remarkable	79	23	Sedan	45	19	Yeltana	80	1
Cleve	17	17	Jungle Dam	100	0	Mt Sir Thomas	100	74	Seymour	10	15	Yerda	100	13
Cobbler Hill	49	21	Jussieu	95	100	Mt Terrible	41	41	Shearers Hill	21	4	Yerelina	100	11
Cockburn	100	0	Kadlongaroo	100	0	Mt Wilson	6	4	Simmens	99	0	Yongala	10	0
Coffin Bay	87	100	Kallakoopah	93	61	Mt. Gunson	96	0	Simpson Desert	100	84	Yorketown	10	5
Coolatoo	36	52	Kallora	3	1	Muckera	100	47	Stockport	4	0	Yudnamutana	100	0
Coonalpyn	10	46	Kappawanta	78	41	Mulgarie	99	0	Stokes Bay	54	44	Yudnapinna	100	0
Coonawarra	0	0	Karoonda	6	25	Muloorina	98	0	Stonefield	30	1	Yunta	100	0

Appendix 10 Weed threat ratings

Note: the table below is derived from the original Bushland Condition Monitoring Weed Threat Ratings, but designed to meet the needs of BAM.

NSXCODE is used by DEW for data entry into the BDBSA. Taxonomy updated July 2024.

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
Z02071	*Abutilon theophrasti*	Swamp Lantern-bush	MALVACEAE	1	1	1	1	1	1	-
C01541	*Acacia baileyana*	Cootamundra Wattle	FABACEAE	1	1	-	-	2	1	2
Q01556	*Acacia cyclops*	Western Coastal Wattle	FABACEAE	3	2	-	-	3	3	3
W01559	*Acacia decurrens*	Early Black Wattle	FABACEAE	-	-	-	-	2	1	-
S01581	*Acacia longifolia ssp. longifolia*	Sallow Wattle	FABACEAE	2	3	-	3	3	3	2
K03753	*Acacia longifolia ssp. sophorae*	Coastal Wattle	FABACEAE	?	?	?	?	?	?	Native
W01583	*Acacia mearnsii*	Black Wattle	FABACEAE	2	3	-	2	3	3	-
Y01616	*Acacia saligna*	Golden Wreath Wattle	FABACEAE	3	3	3	3	2	2	2
K04993	*Rumex acetosella*	Sorrel	POLYGONACEAE	1	1	1	1	1	1	1
W04911	*Aeonium arboreum*	Aeonium	CRASSULACEAE	1	1	-	1	2	2	2
Y05784	*Agave americana*	Century Plant	ASPARAGACEAE	2	2	2	2	2	3	-
M00294	*Agrostis gigantea*	Red-top Bent	POACEAE	2	-	-	-	2	2	-
C00125	*Ailanthus altissima*	Tree Of Heaven	SIMAROUBACEAE	1	-	-	-	2	2	-
E10026	*Aira sp.*	Hair-grass	POACEAE	1	1	1	1	1	1	1
C00645	*Allium ampeloprasum*	Wild Leek	AMARYLLIDACEAE	1	1	-	1	2	2	-
W00651	*Allium triquetrum*	Three-cornered Garlic	AMARYLLIDACEAE	1	1	-	1	3	2	2
A00652	*Allium vineale*	Crow Garlic	AMARYLLIDACEAE	-	1	-	-	2	2	2
C00653	*Aloe arborescens*		ASPHODELACEAE	1	1	-	-	1	1	-
E01390	*Alyssum linifolium*	Flax-leaf Alyssum	BRASSICACEAE	1	1	1	-	1	1	-
A00300	*Ammophila arenaria*	Marram Grass	POACEAE	3	3	3	3	3	4	3
K10053	*Amsinckia sp.*	Fiddle-neck	BORAGINACEAE	1	1	2	2	2	2	2
M02442	*Lysimachia arvensis*	Pimpernel	PRIMULACEAE	1	1	1	1	1	1	1
Q02444	*Lysimachia minima*	Chaffweed	PRIMULACEAE	1	-	-	1	1	1	-
G00275	*Anthoxanthum odoratum*	Sweet Vernal Grass	POACEAE	2		2	2	3	2	2
G02351	*Apium graveolens*	Celery	APIACEAE	1	1	2	2	2	2	-
Y32740	*Mesembryanthemum cordifolium*	Heart-leaf Iceplant	AIZOACEAE	1	1	-	-	2	2	-

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
W02403	*Arbutus unedo*	Strawberry Tree	ERICACEAE	-	-	-	-	1	1	-
K02953	*Arctotheca calendula*	Cape Weed	ASTERACEAE	2	2	2	2	2	2	1
Z03967	*Arctotheca populifolia*	Beach Daisy	ASTERACEAE	3	3	-	3	3	4	-
M02954	*Arctotis stoechadifolia*	White Arctotis	ASTERACEAE	3	3	2	2	3	3	3
C05393	*Arenaria leptoclados*	Lesser Thyme-leaved Sandwort	CARYOPHYLLACEAE	1	1	1	1	1	1	1
A20020	*Argyranthemum frutescens ssp.*	Marguerite Daisy	ASTERACEAE	2	3	2	-	3	3	2
U00158	*Arundo donax*	Giant Reed	POACEAE	1	=	=	=	2	2	2
E32026	*Asparagus asparagoides f.*	Bridal Creeper	ASPARAGACEAE	5	5	5	5	5	5	5
U30122	*Asparagus asparagoides f. asparagoides*	Bridal Creeper	ASPARAGACEAE	5	5	5	5	5	5	5
W30123	*Asparagus asparagoides f. Western Cape (R.Taplin 1133)*	Bridal Creeper	ASPARAGACEAE	5	5	5	5	5	5	5
E04578	*Asparagus declinatus*		ASPARAGACEAE	5	5	5	5	5	5	5
Q05208	*Asparagus aethiopicus*	Asparagus Fern	ASPARAGACEAE	-	-	-	-	5	5	5
K00665	*Asparagus officinalis*	Asparagus	ASPARAGACEAE	3	3	4	3	4	4	-
S10681	*Asparagus sp.*	Asparagus sp.	ASPARAGACEAE	5	5	5	5	5	5	5
M00666	*Asphodelus fistulosus*	Onion Weed	ASPHODELACEAE	2	2	2	2	2	2	2
Z02955	*Symphyotrichum subulatum*	Aster-weed	ASTERACEAE	2	2	2	2	2	2	2
G03267	*Asteriscus spinosus*	Golden Pallensis	ASTERACEAE	2	2	2	2	2	2	2
A03688	*Atriplex prostrata*	Creeping Saltbush	AMARANTHACEAE	2	2	2	2	2	2	2
K00277	*Avellinia festucoides*	Avellinia	POACEAE	1	1	1	1	1	1	1
E10106	*Avena sp.*	Oat	POACEAE	2	2	2	2	2	2	2
K03913	*Avena barbata*	Oat	POACEAE	2	2	2	2	2	2	2
Y15316	*Avena barbata/fatua*	Oat	POACEAE	2	2	2	2	2	2	2
Y00128	*Avena fatua*	Oat	POACEAE	2	2	2	2	2	2	2
Z00279	*Avena sativa*	Oat	POACEAE	2	2	2	2	2	2	2
E00726	*Babiana stricta*	Baboon-flower	IRIDACEAE	-	-	-	-	3	3	3
A02704	*Bellardia trixago*	Bellardia	OROBANCHACEAE	1	1	1	1	1	1	-
E02730	*Bellardia latifolia*	Red Bartsia	OROBANCHACEAE	1	1	1	1	1	1	-
Y01324	*Ranunculus trichophyllus*	Water Buttercup	RANUNCULACEAE	1	1	-	-	1	1	1
Y04596	*Berula erecta*	Water Parsnip	APIACEAE	2	-	2	2	2	2	-

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Q01272	*Beta vulgaris ssp. maritima*	Sea Beet	AMARANTHACEAE	1	-	-	-	1	1	1
M01510	*Billardiera heterophylla*	Blue-bell Creeper	PITTOSPORACEAE	-	2	-	2	3	3	3
E00206	*Brachypodium distachyon*	False Brome	POACEAE	2	2	2	2	2	2	2
W10147	*Brassica sp.*	Turnip sp.	BRASSICACEAE	2	2	2	2	2	2	2
W10147	*Brassica sp.*	Turnip sp.	BRASSICACEAE	2	2	2	2	2	2	2
Y00224	*Briza maxima*	Large Quaking-grass	POACEAE	2	2	2	2	2	2	2
K00225	*Briza minor*	Lesser Quaking-grass	POACEAE	2	2	2	2	2	2	2
G01403	*Brassica tournefortii*	Wild Turnip	BRASSICACEAE	2	2	2	2	2	2	2
U00210	*Bromus catharticus*	Prairie Grass	POACEAE	1	1	1	1	1	1	1
A32536	*Bromus diandrus*	Great Brome	POACEAE	1	1	1	1	1	1	1
A04356	*Bromus hordeaceus ssp. hordeaceus*	Soft Brome	POACEAE	1	1	1	1	1	1	1
Y00208	*Bromus madritensis*	Compact Brome	POACEAE	1	1	1	1	1	1	1
K00209	*Bromus rubens*	Red Brome	POACEAE	1	1	1	1	1	1	1
C10149	*Bromus sp.*	Brome	POACEAE	2	2	2	1	1	1	1
Q02540	*Buglossoides arvensis*	Sheepweed	BORAGINACEAE	1	1	1	1	1	1	1
M02354	*Bupleurum semicompositum*	Hare's Ear	APIACEAE	1	1	1	1	1	1	1
K01405	*Cakile maritima ssp. maritima*	Two-horned Sea Rocket	BRASSICACEAE	1	1	1	1	1	2	1
W02587	*Callitriche stagnalis*	Common Water Starwort	PLANTAGINACEAE	1	11	2	1	1	1	-
Z01407	*Capsella bursa-pastoris*	Shepherd's Purse	BRASSICACEAE	1	1	1	1	1	1	1
	Cardamine hirsuta	Hairy bitter-cress	BRASSICACEAE	1	1	-	1	1	1	1
K10185	*Carduus sp.*	Thistle	ASTERACEAE	2	2	2	2	2	2	2
E03010	*Carduus tenuiflorus*	Slender Thistle	ASTERACEAE	2	2	2	2	2	2	2
U00466	*Carex divisa*	Divided Sedge	CYPERACEAE	2	-	2	-	2	1	-
E01014	*Carpobrotus chilensis*	Angled Pigface	AIZOACEAE	2	2	1	-	2	2	-
G01015	*Carpobrotus edulis ssp. edulis*	Hottentot Fig	AIZOACEAE	2	2	2	-	2	3	2
Y01412	*Carrichtera annua*	Ward's Weed	BRASSICACEAE	2	2	2	-	2	2	-
Y03012	*Carthamus lanatus*	Saffron Thistle	ASTERACEAE	2	2	2	2	2	2	1
G03011	*Carthamus leucocaulos*	Glaucous Star-thistle	ASTERACEAE	-	-	-	1	-	-	1
Q03472	*Casuarina glauca*	Grey Buloak	CASUARINACEAE	2	2	2	2	2	2	-
M00226	*Catapodium rigidum*	Rigid Fescue	POACEAE	1	1	1	1	2	2	1
C05369	*Cenchrus ciliaris*	Buffel Grass	POACEAE	3	3	2	-	2	2	-

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W00387	*W00387*	POACEAE	Cenchrus spinifex	-	2	2	-	-	-	-
A00388	*Cenchrus longispinus*	Spiny Burr-grass	POACEAE	2	-	2	-	-	-	-
Y03020	*Centaurea calcitrapa*	Star Thistle	ASTERACEAE	2	2	2	2	2	2	-
K03021	*Centaurea melitensis*	Malta Thistle	ASTERACEAE	2	2	2	2	2	2	2
E02466	*Centaurium erythraea*	Common Centaury	GENTIANACEAE	1	1	1	1	1	1	1
C10201	*Centaurium sp.*	Centaury	GENTIANACEAE	1	1	1	1	1	1	1
Q05912	*Centaurium tenuiflorum*	Branched Centaury	GENTIANACEAE	1	1	1	1	1	1	1
C01065	*Cerastium balearicum*	Chickweed	CARYOPHYLLACEAE	1	1	1	1	1	1	1
G01067	*Cerastium glomeratum*	Common Mouse-ear Chickweed	CARYOPHYLLACEAE	1	1	1	1	1	1	1
Z10207	*Cerastium sp.*	Chickweed	CARYOPHYLLACEAE	1	1	1	1	1	1	1
E01658	*Chamaecytisus palmensis*	Tree Lucerne	FABACEAE	3	2	2	3	3	3	3
W32471	*Chasmanthe floribunda*	African Corn-flag	IRIDACEAE	3	2	1	2	3	2	3
A01160	*Chenopodium album*	Fat Hen	AMARANTHACEAE	1	1	1	1	1	1	1
Z01175	*Chenopodium glaucum*	Glaucous Goosefoot	AMARANTHACEAE	1	1	1	1	1	1	1
S01169	*Chenopodium murale*	Nettle-leaf Goosefoot	AMARANTHACEAE	1	1	1	1	1	1	1
S10217	*Chenopodium sp.*	Goosefoot	AMARANTHACEAE	1	1	1	1	1	1	1
Y00364	*Chloris gayana*	Rhodes Grass	POACEAE	3	3	3	3	3	3	-
Q03032	*Chondrilla juncea*	Skeleton Weed	ASTERACEAE	2	2	3	2	2	2	-
S03033	*Chrysanthemoides monilifera ssp. monilifera*	Boneseed	ASTERACEAE	4	4	4	4	4	3	-
S03041	*Cirsium vulgare*	Spear Thistle	ASTERACEAE	2	2	2	2	2	2	2
M02186	*Citrullus amarus*	Bitter Melon	CUCURBITACEAE	1	1	1	1	1	1	-
K02185	*Citrullus colocynthis*	Colocynth	CUCURBITACEAE	1	1	1	1	1	1	-
C10237	*Citrullus sp.*	Wild Melon	CUCURBITACEAE	1	1	1	1	1	1	-
M03922	*Coleonema pulchellum*	Diosma	RUTACEAE	2	2	-	-	2	2	2
S02357	*Conium maculatum*	Hemlock	APIACEAE	2	2	2	2	2	2	2
K02521	*Convolvulus arvensis*	Field Bindweed	CONVOLVULACEAE	1	1	1	1	1	1	1
K10257	*Erigeron sp.*	Fleabane	ASTERACEAE	1	1	2	1	2	2	-
W03043	*Erigeron bonariensis*	Flax-leaf Fleabane	ASTERACEAE	1	1	2	1	2	2	-
G04703	*Erigeron canadensis*	Canadian Fleabane	ASTERACEAE	1	1	2	1	2	2	-
S02497	*Coprosma repens*	New Zealand Mirror-bush	RUBIACEAE	2	2	2	2	3	3	3

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M10266	*Cotoneaster sp.*	Cotoneaster	ROSACEAE	2	2	-	2	2	2	2
S20045	*Cotyledon orbiculata var.*	Cotyledon	CRASSULACEAE	1	1	1	-	1	1	1
A03132	*Crassula alata var. alata*	Three-part Crassula	CRASSULACEAE	1	-	1	1	1	1	1
A01488	*Crassula natans var. minor*	Water Crassula	CRASSULACEAE	1	1	1	1	1	1	1
G10271	*Crataegus sp.*	Hawthorn	ROSACEAE	2	-	-	-	3	-	-
S01521	*Crataegus monogyna*	Hawthorn	ROSACEAE	2	-	-	-	3	-	-
K10273	*Crepis sp.*	Hawksbeard	ASTERACEAE	1	1	1	1	1	1	1-
Y03056	*Crepis capillaris*	Smooth Hawksbeard	ASTERACEAE	1	1	1	1	1	1	1-
M01386	*Cuscuta campestris*	Golden Dodder	CONVOLVULACEAE	-	-	3	2	2	2	-
E03062	*Cynara cardunculus ssp. flavescens*	Artichoke Thistle	ASTERACEAE	3	2	2	2	2	2	-
W32595	*Cynodon dactylon var.*	Couch	POACEAE	2	2	2	2	2	2	2
Z10291	*Cynodon sp.*	Couch	POACEAE	2	2	2	2	2	2	2
U06326	*Cynodon dactylon var. dactylon*	Couch	POACEAE	2	2	2	2	2	2	2
Z00227	*Cynosurus echinatus*	Rough Dog's-tail Grass	POACEAE	2	-	2	2	2	2	2
Q00500	*Isolepis levynsiana*	Tiny Flat-sedge	CYPERACEAE	1	1	-	1	2	2	2
G01659	*Cytisus scoparius*	English Broom	FABACEAE	3	-	-	-	4	3	-
S00229	*Dactylis glomerata*	Cocksfoot	POACEAE	2	1	2	2	3	2	2
S10305	*Datura sp.*	Thorn-apple	SOLANACEAE	1	1	1	1	1	1	1
Z03315	*Delairea odorata*	Cape Ivy	ASTERACEAE	-	-	-	-	4	3	-
S01417	*Diplotaxis muralis*	Wall Rocket	BRASSICACEAE	2	2	2	2	2	2	2
U01418	*Diplotaxis tenuifolia*	Lincoln Weed	BRASSICACEAE	2	2	2	2	2	2	2
A03864	*Dipogon lignosus*	Lavatory Creeper	FABACEAE	3	3	-	3	2	4	3
Z04395	*Disa bracteata*	South African Weed Orchid	ORCHIDACEAE	3	-	3	3	4	3	3
U03694	*Dischisma arenarium*	Sand Dichisma	SCROPHULARIACEAE	1	-	-	-	-	-	-
M03198	*Dittrichia graveolens*	Stinkweed	ASTERACEAE	1	2	2	1	2	2	1
G00399	*Echinochloa crus-galli*	Common Barnyard Grass	POACEAE	1	1	2	1	2	2	1
E02546	*Echium plantagineum*	Salvation Jane	BORAGINACEAE	2	2	2	2	2	2	2
C00117	*Ehrharta calycina*	Perennial Veldt Grass	POACEAE	3	4	4	4	4	4	4
G00119	*Ehrharta longiflora*	Annual Veldt Grass	POACEAE	2	2	2	2	2	2	2
Q00120	*Ehrharta villosa*	Pyp Grass	POACEAE	3	3	3	3	3	4	-
Y00972	*Rumex hypogaeus*	Three-corner Jack	POLYGONACEAE	1	1	1	1	1	1	1

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Z10363	*Emex sp.*	Three-corner Jack	POLYGONACEAE	1	1	1	1	1	1	1
C00345	*Eragrostis curvula*	African Love-grass	POACEAE	2	2	2	2	2	2	-
C10377	*Erica sp.*	Heath	ERICACEAE				3	4	3	
K03981	*Erica arborea*	Tree Heath	ERICACEAE				3	4	3	
Y03664	*Erica baccans*	Berry-flower Heath	ERICACEAE				3	4	3	
A02404	*Erica lusitanica*	Spanish Heath	ERICACEAE				3	4	3	
E10386	*Erodium sp.*	Heron's-bill/Crowfoot	GERANIACEAE	2	2	2	2	2	2	2
S01865	*Erodium aureum*		GERANIACEAE	*	2	2	2	2	2	2
U01866	*Erodium botrys*	Long Heron's-bill	GERANIACEAE	*	2	2	2	2	2	2
Z01871	*Erodium moschatum*	Musky Herons-bill	GERANIACEAE	2	2	2	2	2	2	2
S01929	*Euphorbia paralias*	Sea Spurge	EUPHORBIACEAE	3	3	3	3	3	3	3
G01931	*Euphorbia peplus*	Petty Spurge	EUPHORBIACEAE	2	2	2	2	2	2	2
Z01935	*Euphorbia terracina*	False Caper	EUPHORBIACEAE	3	3	3	3	3	3	3
Z02947	*Euryops abrotanifolius*	Euryops	ASTERACEAE	-	-	-	-	3	3	-
U00730	*Ferraria crispa ssp. crispa*	Black Flag	IRIDACEAE	1	1	1	1	2	1	2
G00231	*Lolium arundinaceum*	Tall Meadow Ryegrass	POACEAE	1	1	1	2	1	1	-
M00234	*Lolium pratense*	Meadow Ryegrass	POACEAE			1	2	1	1	-
Q00888	*Ficus carica*	Edible Fig	MORACEAE	-	-	-	-	2	2	-
U02366	*Foeniculum vulgare*	Fennel	APIACEAE	2	2	2	2	2	2	2
Q04108	*Fraxinus angustifolia ssp. angustifolia*	Desert Ash	OLEACEAE	3		2		3	3	-
E04314	*Freesia leichtlinii*	Freesia	IRIDACEAE	3	3	3	3	3	3	3
K10417	*Fumaria sp.*	Fumitory	PAPAVERACEAE	1	1	1	1	1	1	1
E01366	*Fumaria bastardii*	Bastard Fumitory	PAPAVERACEAE	1	1	1	1	1	1	1
G01367	*Fumaria capreolata*	White-flower Fumitory	PAPAVERACEAE	1	1	1	1	1	1	1
A01020	*Aizoon pubescens*	Coastal Galenia	AIZOACEAE	2	2	-	-	2	2	-
C01021	*Aizoon secundum*	Galenia	AIZOACEAE	2	2	2	-	2	2	-
C10421	*Aizoon sp.*	Galenia	AIZOACEAE	2	2	2	-	2	2	-
W02499	*Galium aparine*	Cleavers	RUBIACEAE	1			1		2	-
E02502	*Galium divaricatum*	Slender Bedstraw	RUBIACEAE	1	1	1	1	1	1	1
Y02504	*Galium murale*	Small Bedstraw	RUBIACEAE	1	1	1	1	1	1	1
Z02507	*Galium tricornutum*	Three-horned Bedstraw	RUBIACEAE	1	-	-	-	1	1	1

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E00310	*Gastridium phleoides*	Nit-grass	POACEAE	1	1	1	1	1	1	1
U04434	*Gazania linearis*	Gazania	ASTERACEAE	3	3	3	3	3	3	3
M04202	*Gazania rigens*	Gazania	ASTERACEAE	3	-	-	3	3	3	-
Q10428	*Gazania sp.*	Gazania	ASTERACEAE	3	3	3	3	3	3	3
G03435	*Genista monspessulana*	Montpellier Broom	FABACEAE	3	3	3	3	4	3	3
S01873	*Geranium dissectum*	Cut-leaf Geranium	GERANIACEAE	1	1	1	1	1	1	-
U01874	*Geranium molle*	Soft Geranium	GERANIACEAE	1	1	1	1	1	1	1
S10437	*Gladiolus sp.*	Gladiolus	IRIDACEAE	2	2	2	2	3	3	3
G00735	*Gladiolus undulatus*	Wild Gladiolus	IRIDACEAE	2	2	2	2	3	3	3
K01685	*Glycyrrhiza glabra*	Liquorice	FABACEAE	1	-	1	1	1	1	-
M02486	*Gomphocarpus cancellatus*	Broad-leaf Cotton-bush	APOCYNACEAE	2	2	2		2	2	2
S00317	*Hainardia cylindrica*	Common Barb-grass	POACEAE				1			1
S00909	*Hakea laurina*	Pincushion Hakea	PROTEACEAE	1	-	1	-	2	1	2
U32770	*Hedera helix*	English Ivy	ARALIACEAE					4	4	-
E32458	*Leontodon rhagadioloides*	Cretan Weed	ASTERACEAE	1	1	1	1	2	2	1
A02552	*Heliotropium curassavicum*	Smooth Heliotrope	BORAGINACEAE	1	1	2	1	1	1	1
C02553	*Heliotropium europaeum*	Common Heliotrope	BORAGINACEAE	1	1	1	1	1	1	-
Y02556	*Heliotropium supinum*	Creeping Heliotrope	BORAGINACEAE	1	1	1	-	1	1	-
U03270	*Helminthotheca echioides*	Ox-tongue	ASTERACEAE	1	1	1	1	1	1	-
U01426	*Hirschfeldia incana*	Hoary Mustard	BRASSICACEAE	1	1	1	1	1	1	1
C00281	*Holcus lanatus*	Yorkshire Fog	POACEAE	2	2	2	2	2	2	2
Q10496	*Hordeum sp.*	Barley-grasses	POACEAE	1	1	1	1	1	1	1
W01427	*Hornungia procumbens*	Oval Purse	BRASSICACEAE	1	1	1	1	1	1	1
G00451	*Hyparrhenia hirta*	Tambookie Grass	POACEAE	3	-	3	3	3	3	-
U01354	*Hypericum perforatum ssp. veronense*	St John's Wort	HYPERICACEAE	2	2	2	2	3	3	-
Y03196	*Hypochaeris glabra*	Smooth Cat's Ear	ASTERACEAE	1	1	1	1	1	1	2
K03197	*Hypochaeris radicata*	Rough Cat's Ear	ASTERACEAE	2	2	2	2	2	2	2
U03642	*Ipomoea indica*	Purple Morning-glory	CONVOLVULACEAE	1	-	2	1	2	2	-
U06026	*Iris germanica*	Flag Iris	IRIDACEAE	2	-	2	-	3	2	-
Y10520	*Iris sp.*	Iris	IRIDACEAE	2	2	2	2	3	2	2
C00573	*Isolepis marginata*	Little Club-rush	CYPERACEAE	1	1	1	1	2	2	2

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M10530	*Ixia sp.*	Ixia	IRIDACEAE	3	3	3	-	3	3	-
Q00616	*Juncus acutus*	Sharp Rush	JUNCACEAE	3	4	4	3	3	3	-
W00619	*Juncus articulatus*	Jointed Rush	JUNCACEAE	2	2	2	2	3	2	2
Q00624	*Juncus capitatus*	Dwarf Rush	JUNCACEAE	2	2	2	2	2	2	2
U00626	*Juncus effusus*	Soft Rush	JUNCACEAE	1	-	-	-	2	2	2
U03730	*Kickxia elatine ssp. crinita*	Twining Toadflax	PLANTAGINACEAE	1	1	1	1	1	1	1
K32037	*Lactuca serriola f.*	Prickly Lettuce	ASTERACEAE	2	2	2	2	2	2	2
Z03675	*Lagunaria patersonii*	Pyramid Tree	MALVACEAE	2	2	-	-	2	1	2
G00311	*Lagurus ovatus*	Hare's Tail Grass	POACEAE	2	2	2	2	2	2	2
S00237	*Lamarckia aurea*	Toothbrush Grass	POACEAE	1	1	1	1	1	1	-
Y01704	*Lathyrus latifolius*	Perennial Pea	FABACEAE	1	-	-	1	2	2	-
C03581	*Lathyrus tingitanus*	Tangier Pea	FABACEAE	1	-	-	1	2	2	-
E02598	*Lavandula stoechas ssp. stoechas*	Topped Lavender	LAMIACEAE	4	-	2	-	4	2	-
A04760	*Leontodon saxatilis*	Lesser Hawkbit	ASTERACEAE	1	1	1	1	1	1	1
S03393	*Lepidium africanum*	Common Peppercress	BRASSICACEAE	1	1	1	1	1	1	1
K10565	*Lepidium sp.*	Peppercress	BRASSICACEAE	1	1	1	1	1	1	1
W02279	*Leptospermum laevigatum*	Coast Tea-tree	MYRTACEAE	3	3	-	3	3	4	3
Q10584	*Limonium sp.*	Sea-lavenders	PLUMBAGINACEAE	2	2	2	2	2	2	2
K01909	*Linum strictum ssp. strictum*	Upright Yellow Flax	LINACEAE	1	1	1	1	1	1	1
U01910	*Linum trigynum*	French Flax	LINACEAE	1	1	1	1	1	1	1
S04433	*Logfia gallica*	Narrow Cudweed	ASTERACEAE	1	1	1	1	1	1	-
W10595	*Lolium sp.*	Ryegrass	POACEAE	2	2	2	2	1	1	1
G10599	*Lotus sp.*	Lotus	FABACEAE	1	1	1	1	1	1	-
G01711	*Lotus subbiflorus*	Hairy Bird's-foot Trefoil	FABACEAE	-	-	-	-	1	1	-
Z06243	*Lotus uliginosus*	Greater Bird's-foot Trefoil	FABACEAE	-	-	-	-	2	2	-
G02319	*Ludwigia peploides ssp. montevidensis*	Water Primrose	ONAGRACEAE	-	-	3	-	1	-	-
Y01712	*Lupinus cosentinii*	Blue Lupin	FABACEAE				1	2	2	-
M02662	*Lycium ferocissimum*	African Boxthorn	SOLANACEAE	4	4	4	3	3	3	3
W02091	*Malva parviflora*	Small-flower Marshmallow	MALVACEAE	1	1	1	1	1	1	1
Y02600	*Marrubium vulgare*	Horehound	LAMIACEAE	3	3	3	2	2	3	2
C01445	*Matthiola incana*	Common Stock	BRASSICACEAE	2	2	-	-	-	-	2

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
C10625	*Medicago sp.*	Medic	FABACEAE	2	2	2	2	2	2	2
A04540	*Melaleuca armillaris ssp. armillaris*	Bracelet Honey-myrtle	MYRTACEAE	1	-	1	-	2	1	2
S02021	*Melianthus comosus*	Tufted Honey-flower	FRANCOACEAE	1	-	-	-	3	2	-
U02022	*Melianthus major*	Cape Honey-flower	FRANCOACEAE	2	-	-	-	3	2	-
C01729	*Melilotus indicus*	King Island Melilot	FABACEAE	2	2	2	2	2	2	2
E10634	*Mentha sp.*	Mint	LAMIACEAE	1	1	1	1	2	2	2
S02605	*Mentha pulegium*	Pennyroyal	LAMIACEAE	1	1	2	1	2	1	2
U20118	*Mentha spicata*	Spearmint	LAMIACEAE	1	-	1	1	2	2	-
E04878	*Mentha X piperita var. citrata*	Lemon Mint	LAMIACEAE	1	-	1	1	2	2	-
G01023	*Mesembryanthemum crystallinum*	Common Iceplant	AIZOACEAE	2	2	2	2	2	2	2
Y01024	*Mesembryanthemum nodiflorum*	Slender Iceplant	AIZOACEAE	2	2	2	2	2	2	-
C01073	*Sabulina mediterranea*	Slender Sandwort	CARYOPHYLLACEAE	1	1	1	1	1	1	1
E01074	*Moenchia erecta*	Erect Chickweed	CARYOPHYLLACEAE	1	1	1	1	1	1	1
E03266	*Monoculus monstrosus*	Tripteris	ASTERACEAE	1	1	-	-	1	1	-
K00737	*Moraea flaccida*	One-leaf Cape Tulip	IRIDACEAE	3	3	3	3	3	3	3
M00738	*Moraea miniata*	Two-leaf Cape Tulip	IRIDACEAE	3	3	3	3	3	3	-
Y00736	*Moraea setifolia*	Thread Iris	IRIDACEAE	2	2	2	2	2	2	2
Y02000	*Muraltia heisteria*	African Furze	POLYGALACEAE	-	-	1	-	3	1	-
E03514	*Myosotis discolor*	Changing Forget-me-not	BORAGINACEAE	1	-	1	1	1	1	-
U00722	*Narcissus tazetta*	Polyanthus Narcissus	AMARYLLIDACEAE	2	2	-	-	3	2	2
W05771	*Nassella leucotricha*	Texas Needle Grass	POACEAE	-	-	-	-	3	2	-
U05770	*Nassella neesiana*	Chilean Needle Grass	POACEAE	-	-	3	-	3	2	-
E02562	*Neatostema apulum*	Hairy Sheepweed	BORAGINACEAE	1	1	1	1	1	1	-
Q02664	*Nicotiana glauca*	Tree Tobacco	SOLANACEAE	2	2	2	2	2	2	2
E00822	*Oenothera stricta ssp. stricta*	Common Evening Primrose	ONAGRACEAE	2	2	2	2	2	2	2
S20125	*Olea europaea ssp.*	Olive	OLEACEAE	3	4	3	3	4	4	4
A04444	*Oncosiphon suffruticosum*	Calomba Daisy	ASTERACEAE	3	3	3	-	3	3	-
Q04952	*Onopordum acanthium*	Scotch Thistle	ASTERACEAE	2	2	2	2	2	2	-
A03264	*Onopordum acaulon*	Horse Thistle	ASTERACEAE	2	2	3	2	2		2
C06417	*Opuntia sp.*		CACTACEAE	2	2	2	-	2	-	-

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
Y05036	*Orobanche minor*	Lesser Broomrape	OROBANCHACEAE	-	-	3	-	2	-	-
M04158	*Orobanche ramosa ssp. mutelii*	Branched Broomrape	OROBANCHACEAE	-	-	3	-	2	-	-
M10718	*Orobanche sp.*	Broomrape	OROBANCHACEAE	-	-	3	-	2	-	-
Z01855	*Oxalis corniculata*	Creeping Wood-sorrel	OXALIDACEAE	2	2	2	-	2	2	2
M01862	*Oxalis pes-caprae*	Soursob	OXALIDACEAE	3	3	3	3	4	4	3
Z01863	*Oxalis purpurea*	One-o'clock	OXALIDACEAE	2	2	2	2	2	2	2
K10733	*Papaver sp.*	Poppy	PAPAVERACEAE	1	1	1	1	1	1	1
U00318	*Parapholis incurva*	Curly Ryegrass	POACEAE	2	2	2	2	1	2	2
Y10740	*Parentucellia sp.*	Bartsia	SCROPHULARIACEAE	1	1	1	1	1	1	1
C00417	*Paspalum dilatatum*	Paspalum	POACEAE	3	3	3	3	3	3	3
U00182	*Paspalum distichum*	Water Couch	POACEAE	3	3	3	3	3	3	3
E00418	*Paspalum vaginatum*	Salt-water Couch	POACEAE	3	3	3	3	3	3	3
S00421	*Cenchrus clandestinus*	Kikuyu	POACEAE	3	3	3	3	3	3	3
U00422	*Cenchrus macrourus*	African Feather-grass	POACEAE	3	3	3	3	3	3	-
C03709	*Cenchrus setaceus*	Fountain Grass	POACEAE	3	4	4	4	4	4	4
W00423	*Cenchrus longisetus*	Feather-top	POACEAE	3	3	3	3	3	3	3
C00185	*Pentameris airoides ssp. airoides*	False Hair-grass	POACEAE	1	1	1	2	1	1	-
E00186	*Pentameris pallida*	Pussy Tail	POACEAE	3	3	3	3	3	3	-
Q10760	*Petrorhagia sp.*	Pink	CARYOPHYLLACEAE	1	1	1	1	1	1	1
Z01079	*Petrorhagia dubia*	Velvet Pink	CARYOPHYLLACEAE	1	1	1	1	1	1	1
W10763	*Phalaris sp.*	Canary Grass	POACEAE	3	3	3	3	3	3	3
K00285	*Phalaris aquatica*	Phalaris	POACEAE	3	3	3	3	3	3	3
M00286	*Phalaris canariensis*	Canary Grass	POACEAE	3	3	3	3	3	3	3
E02570	*Phyla canescens*	Lippia	VERBENACEAE	2	2	3	2	2	2	-
K02733	*Phyllopodium cordatum*		SCROPHULARIACEAE	-	1	1	-	1	1	-
Z03375	*Pinus halepensis*	Aleppo Pine	PINACEAE	3	3	3		2	3	3
W03379	*Pinus radiata*	Radiata Pine	PINACEAE	3	3	2		3	3	3
W00123	*Piptatherum miliaceum*	Rice Millet	POACEAE	2	2	2	2	2	2	2
C01509	*Pittosporum undulatum*	Sweet Pittosporum	PITTOSPORACEAE	2	2	-	-	3	3	3
G02811	*Plantago bellardii*	Hairy Plantain	PLANTAGINACEAE	1	1	2	1	1	2	-
E20138	*Plantago coronopus ssp.*	Bucks-horn Plantain	PLANTAGINACEAE	2	2	2	2	2	2	2

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
A20284	*Plantago lanceolata var.*	Ribwort	PLANTAGINACEAE	2	2	2	2	2	2	2
M10786	*Plantago sp.*	Plantain	PLANTAGINACEAE	2	2	2	2	2	2	2
Z05971	*Poa annua*	Winter Grass	POACEAE	2	2	2	2	2	2	2
Q00244	*Poa bulbosa*	Bulbous Meadow-grass	POACEAE	2	2	2	2	2	2	2
W00255	*Poa pratensis*	Kentucky Blue-grass	POACEAE			2	2	2	2	2
Q10796	*Poa sp.*	Meadow-grass/Tussock-grass	POACEAE	2	2	2	2	2	2	2
E10802	*Polycarena rariflora*		SCROPHULARIACEAE	-	-	-	-	1	1	-
E01082	*Polycarpon tetraphyllum*	Four-leaf Allseed	CARYOPHYLLACEAE	1	1	1	1	1	1	1
M02002	*Polygala monspeliaca*	Annual Milkwort	POLYGALACEAE	-	-	-	1	-	-	-
Z02003	*Polygala myrtifolia*	Myrtle-leaf Milkwort	POLYGALACEAE	3	4	-	4	4	4	4
M06066	*Polygonum aviculare*	Wireweed	POLYGONACEAE	1	2	2	1	1	1	2
M00314	*Polypogon maritimus*	Coast Beard-grass	POACEAE	1	1	1	1	1	2	1
Z00315	*Polypogon monspeliensis*	Annual Beard-grass	POACEAE	1	1	1	1	1	2	2
Q00316	*Polypogon viridis*	Water Bent	POACEAE	1	1	1	1	1	1	1
M03154	*Populus alba*	White Poplar	SALICACEAE	1	-	2	1	1	1	1
G10811	*Populus sp.*	Poplar	SALICACEAE	1	=	2	1	1	1	2
Q03392	*Mesembryanthemum granulicaule*	Match-head Plant	AIZOACEAE	1	1	2	-	-	-	-
C32165	*Puccinellia ciliata*	Australian Saltmarsh-grass	POACEAE	1	1	1	1	1	1	1
G00259	*Puccinellia distans*	Reflexed Poa	POACEAE	1	-	2	1	1	1	-
Q00260	*Puccinellia fasciculata*	Borrer's Saltmarsh-grass	POACEAE	1	1	2	2	1	1	-
Q01336	*Ranunculus repens*	Creeping Buttercup	RANUNCULACEAE	1	1	2	1	2	1	-
G01463	*Raphanus raphanistrum*	Wild Radish	BRASSICACEAE	1	1	1	1	1	1	1
K01465	*Rapistrum rugosum ssp. rugosum*	Turnip Weed	BRASSICACEAE	2	2	2	1	2	2	-
Y03292	*Reichardia tingitana*	False Sowthistle	ASTERACEAE	2	2	2	2	2	2	2
M01482	*Reseda lutea*	Cut-leaf Mignonette	RESEDACEAE	2	2	2	2	2	2	-
Z01483	*Reseda luteola*	Wild Mignonette	RESEDACEAE	2	2	2	2	2	2	-
G10847	*Reseda sp.*	Mignonette	RESEDACEAE	2	2	2	2	2	2	-
A03652	*Retama raetam*	White Weeping Broom	FABACEAE	2	2	2	2	2	2	-
M02046	*Rhamnus alaternus*	Blowfly Bush	RHAMNACEAE	3	3	3	3	3	3	3
S01953	*Ricinus communis*	Castor Oil Plant	EUPHORBIACEAE	2	2	2	2	2	2	2

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
M00754	*Romulea minutiflora*	Small-flower Onion-grass	IRIDACEAE	2	2	2	2	2	2	2
Z00755	*Romulea rosea var. australis*	Common Onion-grass	IRIDACEAE	2	2	2	2	2	2	2
U10666	*Romulea sp.*	Onion-grass sp.	IRIDACEAE	2	2	2	2	2	2	2
Z03499	*Rorippa nasturtium-aquaticum*	Watercress	BRASSICACEAE	2	2	2	2	2	2	-
E01526	*Rosa canina*	Dog Rose	ROSACEAE	3	3	3	3	3	3	-
Y01528	*Rosa rubiginosa*	Sweet Briar	ROSACEAE	3	3	3	3	3	3	3
E00282	*Rostraria cristata*	Annual Cat's-tail	POACEAE	1	1	1	1	1	1	1
Y00284	*Rostraria pumila*	Tiny Bristle-grass	POACEAE	1	1	1	1	1	1	-
G10863	*Rubus sp.*	Blackberry	ROSACEAE	4	4	3	3	5	5	4
C32393	*Rubus fruticosus aggregate*	Blackberry	ROSACEAE	4	4	3	3	5	5	4
U00994	*Rumex conglomeratus*	Clustered Dock	POLYGONACEAE	2	2	2	2	1	1	--
W00995	*Rumex crispus*	Curled Dock	POLYGONACEAE	2	2	2	2	1	1	2
K10865	*Rumex sp.*	Dock	POLYGONACEAE	2	2	2	2	2	2	2
G01083	*Sagina apetala*	Annual Pearlwort	CARYOPHYLLACEAE	1	1	1	1	1	1	1
K01085	*Sagina maritima*	Sea Pearlwort	CARYOPHYLLACEAE	1	1	1	1	2	2	-
Y10872	*Salix sp.*	Willow	SALICACEAE	3	3	4	3	4	4	-
M20166	*Salvia verbenaca var.*	Wild Sage	LAMIACEAE	2	2	2	2	2	2	2
S02833	*Sixalix atropurpurea*	Pincushion	CAPRIFOLIACEAE	3	2	2	2	3	2	2
G03875	*Schinus molle*	Pepper-tree	ANACARDIACEAE	2	2	2	2	2	2	2
K00189	*Schismus barbatus*	Arabian Grass	POACEAE	1	1	1	1	1	1	1
Q03536	*Senecio angulatus*	Cape Ivy	ASTERACEAE	-	-	-		4	3	3
C03301	*Senecio elegans*	Purple Groundsel	ASTERACEAE	-	-	1	2	1	1	-
Y03320	*Senecio pterophorus*	African Daisy	ASTERACEAE	3	3	3	3	3	3	3
Q03324	*Senecio vulgaris*	Common Groundsel	ASTERACEAE	1	-	-	1	1	1	1
Q02516	*Sherardia arvensis*	Field Madder	RUBIACEAE	1	1	1	1	1	1	1
U10914	*Silene sp.*	Catchfly	CARYOPHYLLACEAE	1	1	1	1	1	1	1
G01091	*Silene apetala*	Sand Catchfly	CARYOPHYLLACEAE	1	1	1	1	1	1	1
U03326	*Silybum marianum*	Variegated Thistle	ASTERACEAE	2	2	2	2	2	2	2
C10917	*Sisymbrium sp.*	Wild Mustard	BRASSICACEAE	1	1	1		1	1	1
U02674	*Solanum aviculare*	Kangaroo Apple	SOLANACEAE	2	2	-	-	2	2	2
G02679	*Solanum elaeagnifolium*	Silver-leaf Nightshade	SOLANACEAE	2	2	2	2	2	2	2

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
W04883	*Solanum linnaeanum*	Apple Of Sodom	SOLANACEAE	2	2	2	-	3	3	3
W02691	*Solanum nigrum*	Black Nightshade	SOLANACEAE	2	2	2	2	2	2	2
U20178	*Sonchus asper ssp.*	Rough Sow-thistle	ASTERACEAE	2	2	2	2	2	2	2
K30081	*Sonchus oleraceus*	Common Sow-thistle	ASTERACEAE	1	1	1	1	1	1	1
C10925	*Sonchus sp.*	Sow-thistle	ASTERACEAE	1	1	1	1	1	1	1
Q00756	*Sparaxis bulbifera*	Sparaxis	IRIDACEAE	3	3	3	3	3	3	3
G10927	*Sparaxis sp.*	Sparaxis	IRIDACEAE	3	3	3	3	3	3	3
S00757	*Sparaxis tricolor*	Tricolor Harlequin Flower	IRIDACEAE	3	3	3	3	3	3	-
S01777	*Spartium junceum*	Spanish Broom	FABACEAE	2	2	-	-	3	3	-
A10932	*Spergularia sp.*	Sand-spurrey	CARYOPHYLLACEAE	1	1	1	1	1	1	1
Z03711	*Sporobolus africanus*	Rat-tail Grass	POACEAE	1	-	1	1	2	2	1
C05377	*Sporobolus virginicus*	Salt Couch	POACEAE	2	2	2	2	2	2	-
Y02636	*Stachys arvensis*	Stagger Weed	LAMIACEAE	1	1	-	-	2	1	1
Z01107	*Stellaria media*	Chickweed	CARYOPHYLLACEAE	1	1	1	1	1	1	1
C00433	*Stenotaphrum secundatum*	Buffalo Grass	POACEAE		2	2		2	2	2
S03501	*Suaeda aegyptiaca*		AMARANTHACEAE	2	2	-	-	-	-	-
S04125	*Suaeda baccifera*	Seablite	AMARANTHACEAE	2	2	-	-	-	-	-
U05886	*Tamarix aphylla*	Athel Pine	TAMARICACEAE	3	3	3	2	2	2	3
U10966	*Taraxacum sp.*	Dandelion	ASTERACEAE	1	1	1	1	1	1	1
S00545	*Thinopyrum elongatum*	Tall Wheat-grass	POACEAE	3	3	3	3	3	3	3
Y04852	*Thinopyrum junceiforme*	Sea Wheat-grass	POACEAE	-	-	-	3	3	4	3
S05209	*Trachyandra divaricata*	Dune Onion Weed	ASPHODELACEAE	-	2	-	-	2	4	-
Q04740	*Tragopogon porrifolius*	Salsify	ASTERACEAE	2	2	2	2	2	2	2
U01890	*Tribulus terrestris*	Caltrop	ZYGOPHYLLACEAE	2	2	2	1	1	1	-
E11002	*Trifolium sp.*	Clover	FABACEAE	2	2	2	2	2	2	2
E03266	*Monoculus monstrosus*	Tripteris	ASTERACEAE	1	1	1	1	1	1	-
M02882	*Tritonia squalida*	Tritonia	IRIDACEAE	-	-	-	-	2	2	-
W01883	*Tropaeolum majus*	Nasturtium	TROPAEOLACEAE	1	-	-	-	2	2	2
Y01844	*Ulex europaeus*	Gorse	FABACEAE	3	-	3	-	4	4	4
E03346	*Urospermum picroides*	False Hawkbit	ASTERACEAE	2	2	2	2	2	2	2
M00894	*Urtica urens*	Small Nettle	URTICACEAE	1	1	1	1	1	1	1

NSX CODE	Species name	Common Name	Family	Threat N/Y	Threat EP	Threat MDB	Threat SE	Threat SMLR	Threat SMLR-CO	Threat KI
A04004	*Vellereophyton dealbatum*	White Cudweed	ASTERACEAE	1	1	1	1	1	1	1
S02737	*Verbascum virgatum*	Twiggy Mullein	SCROPHULARIACEAE	2	2	2	2	2	2	-
A30060	*Verbena supina var.*		VERBENACEAE	1	1	1	1	1	1	-
U11034	*Vicia sp.*	Vetch	FABACEAE	2	2	2	2	2	2	2
G02483	*Vinca major*	Blue Periwinkle	APOCYNACEAE	3		4		4	4	4
S11041	*Vulpia sp.*	Fescue	POACEAE	2	2	2	2	2	2	2
W05991	*Watsonia meriana var. bulbillifera*	Bulbil Watsonia	IRIDACEAE	2	-	2	-	4	3	3
C11045	*Watsonia sp.*	Watsonia	IRIDACEAE	2	-	2	-	4	3	3
C30109	*Xanthium strumarium*	Californian Burr	ASTERACEAE	2	2	3	2	2	2	-
Z03359	*Xanthium spinosum*	Bathurst Burr	ASTERACEAE	3	2	3	1	3	2	3
C02749	*Zaluzianskya divaricata*	Spreading Night-phlox	SCROPHULARIACEAE	1	1	1	1	1	1	2
M00586	*Zantedeschia aethiopica*	White Arum Lily	ARACEAE	2	2	2	-	3	2	3

Appendix 11 Provisional list of threatened ecosystems in SA

Please cite as DEW (in progress) unpublished and provisional list
(Originally cited as DEH 2001)

EPBC Status:

Rated

1 Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions
2 The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin
3 Swamps of the Fleurieu Peninsula
4 Iron-grass Natural Temperate Grassland of South Australia
5 Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia
6 Giant Kelp Marine Forests of South East Australia
7 Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
8 Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains
9 Eyre Peninsula Blue Gum (Eucalyptus petiolaris) Woodland
10 Kangaroo Island Narrow-leaved Mallee (Eucalyptus cneorifolia) Woodland
11 Subtropical and Temperate Coastal Saltmarsh
12 White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

State Status: No ecosystems have any official State rating.
State Assessed: All have been assessed for the purposes of the NLWA Subregion Synopses and Conservation Strategy Case Studies project (2001).
Threats: Apply across all subregions unless otherwise stated.
Last update: 10 October 2005

Threatened Ecosystems of the Agricultural Regions

ENDANGERED

Allocasuarina luehmannii Low Woodland on gilgai soils on plains
EPBC ACT ENDANGERED
Limited distribution in Bordertown area. Heavily modified and fragmented by clearance for cropping and grazing.
IBRA Regions: MDD
Trend: declining
NVIS Subgroup: casuarina and allocasuarina forests and woodlands
Subregion: MDD5

ENDANGERED

Associations that have *Allocasuarina luehmannii* as a subdominant to any one or more of the following:- *E. camaldulensis, E. leucoxylon, E. microcarpa, E. largiflorens*
EPBC ACT ENDANGERED
Limited distribution in Bordertown area. Heavily modified and fragmented by clearance for cropping and grazing, and no examples in reserves.
IBRA Regions: MDD
Trend: declining
NVIS Subgroup: eucalyptus woodlands with a grassy understorey
Subregion: MDD5

VULNERABLE

Allocasuarina verticillata Grassy Low Woodland on clay loams of low hills
Formerly extensive but much lost through clearance. Poorly conserved. Some patches with good understorey remain. Probably always patchy by nature. Highly modified

	by clearance, grazing and invasion of exotics. (Note: This does not include *Allocasuarina verticillata* Low Woodland on calcareous soils on coastal plains with a low shrubby understorey of *Lasiopetalum* spp., *Acacia* spp., *Acrotriche* spp.) IBRA Regions: FLB, KAN, EYB Trend: declining NVIS Subgroup: casuarina and allocasuarina forests and woodlands Subregion: FLB1, FLB2, KAN1, KAN2, EYB1, EYB3
ENDANGERED	*Banksia marginata* Grassy Low Woodland on sandy loam plains in higher rainfall areas Highly modified by clearance and grazing, and few examples in reserves. IBRA Regions: NCP, FLB, KAN, MDD, (extinct in EYB) Trend: rapidly declining (extinct in EYB3) NVIS Subgroup: heath and banksia woodlands and shrublands Subregion: NCP1, FLB1, KAN2, MDD4, and extinct in EYB3
VULNERABLE	*Baumea arthrophylla* Sedgeland in drainage lines and depressions Threatened by drainage and salinity. Inadequately conserved in Hacks Lagoon CP. IBRA Regions: NCP, KAN, EYB Trend: declining NVIS Subgroup: herbland, sedgeland and rushland Subregion: NCP3, KAN1?, EYB3
VULNERABLE	*Callitris gracilis* +/- *E. leucoxylon* Grassy Low Woodland on quartzite gravels on western footslopes of Adelaide Hills Several examples in reserves but most have disturbed understorey (ie invasion of weeds at expense of native species). IBRA Regions: FLB Trend: declining NVIS Subgroup: callitris forests and woodlands Subregion: FLB1
ENDANGERED	*Eucalyptus behriana*, +/- *E. odorata*, +/- *E. dumosa* Woodland/Mallee on gilgai soils on plains Original small, disjunct occurrences in SA have been subject to extensive clearance and degradation. IBRA Regions: MDD, FLB, EYB Trend: declining NVIS Subgroup: mallee eucalyptus low open woodlands Subregion: MDD4, MDD5, FLB2, EYB3
VULNERABLE	*Eucalyptus camaldulensis* var. *camaldulensis* Woodland on seasonally inundated flats Reduced in extent and still threatened by drainage (not MDD5), extensive clearance and grazing. Inadequately conserved in Mary Seymour CP, Big Heath CP, Penola CP and Glen Roy CP. (Note: this is not a riparian ecosystem.) IBRA Regions: NCP, MDD, VVP, EYB Trend: declining NVIS Subgroup: eucalyptus woodlands with a shrubby understorey Subregion: NCP2, NCP3, MDD5**,** VVP2, EYB3, EYB4
ENDANGERED ENDEMIC	*E. cneorifolia*, *E. phenax* ssp. 'Kangaroo Island' Mallee on gilgai soils on plains In lower Cygnet River catchment and MacGillivray plateau. Only conserved in Beyeria CP and an adjacent HA.

	Otherwise confined to roadsides where it is threatened by weed invasion and bulldozing. IBRA Regions: KAN Trend: declining NVIS Subgroup: mallee eucalyptus low open woodlands Subregion: KAN1
ENDANGERED ENDEMIC	*E. cneorifolia*, *E. rugosa* Mallee over *Rhagodia candolleana* on glacial sediments on plains Locally common on roadsides between Kingscote and Emu Bay. Not conserved and largely confined to roadsides, where it is threatened by weed invasion and bulldozing. IBRA Regions: KAN Trend: declining NVIS Subgroup: mallee eucalyptus low open woodlands Subregion: KAN1
ENDANGERED ENDEMIC	*E. cretata* Mallee on clay loam plains Limited distribution around Darke Peak, and few examples within reserves. Threatened by grazing and weed invasion. (Note: this ecosystem excludes *E. cretata* Mallee on rocky hillsides with heath understorey, eg at Carappee Hill.) IBRA Regions: EYB Trend: declining NVIS Subgroup: mallee eucalyptus low open woodlands Subregion: EYB5
ENDANGERED	*E. dalrympleana* ssp. *dalrympleana* Open Forest on heavy soils of upland valleys Very limited distribution in higher rainfall areas of Mount Lofty Ranges. Highly modified by invasion of exotics, and few examples in reserves. IBRA Regions: FLB, KAN Trend: declining NVIS Subgroup: eucalyptus forests with a heath understorey Subregion: FLB1, KAN2
ENDANGERED	*E. dumosa* Mallee over *Melaleuca uncinata* +/- *M. wilsonii* on heavy soils on plains Heavily modified by clearance, grazing and weed invasion. IBRA Regions: MDD, NCP Trend: declining NVIS Subgroup: mallee eucalyptus low open woodlands Subregion: MDD2, MDD4, NCP4
VULNERABLE	*E. fasciculosa* Grassy Woodland on red terra rossa soils of low hills This has a very similar understorey to *E. leucoxylon* Grassy Woodland. Reserved examples mostly small and degraded eg Glen Roy CP. This ecosystem is vulnerable due to the widespread poor health of the pink gums. The pink gums generally exhibit limited regeneration, little leaf canopy, high mistletoe content, lerps and Mundulla Yellows. Main recovery action required is further research into reasons for the decline. IBRA Regions: NCP, MDD Trend: declining NVIS Subgroup: eucalyptus woodlands with a grassy understorey Subregion: NCP3, MDD5
VULNERABLE	*E. fasciculosa* +/- *E. leucoxylon* Heathy Woodland on sandy loams of flats and slopes. Reserved examples mostly small and in poor condition. This ecosystem is vulnerable for the same reasons given above. IBRA Regions: FLB, KAN, NCP, MDD Trend: declining NVIS Subgroup: eucalyptus forests with a heath understorey Subregion: FLB1, KAN1, KAN2, NCP1, NCP3, NCP4, MDD4

VULNERABLE

E. leucoxylon ssp. *pruinosa* +/- *E. odorata* Grassy Low Woodland on loams of hill slopes
In Mid North from Barossa to southern Flinders. Previously extensive. Poorly conserved. Highly modified by clearance and grazing. Lack of regeneration. (listed in Robertson 1998)
IBRA Regions: FLB
Trend: declining
NVIS Subgroup: eucalyptus woodlands with a grassy understorey
Subregion: FLB1, FLB2, FLB4

VULNERABLE

E. macrorhyncha ssp. *macrorhyncha* Open Forest
A relict occurrence with a very limited distribution in the hills near Clare. A single occurrence conserved in good condition in Spring Gully CP. Most other occurrences are degraded by grazing and weed invasion.
IBRA Regions: FLB
Trend: static
NVIS Subgroup: eucalyptus forests with a grassy understorey
Subregion: FLB2

ENDANGERED

E. microcarpa Grassy Woodland on cracking clays on plains
EPBC ACT Nominated
Limited distribution in Bordertown-Frances area. Heavily modified and fragmented by clearance for cropping and grazing, and no examples in reserves.
IBRA Regions: MDD
Trend: declining
NVIS Subgroup: eucalyptus woodlands with a grassy understorey
Subregion: MDD4, MDD5

ENDANGERED

E. microcarpa Grassy Low Woodland on foothills and hill slopes of southern Mount Lofty Ranges
EPBC ACT Nominated
Limited distribution on hills south of Adelaide. Heavily modified by urban spread and associated invasion of exotics. Only a few degraded examples exist within reserves.
IBRA Regions: FLB
Trend: declining
NVIS Subgroup: eucalyptus woodlands with a grassy understorey
Subregion: FLB1

ENDANGERED

E. odorata +/- *E. leucoxylon* Grassy Low Woodland on loamy soils of low hills
EPBC ACT CRITICALLY ENDANGERED
Highly modified by clearance and grazing, and the few examples in reserves are very small. *E. odorata* is largely confined to SA.
IBRA Regions: FLB, MDD, KAN, GAW, EYB
Trend: declining
NVIS Subgroup: eucalyptus woodlands with a grassy understorey
Subregion: FLB1, FLB2, FLB3, FLB4, MDD2, KAN2, GAW2, EYB3

ENDANGERED

E. ovata Grassy Low Open Forest in non-saline wetlands
Heavily modified and fragmented by drainage, clearance for grazing and by invasion of exotics. Few examples in reserves.
IBRA Regions: NCP
Trend: declining
NVIS Subgroup: eucalyptus forests with a grassy understorey
Subregion: NCP2, NCP3

VULNERABLE	*E. ovata* +/- *E. viminalis* ssp. *cygnetensis* +/- *E. camaldulensis* var. *camaldulensis* Low Woodland in valleys and drainage lines Heavily modified and fragmented by clearance for grazing, and no examples in reserves. IBRA Regions: KAN, NCP Trend: declining NVIS Subgroup: eucalyptus woodlands with a shrubby understorey Subregion: KAN1, KAN2, NCP2, NCP3
ENDANGERED ENDEMIC	*E. peninsularis*, *E. dumosa* complex Mallee on loams or clay-loams on flats Very limited range and only small areas in reserves. Reduced in extent and modified by clearance and grazing. IBRA Regions: EYB Trend: declining NVIS Subgroup: mallee eucalyptus low open woodlands Subregion: EYB3
ENDANGERED ENDEMIC to EYB	*Eucalyptus petiolaris* Grassy Woodland on heavy, fertile soils on plains Few examples and highly modified by clearance, grazing, salinisation and degradation by weed invasion. IBRA Regions: EYB Trend: declining NVIS Subgroup: eucalyptus woodlands with a grassy understorey Subregion: EYB3
VULNERABLE	*Eucalyptus viminalis* ssp. *cygnetensis* and/or *E. viminalis* ssp. *viminalis* Woodland on alluvial soils in moist areas Threatened by clearance, grazing, drainage (in NCP2, NCP3) and koalas (in KAN1). IBRA Regions: NCP, KAN, FLB, EYB Trend: declining NVIS Subgroup: eucalyptus woodlands with a grassy understorey Subregion: NCP2, NCP3, KAN1, KAN2, FLB1, EYB3
ENDANGERED	Freshwater wetlands eg *Triglochin procerum* Herbland **EPBC ACT CRITICALLY ENDANGERED (KAN2) – Swamps of the Fleurieu Peninsula** Threatened by clearance, drainage, build up off herbicides and fertilisers from adjacent agricultural land, salinity, grazing and trampling by stock, and weed invasion. IBRA Regions: all regions Trend: declining NVIS Subgroup: herbland, sedgeland and rushland Subregion: FLB1, FLB2**,** KAN1, KAN2, NCP1, NCP2, NCP3, MDD3, VVP2, EYB1, EYB2, EYB3, RIV
VULNERABLE	*Gahnia filum* Sedgeland in drainage lines and depressions **EPBC ACT CRITICALLY ENDANGERED (KAN2) – Swamps of the Fleurieu Peninsula** A number of small areas in reserves. An ecosystem that historically has suffered severe degradation from drainage (in NCP mainly), increased salinity (can tolerate a certain level) and grazing. Little regeneration evident. IBRA Regions: NCP, EYB, KAN (but most occurs in NCP) Trend: declining NVIS Subgroup: herbland, sedgeland and rushland Subregion: NCP1, NCP3, NCP4, EYB1, EYB3, EYB4, KAN2
ENDANGERED	*Gahnia trifida* Sedgeland in drainage lines and depressions (of fresher water than *G. filum*) A number of small areas in reserves. Has a more restricted range than *G. filum* Sedgeland and has less tolerance of

saline water. Consequently it has suffered more from agricultural development. Less remnants remain and it is less well conserved than *G. filum* Sedgeland. Currently threatened by drainage (in NCP mainly) and increased salinity.
IBRA Regions: NCP, EYB
Trend: declining
NVIS Subgroup: herbland, sedgeland and rushland
Subregion: NCP1, NCP3, EYB3, EYB4

ENDANGERED

Lomandra effusa Tussock Grassland on shallow loams in low hills
EPBC ACT CRITICALLY ENDANGERED
Heavily modified by clearance, grazing and exotics. Original vegetation structure probably included at least a scattering of tall shrubs, mallees or low trees.
IBRA Regions: FLB, MDD, KAN, EYB
Trend: declining
NVIS Subgroup: other tussock grasslands
Subregion: FLB2, MDD2, KAN2, EYB2, EYB3

ENDANGERED

Lomandra multiflora ssp. *dura* Tussock Grassland on shallow clay loams in low hills
EPBC ACT CRITICALLY ENDANGERED
Heavily modified by grazing and exotics. Mainly in Burra Hills.
ENDEMIC
IBRA Regions: FLB (Note: not recorded in KAN in Robertson 1998)
Trend: declining
NVIS Subgroup: other tussock grasslands
Subregion: FLB2

ENDANGERED

Leptospermum lanigerum Closed Shrubland in non-saline wetlands
EPBC ACT CRITICALLY ENDANGERED (KAN2) – Swamps of the Fleurieu Peninsula
Occurs in small disjunct areas. Only small examples conserved. Threatened by drainage (in KAN2 & NCP1), salinity and irrigation, some of which may be occurring distant to the ecosystem location.
IBRA Regions: FLB, KAN, NCP
Trend: declining
NVIS Subgroup: tall shrublands
Subregion: FLB1, KAN1, KAN2, NCP1

VULNERABLE

Melaleuca squamea +/- *Leptospermum continentale* Closed Shrubland on peaty soils
Threatened by *Phytophthora cinnamomi* (?), salinity and drainage (in NCP2, NCP3, VVP2).
IBRA Regions: NCP, KAN (Flinders Chase NP), VVP
RE ID: SA0026
Trend: declining
NVIS Subgroup: tall shrublands
Subregion: NCP2, NCP3, KAN1, VVP2

ENDANGERED

Themeda triandra +/- *Danthonia* spp. Tussock Grassland on heavy, fertile soils of plains and hill slopes.
EPBC ACT Nominated
Highly modified by grazing and weed invasion, and few examples in reserves. May be the result of clearance of overstorey.
IBRA Regions: FLB, VVP, NCP, EYB?
Trend: declining
NVIS Subgroup: other tussock grasslands
Subregion: FLB1, VVP2, NCP1, EYB3?

Rare Ecosystems in South Australia (Note: List Incomplete)

RARE *Eucalyptus willisii* ssp. *falciformis* Open Forest/Woodland on sand
Moderately conserved in several Native Forest Reserves and Heritage Agreements.
IBRA Regions: NCP
NVIS Subgroup:
Subregion:

RARE *Acacia cambagei* Low Open Woodland over *Typhonium* aff. *alismifolium* and *Nicotiana truncata* lining arid watercourses on gypseous plains
Threatened by stock and feral animal trampling.
IBRA Regions: STP (Moon Plain)
NVIS Subgroup:
Subregion:

RARE *Eucalyptus conglobata* Low Woodland on fertile loams over limestone
ENDEMIC to EYB Originally described by Davies (1982) as E. dumosa ssp. conglobata Low Woodland of Lower EP, though he also had the same open scrub association listed in sth MLR, sth EP & YP. Now considered to be confined to southern EP and adjacent Taylor and Boston Islands (Nicolle 1997). Large proportion of range conserved within Lincoln NP.
IBRA Regions: EYB
NVIS Subgroup:
Subregion: EYB4

RARE *Melaleuca armillaris* ssp. *akineta* Closed Scrub in drainage lines associated with granite. Limited in extent, and much of that is within reserves.
IBRA Regions: EYB, GAW
NVIS Subgroup:

RARE *Eucalyptus cyanophylla* Mallee on loamy sand dunes
Limited in extent. Mostly narrow, linear examples remain, though many of these are in Heritage Agreements. Occurs mainly south of the River Murray. Unknown extent in Cooltong CP. Possible upgrade to Vulnerable if not in this park.
IBRA Regions: MDD, RIV(?)
NVIS Subgroup:
Subregion:

RARE *Allocasuarina helmsii* Shrubland on granitic sands
Moderately conserved in Lake Gilles CP, Gawler Ranges CR and two Heritage Agreements near Buckleboo.
IBRA Regions: EYB
NVIS Subgroup:
Subregion:

RARE (?) *Triodia compacta* Hummock Grassland on sandy consolidated dunefields
Of limited extent and threatened by coastal development.
IBRA Regions: EYB
NVIS Subgroup:
Subregion:

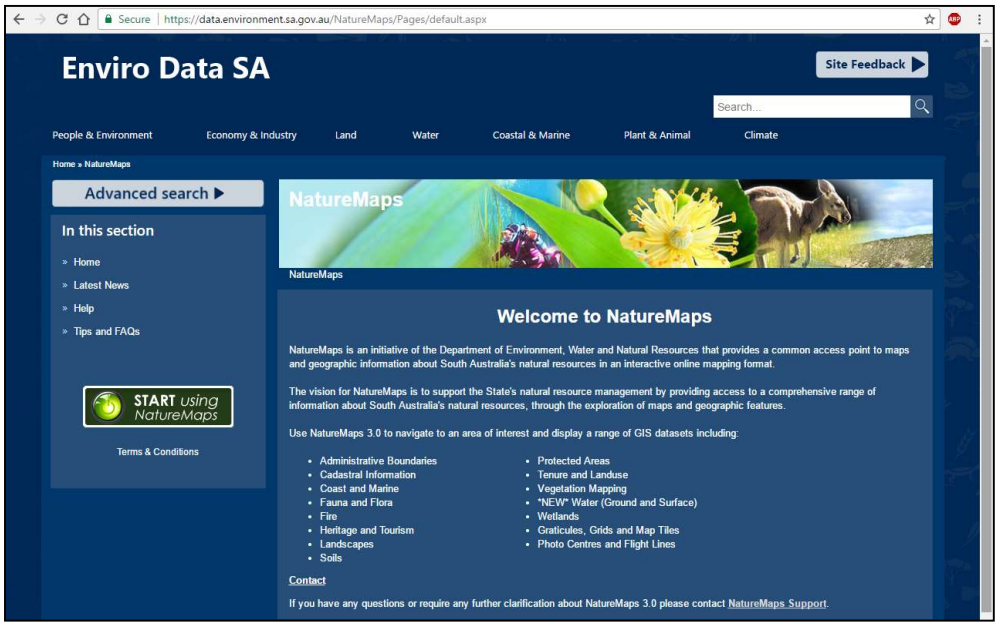
RARE *Baumea*[8] *juncea*, *Chorizandra enodis* Sedgeland
A number of small areas in reserves. Endangered for SE..
IBRA Regions: NCP, EYB, KAN
NVIS Subgroup:
Subregion:

[8] Note: *Baumea* has changed name to *Machaerina*

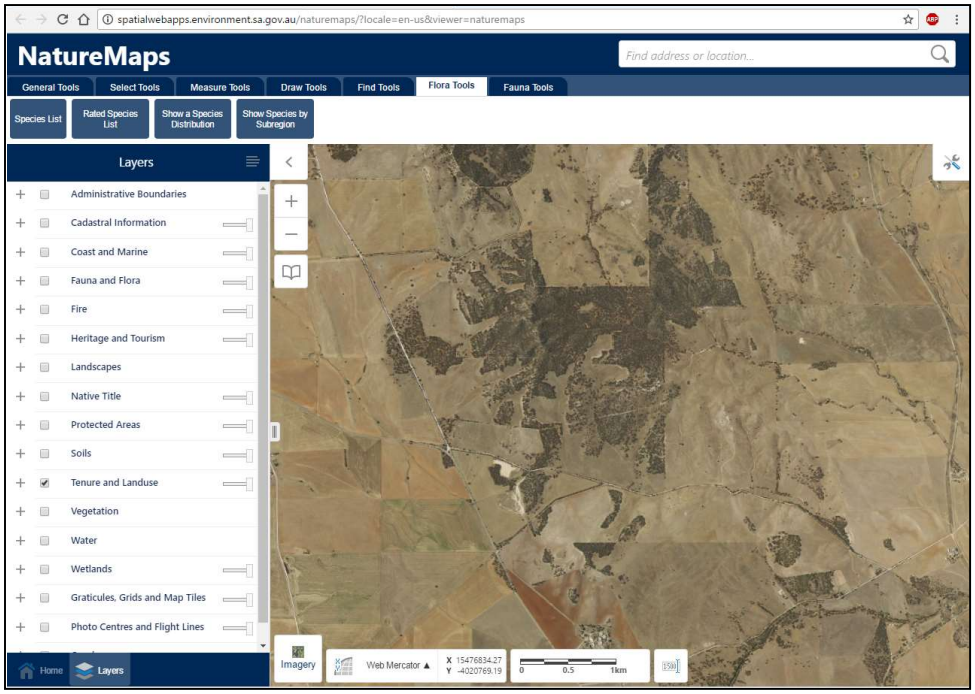
Appendix 12 NatureMaps species search tool

The procedure for downloading detailed species data for records within a specified area is:

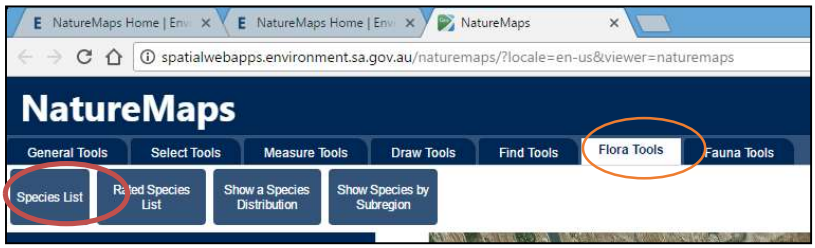
1. Start from the NatureMaps home page https://data.environment.sa.gov.au/NatureMaps/Pages/default.aspx



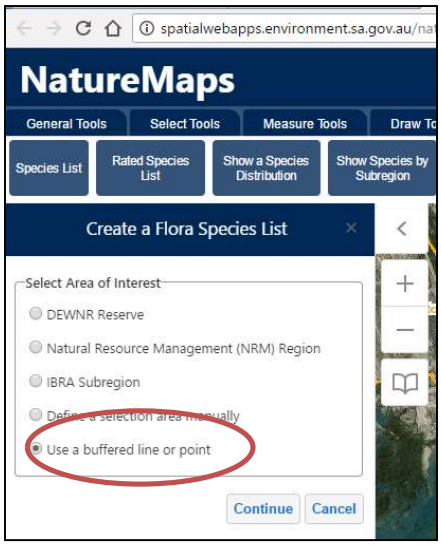
2. Locate the area of interest (area of assessment)



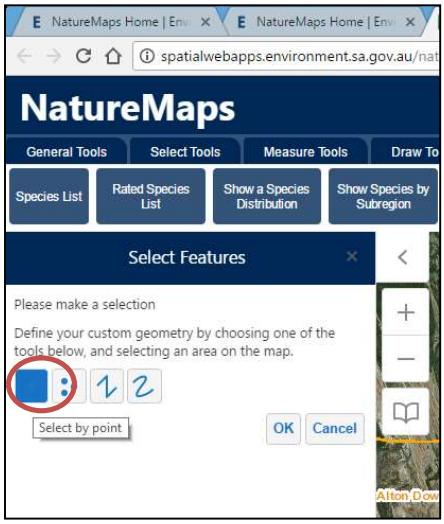
3. Select Flora Tool the select Species list

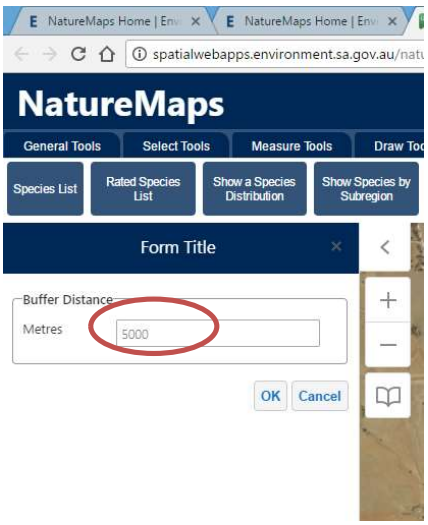


4. Select Use a buffered line or point

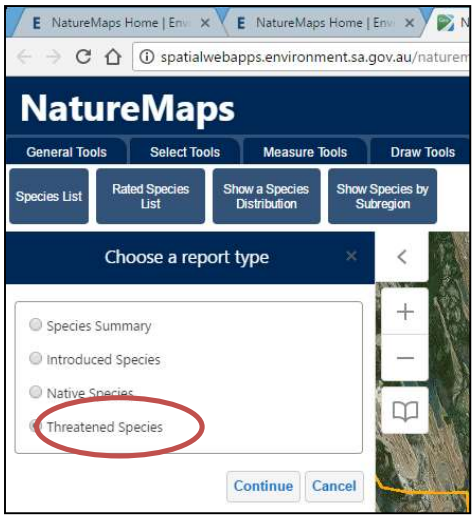


5. Select a point and click on the centroid of the clearance area or SEB area, then enter 5000





6. Select threatened species



7. Select 'Click here' to open species summary report (excel file)

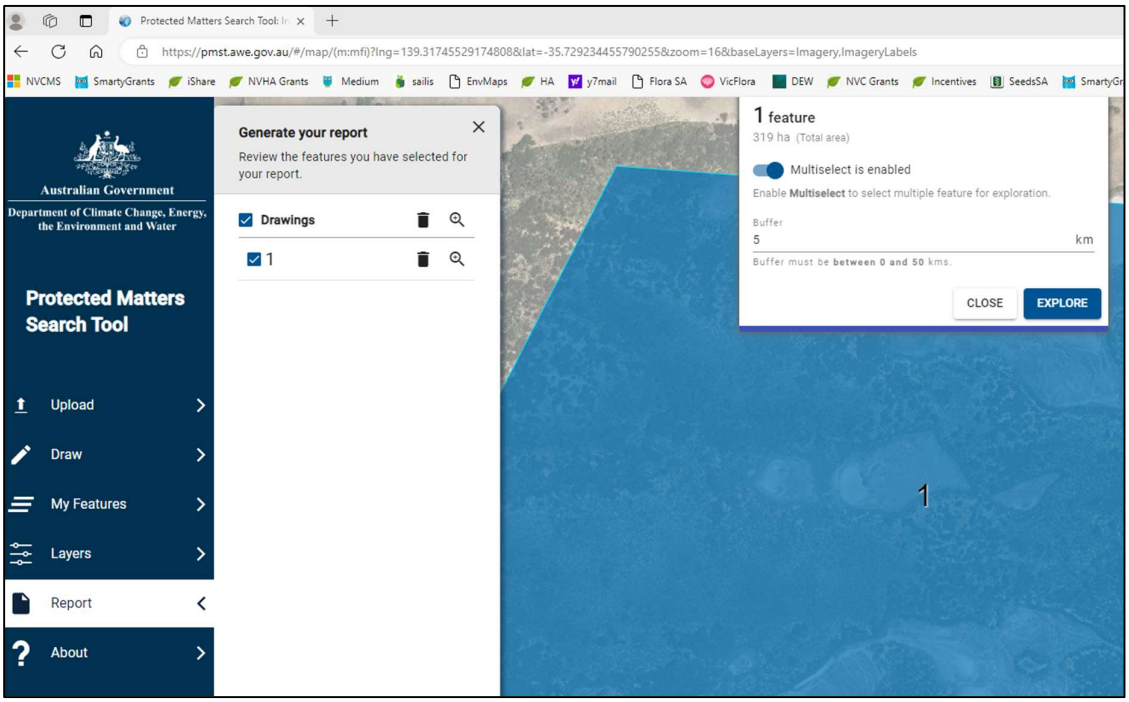
	A	B	C	D	E	F	G	H	I	J
1	NSXCODE	FAMILY N/	SPECIES	COMMON NAME	NATIVE	NATIONAI	STATE RAT	COUNT	LAST SIGHTED	
2	Z03915	LEGUMIN(	Acacia spilleriana	Spiller's Wattle	Y	EN	E	8	04-Oct-2008	
3	Q04432	COMPOSI	Olearia pannosa ssp. pannosa	Silver Daisy-bush	Y	VU	V	6	02-Dec-2003	
4										

8. Repeat for fauna species

Appendix 13 EPBC Act protected matters search tool

The Australian Government's Protected Matters Search Tool generates a report that will help determine whether matters of national environmental significance or other matters protected by the *Environment Protection and Biodiversity Conservation Act 1999* are likely to occur in your area of interest. Any information provided through this facility is indicative only, and local knowledge and information should also be sought where possible.

1. Start the Protected Matters Search Tool
2. Zoom to the area of interest
3. Select the block using 'Draw' (draw a polygon)
4. Select Report, select the relevant drawing and enter 5 km for Buffer.
5. Select Explore
6. Select Generate Report (PDF or Excel available)
7. Review the report to identify threatened species with 'presence text' = '**Species or species habitat known to occur within area'**.



Listed Threatened Species			[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.			
Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area

11 References

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Government of South Australia

Department for Environment and Water

Native Vegetation Council