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Appendix 1 *Chrysanthemoides monilifera* listings under the NSW Noxious Weeds Act 1993

Table A1 The weed control class for each local control authority in which bitou bush or boneseed is declared noxious under the *Noxious Weeds Act 1993*, at 1 March 2006.

Council/control area	Control class	Council/control area	Control class
Ashfield Municipality	4	Leichhardt Municipality	4
Auburn	4	Liverpool City	3
Bankstown City	3	Lord Howe Island	2
Bega Valley Shire	3	Manly	4
Bellingen Shire	4	Marrickville	3
Blue Mountains City	4	Mosman Municipality	4
Botany Bay City	4	Nambucca Shire	4
Burwood	3	Newcastle City	4
Canada Bay City	4	North Sydney	4
Canterbury City	3	Parramatta City	3
Clarence Valley ^a	4	Pittwater	4
Coffs Harbour City	4	Port Macquarie–Hastings	4
Eurobodalla Shire	4	Port Stephens	4
Fairfield City	3	Randwick City	4
Far North Coast County ^b	4	Rockdale City	3
Gosford City	4	Ryde City	4
Great Lakes	4	Shellharbour City	4
Greater Taree City	4	Shoalhaven City	4
Holroyd City	3	Strathfield Municipality	3
Hornsby Shire	3	Sutherland Shire	4
Hunters Hill Municipality	4	Sydney City ^c	4
Hurstville City	3	Warringah	4
Kempsey Shire	4	Waverley	4
Kiama Municipality	4	Willoughby City	4
Kogarah Municipality	3	Wollongong City	4
Ku-ring-gai	3	Woollahra Municipality	4
Lake Macquarie City	4	Wyong Shire	4
Lane Cove Municipality	4		

^a This control area includes the Copmanhurst, Grafton, Maclean and Pristine Waters Local Government Areas (or LGAs).

^b This control area includes the Ballina, Byron, Kyogle, Lismore, Richmond Valley and Tweed LGAs.

^c This control area also includes South Sydney.

Declaration status under the NW Act (CC = Control Class):

- CC2** The plant must be eradicated from the land and the land must be kept free of the plant.
- CC3** The plant must be fully and continuously suppressed and destroyed.
- CC4** The growth and the spread of the plant must be controlled according to the measures specified in a management plan published by a local control authority.

In addition, both bitou bush and boneseed plants may not be sold, traded or otherwise distributed throughout New South Wales.

Appendix 2 Development of a model to rank plant species threatened by bitou bush invasion

Invasion by bitou bush and boneseed is an enormous problem in New South Wales and its management requires planned use of limited resources. Establishing priorities is an important part of the planning process. Priorities for the Bitou TAP (i.e. this plan) include the determination of plant species, populations and ecological communities threatened by bitou bush and sites where the actions of the Bitou TAP can be achieved for each taxa (or biological entity).

Prior to the development of the draft (see DEC 2004), determination of the species, populations and ecological communities most at risk from bitou bush and boneseed invasion was a difficult task (Downey 2004). This was mostly because information that quantifies the impacts was absent across a broad range of native taxa (see Downey 2004; Downey submitted), especially with respect to fauna (see Chapter 5). For example, prior to the development of the draft only six native plants and two birds were deemed to be at risk from bitou bush and boneseed. In order to determine the species at risk the Weed Impacts to Native Species (WINS) assessment process was developed (see Downey in press). The WINS assessment process involves four systematic stages: 1) a review of the literature; 2) collation and assessment of knowledge from land managers, botanists and scientists with specific involvement, either in managing bitou bush, or the native species in bitou bush infested areas; 3) rigorous evaluation and examination of an interim list of native species identified as potentially at risk; and 4) ranking the revised list using a model. Information from stages 1–3 is not presented here, with the exception of the final list of species at risk. The model used for stage 4 of the WINS process is presented below.

The draft plan identified 63 plant species at risk and a further 70 that were potentially at risk, which were not modelled due to a lack of information. Following the public exhibition and further consultation (i.e. stage 3 of the WINS process) a further 25 species were added to the list of species at risk, bringing the total to 158. This revised list of species at risk was then run through the model described below. The full list of the species modelled along with their score for each attribute and their final ranking is presented in Appendix 3, Table A3.1. In addition, there were several species that were not modelled due to insufficient information, which are presented in Appendix 3, Table A3.2.

It should be noted that all plant species considered to be at risk from bitou bush and boneseed invasion in New South Wales were examined during the WINS selection process, not just those formally listed as threatened (i.e. under the TSC Act). Of the 158 species identified through the WINS assessment process as being at risk, 55 were listed as threatened under the TSC Act (see Table A3.3 in Appendix 3); 30 of which were also listed as threatened nationally (i.e. under the EPBC Act), highlighting the role of the WINS assessment process in capturing the full diversity of plant species at risk.

The model used in the draft TAP was the first attempt to rank native species at risk from an individual weed invasion in Australia. The model outlined below is a revision of the one presented in the draft TAP (see DEC 2004). The main changes to the species model are:

- ▶ The *Threatened status* attribute (C) was removed, as it was not an independent attribute. For example, a species with a limited distribution is more likely to be listed as threatened than a widespread species, therefore species with limited distributions could be artificially elevated in the ranking when their *Distribution* and *Threatened status* attributes were combined.
- ▶ The *Shade tolerance* attribute (D) (a measure of susceptibility) was revised to *Susceptibility of the species to invasion*, as this encompasses all of the species at risk equally, not just those at risk through shade tolerance.
- ▶ Weightings were applied to several of the attributes to ensure that no one factor was overriding the model predictions (see below for further details).

The model presented here is not definitive. Specific information was not available for some species (e.g. seed banks and dispersal rates). The model can be re-run when more comprehensive data becomes available, or if additional species are considered to be at risk.

The ranking of priority species in the revised model uses four attributes: (A) susceptibility of the habitat to bitou bush invasion; (B) native species distribution; (C) susceptibility of the native species to bitou bush invasion; and (D) native species persistence (sub-divided into (D¹) seed bank and (D²) dispersal). Each attribute is scored with the highest score implying the highest priority.

The model for ranking plant species threatened by bitou bush invasion is:

$$\text{priority rank} = (\text{habitat susceptibility [A]} \times 1.25) \times \text{distribution [B]} \times ((\text{species susceptibility [C]} + (\text{persistence [D}^1 + \text{D}^2]/2))/3)$$

Attribute A in the model was weighted (by 1.25) to account for its importance in determining the overall risk from invasion. If the habitat is not susceptible to invasion the susceptibility of the species that occur in that habitat is of little importance. The attributes that describe the individual native species' susceptibility [C] and ability of these species to persist [D] on the other hand, were scaled down due to their combined values overriding the model. The weighting therefore standardised the combined values for C and D with the individual values of A and B. Lastly, the persistence sub-attributes (D¹ and D²) were averaged in order to maintain a consistent set of values for each attribute, again limiting these values from overriding the model.

A **Susceptibility of the habitat to bitou bush invasion**

Some habitats are more prone to invasion by bitou bush than others. For example, a particular habitat may provide limited competition to bitou bush, such as tussock grasslands with inter-tussock spaces. Also, a particular disturbance regime may favour invasion (e.g. fire and soil disturbance). The density of bitou bush present is not necessarily a reflection (or measure) of the invasibility of that habitat, as many invasive plants exhibit a distinct lag period between initial occurrence and dominance (even at a site level). Therefore, a site with a light infestation of bitou bush may either present a barrier to invasion, or the invasion process is in the early stages and heavier infestations may occur in the future if untreated.

Score	<i>Habitat invasibility</i>
0	<i>Extremely low habitat invasibility</i> – non-coastal habitats or those habitats close to the coast in which boneseed (or rarely, bitou bush) occurs but are generally not susceptible to invasion
1	<i>Low habitat invasibility</i> – habitats with closed canopies (e.g. closed forests or heaths), or water logged habitats (e.g. margins of swamps)
2	<i>Medium habitat invasibility</i> – habitats with open canopies (e.g. open woodlands or shrublands), or forest margins
3	<i>High habitat invasibility</i> – habitats with no or low vegetation (e.g. sand dunes or spinifex grasslands), or habitats with a limited shrub layer, or sites where the native vegetation is disturbed such that there is no or patchy vegetation

B Distribution of native species relative to bitou bush

This attribute describes the potential for bitou bush to have a major impact on an individual native species based on the degree of overlap between the distribution of bitou bush and the native species. For example, a species that occurs both within and outside the distribution of bitou bush is less likely to experience population level impacts than a species which is confined to areas occupied by bitou bush.

<i>Score</i>	<i>Distribution of native species</i>
0	Not known from coastal habitats
1	Distributed across a range of habitats (some of which are coastal <50%)
2	Known predominantly from coastal habitats (>50% but <100%)
3	Known only from coastal habitats
4	Known only from coastal habitats in which all locations are within the distribution of bitou bush (and/or boneseed)

C Susceptibility of individual species to bitou bush invasion

A number of specific attributes can be used to describe the susceptibility of plants to weed invasion, however, many of them could not be used because insufficient data was available for many of the species examined here (i.e. on the effects of competition). Shade sensitivity or tolerance was used in the draft TAP, but this attribute did not apply equally to all native species examined (i.e. some species were not affected by shade, but were susceptible to invasion as a result of other processes). Thus, a broader measure was used here to encompass and assess the general level of susceptibility of individual plant species to bitou bush invasion.

<i>Score</i>	<i>Species susceptibility</i>
1	Species persists or grows in invaded areas
2	Information about susceptibility to invasion is unknown
3	Slightly sensitive to invasion (i.e. occurs in part shade)
4	Sensitive to invasion (i.e. shade sensitive species – occurs only in full sun/does not occur in shade and thus absent in bitou bush invaded areas)

D Persistence (seed bank and dispersal)

This attribute describes the ability of the native plant species to persist at a site, as measured by their ability to survive, reproduce and disperse (immigrate and emigrate). In order to capture this information, the attribute was divided into two sub-attributes: a reflection of a species' seed bank or seed storage capability (D^1) and its ability to disperse (D^2). By obtaining the average value of the two scores (i.e. for each sub-attribute), the combined value of D^1 and D^2 was not unduly elevated as a single attribute in the model.

The size of the seed bank present, or seed storage capabilities (i.e. seeds stored in cones), and the seed dispersal ability of each species is extremely important for the longer term survival of that species, as well as for the ability of a species to respond once bitou bush has been removed. Species with no or poor seed banks may not be able to re-establish, or will have minimal recruitment following the removal of bitou bush, while those species with large seed banks are more likely to persist.

Persistence sub-attribute D¹ – seed bank:

Score	Seed banks
1	Long-lived seed bank and/or effective seed storage ability present
2	Information about seed dormancy/storage is unknown
3	The species has a short-lived seed bank or seed storage capability, or is primarily a-sexual or reproduction is vegetative
4	The species has a limited seed bank, seed storage capability or ability to regenerate vegetatively

Seed dispersal is another attribute that describes a species' ability to persist. Species that can disperse their propagules to sites free of bitou bush, or to areas where bitou bush control has occurred are more likely to persist than those that have poor dispersal mechanisms.

Persistence sub-attribute D² – dispersal:

Score	Dispersal
1	Seed dispersal ability is high (e.g. bird dispersed fruits)
2	Information about dispersal is unknown
3	Seed dispersal capability is limited (i.e. seeds are dispersed locally through dehiscence)
4	No or poor seed dispersal capability

Species for which there is limited information are given a lower score than those that are known to have limited seed storage or dispersal capability, because they may actually possess seed storage or seed dispersal mechanisms. For many of the species examined this information is poorly known.

Appendix 3 Species considered in the TAP

Table A3.1 Species considered and their rank in the model.

species name	family name	attribute in the model ^a					model	
		A 0–3	B 0–4	C 1–4	D ¹ 1–4	D ² 1–4	(A*1.25)*B* ((C+(D ¹ +D ²)/2)/3)	species rank ^b
		habitat invasibility	distribution	species susceptibility	seed bank	dispersal	max score (40)	
high priority species								
<i>Plectranthus cremus</i>	Lamiaceae	3	4	4	3	2	32.5	1
<i>Zieria prostrata</i>	Rutaceae	3	4	2	3	4	27.5	2
<i>Chamaesyce psammogeton</i>	Euphorbiaceae	3	3	4	3	3	26.3	3
<i>Senecio spathulatus</i>	Asteraceae	3	3	3	3	3	22.5	4
<i>Acianthus exiguus</i>	Orchidaceae	3	3	4	2	2	22.5	4
<i>Calystegia soldanella</i>	Convolvulaceae	3	3	4	2	2	22.5	4
<i>Chamaecrista maritima</i>	Caesalpinaceae	3	3	4	2	2	22.5	4
<i>Sophora tomentosa</i>	Fabaceae	3	3	3	3	3	22.5	4
<i>Lepturus repens</i>	Poaceae	3	3	4	2	2	22.5	4
<i>Pultenaea maritima</i>	Fabaceae	3	3	4	2	2	22.5	4
<i>Stackhousia spathulata</i>	Stackhousiaceae	3	3	3	3	3	22.5	4
<i>Ischaemum triticeum</i>	Poaceae	3	3	4	2	2	22.5	4
<i>Vigna marina</i>	Fabaceae	3	3	4	2	2	22.5	4
<i>Gleichenia mendellii</i>	Gleicheniaceae	3	3	3	2	3	20.6	14
<i>Actites megalocarpa</i>	Asteraceae	3	3	4	2	1	20.6	14
<i>Poa poiformis</i>	Poaceae	3	3	4	2	1	20.6	14
<i>Fontainea oraria</i>	Euphorbiaceae	2	4	2	4	4	20	17
<i>Diuris praecox</i>	Orchidaceae	2	4	3	3	3	20	17
<i>Westringia fruticosa</i>	Lamiaceae	3	3	3	2	2	18.8	19
medium priority species								
<i>Asplenium difforme</i>	Aspleniaceae	3	3	3	2	1	16.9	20
<i>Pandanus tectorius</i> var. <i>australianus</i>	Pandanaceae	3	3	3	2	1	16.9	20
<i>Acronychia littoralis</i>	Rutaceae	2	4	3	3	1	16.7	22
<i>Pterostylis</i> no 15. (botany bay orchid)	Orchidaceae	2	4	3	2	2	16.7	22
<i>Viminaria juncea</i> (prostrate form)	Fabaceae	2	4	3	2	2	16.7	22
<i>Pterostylis woollsii</i>	Orchidaceae	2	4	3	2	2	16.7	22
<i>Acalypha nemorum</i> (prostrate form)	Euphorbiaceae	3	3	2	2	2	15	26
<i>Pimelea spicata</i>	Thymelaeaceae	3	2	3	3	3	15	26
<i>Macarthuria neocambrica</i>	Aizoaceae	3	3	2	2	2	15	26
<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Mimosaceae	2	3	3	1	4	13.8	29
<i>Caladenia porphyrea</i>	Orchidaceae	2	4	2	2	2	13.3	30
<i>Diuris superba</i>	Orchidaceae	2	4	2	2	2	13.3	30
<i>Diuris curta</i>	Orchidaceae	2	4	2	2	2	13.3	30
<i>Abildgaardia ovata</i>	Cyperaceae	3	3	2	2	1	13.1	33
<i>Bossiaea stephensonii</i>	Fabaceae	3	3	2	1	2	13.1	33
<i>Dianella crinoides</i>	Phormiaceae	3	3	2	2	1	13.1	33
<i>Dianella congesta</i>	Phormiaceae	3	3	2	2	1	13.1	33
<i>Cryptocarya foetida</i>	Lauraceae	2	3	2	3	3	12.5	37
<i>Syzygium paniculatum</i>	Myrtaceae	2	3	3	3	1	12.5	37
<i>Geodorum densiflorum</i>	Orchidaceae	2	3	3	2	2	12.5	37
<i>Tricoryne simplex</i>	Anthericaceae	2	3	3	2	2	12.5	37
<i>Wilsonia rotundifolia</i>	Convolvulaceae	3	2	3	2	2	12.5	37
<i>Casuarina equisetifolia</i>	Casuarinaceae	2	3	3	2	2	12.5	37
<i>Persoonia katerae</i>	Proteaceae	2	4	2	2	1	11.7	43
<i>Thesium australe</i>	Santalaceae	3	2	2	3	2	11.3	44
<i>Acronychia imperforata</i>	Rutaceae	2	3	3	2	1	11.3	44
<i>Sema acclinis</i>	Caesalpinaceae	2	2	4	1	4	10.8	46
<i>Zieria granulata</i>	Rutaceae	2	2	3	3	4	10.8	46
<i>Rulingia hermannifolia</i>	Sterculiaceae	2	2	4	3	2	10.8	46
<i>Eucalyptus camfieldii</i>	Myrtaceae	2	2	3	3	3	10	49
<i>Tetradlea juncea</i>	Tremandraceae	2	2	3	3	3	10	49
<i>Vitex trifolia</i> var. <i>trifolia</i>	Verbenaceae	2	3	2	2	2	10	49
<i>Diuris arenaria</i>	Orchidaceae	2	3	2	2	2	10	49
<i>Hibiscus tiliaceus</i>	Malvaceae	2	3	2	2	2	10	49
<i>Liparis habenarina</i>	Orchidaceae	2	3	2	2	2	10	49
<i>Pterostylis nigricans</i>	Orchidaceae	2	3	2	2	2	10	49
<i>Spyridium cinereum</i>	Rhamnaceae	2	3	2	2	2	10	49
<i>Tylophora benthamii</i>	Asclepiadaceae	2	3	2	2	2	10	49
<i>Xylosma terra-reginae</i>	Flacourtiaceae	2	3	2	2	2	10	49
<i>Elyonurus citreus</i>	Poaceae	3	2	2	2	2	10	49
<i>Grevillea humilis</i> subsp. <i>maritima</i>	Proteaceae	3	2	2	2	2	10	49
low priority species								
<i>Cynanchum carnosum</i>	Asclepiadaceae	2	3	2	2	1	8.8	61
<i>Cyperus scaber</i>	Cyperaceae	2	3	2	2	1	8.8	61
<i>Myoporum bateae</i>	Myoporaceae	2	3	2	2	1	8.8	61
<i>Persoonia conjuncta</i>	Proteaceae	2	3	2	2	1	8.8	61
<i>Wilsonia backhousei</i>	Convolvulaceae	2	2	3	2	2	8.3	65
<i>Cynanchum elegans</i>	Asclepiadaceae	2	2	2	3	3	8.3	65
<i>Cordyline congesta</i>	Asteliaceae	2	2	3	3	1	8.3	65
<i>Desmodium heterocarpon</i> var. <i>heterocarpon</i>	Fabaceae	2	2	3	2	2	8.3	65
<i>Typhonium eliosurum</i>	Araceae	2	2	3	2	2	8.3	65
<i>Acacia georgensis</i>	Mimosaceae	2	2	2	1	4	7.5	70
<i>Phaius tancaevillae</i>	Orchidaceae	1	3	3	3	3	7.5	70
<i>Sarcostemma brunonianum</i>	Asclepiadaceae	3	1	4	2	2	7.5	70
<i>Thozetia racemosa</i>	Asclepiadaceae	2	3	1	2	2	7.5	70
<i>Wahlenbergia littorcola</i>	Campanulaceae	2	2	3	2	1	7.5	70
<i>Diuris byronensis</i>	Orchidaceae	1	4	2	2	2	6.7	75
<i>Correa bauerlenii</i>	Rutaceae	2	2	2	2	2	6.7	75

[continued on next page]

Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

species name	family name	attribute in the model ^a					model	
		A 0–3	B 0–4	C 1–4	D ¹ 1–4	D ² 1–4	(A*1.25)*B* ((C+(D ¹ +D ²)/2))/3)	species rank ^b
		habitat invasibility	distribution	species susceptibility	seed bank	dispersal	max score (40)	
low priority species								
<i>Geniostoma huttonii</i>	Loganiaceae	2	2	2	2	2	6.7	75
<i>Haemodorum austroqueenslandicum</i>	Haemodoraceae	2	2	2	2	2	6.7	75
<i>Scaevola aemula</i>	Goodeniaceae	2	2	2	2	2	6.7	75
<i>Zieria tuberculata</i>	Rutaceae	2	2	2	2	2	6.7	75
<i>Phaius australis</i>	Orchidaceae	1	3	3	2	2	6.3	81
<i>Gonocarpus salsoloides</i>	Haloragaceae	1	3	3	2	2	6.3	81
<i>Polyalthia nitidissima</i>	Annonaceae	2	3	1	2	1	6.3	81
<i>Comesperma sphaerocarpum</i>	Polygalaceae	2	2	2	2	1	5.8	84
<i>Cyperus subulatus</i>	Cyperaceae	2	2	2	2	1	5.8	84
<i>Galactia tenuiflora</i> var. <i>villosa</i>	Fabaceae	2	2	2	1	2	5.8	84
<i>Logania pusilla</i>	Loganiaceae	2	2	2	2	1	5.8	84
<i>Oxalanguata</i>	Oxalaceae	1	3	2	3	2	5.6	88
<i>Caladenia tessellata</i>	Orchidaceae	2	1	3	3	3	5	89
<i>Eucalyptus paniculata</i> subsp. <i>matutina</i>	Myrtaceae	1	3	2	2	2	5	89
<i>Macrozamia flexuosa</i>	Zamiaceae	2	2	1	2	2	5	89
<i>Calystegia affinis</i>	Convolvulaceae	1	3	2	2	2	5	89
<i>Carmichaelia exsul</i>	Fabaceae	1	3	2	2	2	5	89
<i>Cupaniopsis anarcardioides</i>	Sapindaceae	1	3	2	2	2	5	89
<i>Glochidion sumatranum</i>	Euphorbiaceae	1	3	2	2	2	5	89
<i>Haemodorum corymbosum</i>	Haemodoraceae	3	1	2	2	2	5	89
<i>Prostanthera densa</i>	Lamiaceae	1	2	2	3	4	4.6	97
<i>Acrostichum speciosum</i>	Pteridaceae	1	3	2	2	1	4.4	98
<i>Celtis paniculata</i>	Ulmaceae	1	3	2	2	1	4.4	98
<i>Cyperus stradbrogensis</i>	Cyperaceae	1	3	2	2	1	4.4	98
<i>Fimbristylis polytrichoides</i>	Cyperaceae	1	3	2	2	1	4.4	98
<i>Hypserpa decumbens</i>	Menispermaceae	1	3	2	2	1	4.4	98
<i>Pelargonium australe</i>	Geraniaceae	3	1	2	2	1	4.4	98
<i>Pisonia umbellifera</i>	Nyctaginaceae	1	3	2	2	1	4.4	98
<i>Planchonella laurifolia</i>	Sapotaceae	1	3	2	2	1	4.4	98
<i>Planchonella myrsinioides</i>	Sapotaceae	1	3	2	2	1	4.4	98
<i>Melaleuca groveana</i>	Myrtaceae	2	1	2	3	3	4.2	107
<i>Acianthus amplexicaulis</i>	Orchidaceae	1	2	3	2	2	4.2	107
<i>Pterostylis ophioglossa</i>	Orchidaceae	2	1	3	2	2	4.2	107
<i>Thysanotus juncifolius</i>	Anthericaceae	1	2	3	2	2	4.2	107
<i>Viola betonicifolia</i>	Violaceae	2	1	3	2	2	4.2	107
<i>Arthraxon hispidis</i>	Poaceae	2	1	3	2	2	4.2	107
<i>Acmena hemilampra</i>	Myrtaceae	1	3	1	3	1	3.8	113
<i>Bridelia exaltata</i>	Euphorbiaceae	1	3	1	3	1	3.8	113
<i>Caesalpinia bonduc</i>	Caesalpinaceae	1	2	2	2	3	3.8	113
<i>Grevillea hilliana</i>	Proteaceae	1	2	2	2	2	3.3	116
<i>Ailanthus triphysa</i>	Simaroubaceae	1	2	2	2	2	3.3	116
<i>Marsdenia lissae</i>	Asclepiadaceae	1	2	2	2	2	3.3	116
<i>Callistemon acuminatus</i>	Myrtaceae	1	2	2	2	2	3.3	116
<i>Coprosma inopinata</i>	Rubiaceae	1	2	2	2	2	3.3	116
<i>Cryptandra propinqua</i>	Rhamnaceae	2	1	2	2	2	3.3	116
<i>Cryptandra scortechinii</i>	Rhamnaceae	2	1	2	2	2	3.3	116
<i>Cryptocarya triplinervis</i> var. <i>triplinervis</i>	Lauraceae	1	2	2	2	2	3.3	116
<i>Cryptocarya triplinervis</i> var. <i>pubens</i>	Lauraceae	1	2	2	2	2	3.3	116
<i>Darwinia leptantha</i>	Myrtaceae	1	2	2	2	2	3.3	116
<i>Gleichenia rupestris</i>	Gleicheniaceae	2	1	2	2	2	3.3	116
<i>Melicope vitiflora</i>	Rutaceae	1	2	2	2	2	3.3	116
<i>Endiandra globosa</i>	Lauraceae	1	2	1	3	2	2.9	128
<i>Abildgaardia vaginata</i>	Cyperaceae	1	2	2	2	1	2.9	128
<i>Coelospermum paniculatum</i>	Rubiaceae	1	2	2	2	1	2.9	128
<i>Euphrasia collina</i> subsp. <i>paludosa</i>	Scrophulariaceae	2	1	2	2	1	2.9	128
<i>Haloragis exaltata</i> subsp. <i>exaltata</i>	Haloragaceae	1	2	2	2	1	2.9	128
<i>Leucopogon esquamatus</i>	Epacridaceae	1	2	2	2	1	2.9	128
<i>Lindsaea fraseri</i>	Lindsaeaceae	1	2	2	2	1	2.9	128
<i>Lygodium microphyllum</i>	Schizaeaceae	1	2	2	2	1	2.9	128
<i>Niemeyera chartacea</i>	Sapotaceae	1	2	2	2	1	2.9	128
<i>Pelargonium inodorum</i>	Geraniaceae	2	1	2	2	1	2.9	128
<i>Persoonia linearis</i>	Proteaceae	2	1	2	2	1	2.9	128
<i>Streptothamnus moorei</i>	Flacourtiaceae	1	2	2	2	1	2.9	128
<i>Cryptostylis hunteriana</i>	Orchidaceae	1	1	3	3	3	2.5	140
<i>Linum marginale</i>	Linaceae	1.5	1	2	2	2	2.5	140
<i>Pultenaea villifera</i>	Fabaceae	2	1	1	2	2	2.5	140
<i>Allocasuarina defungens</i>	Casuarinaceae	1	2	1	1	2	2.1	143
<i>Allocasuarina simulans</i>	Casuarinaceae	1	2	1	1	2	2.1	143
<i>Syzygium moorei</i>	Myrtaceae	1	2	1	2	1	2.1	143
<i>Corybas undulatus</i>	Orchidaceae	1	1	2	2	2	1.7	146
<i>Aldrovanda vesiculosa</i>	Droseraceae	1	1	2	2	2	1.7	146
<i>Caesia parviflora</i> var. <i>minor</i>	Liliaceae	1	1	2	2	2	1.7	146
<i>Caladenia quadrifaria</i>	Orchidaceae	1	1	2	2	2	1.7	146
<i>Oldenlandia galioides</i>	Rubiaceae	1	1	2	2	2	1.7	146
<i>Isopogon anemonifolius</i>	Proteaceae	1	2	1	1	1	1.7	146
<i>Syzygium hodgkinsoniae</i>	Myrtaceae	1	1	2	2	2	1.7	146
<i>Acacia bakeri</i>	Mimosaceae	1	1	2	1	2	1.5	153
<i>Acacia kydrensis</i>	Mimosaceae	1	1	2	1	2	1.5	153
<i>Archidendron hendersonii</i>	Mimosaceae	1	1	2	1	2	1.5	153
<i>Carex brownii</i>	Cyperaceae	1	1	2	2	1	1.5	153
<i>Hoya australis</i> subsp. <i>australis</i>	Asclepiadaceae	1	1	2	2	1	1.5	153
<i>Lipocarpha microcephala</i>	Cyperaceae	1	1	2	2	1	1.5	153

^a Attributes are described in Appendix 2 along with their scores, the range for each is presented here for information (e.g. the range for A is 0–3).

^b Species with the same score were given an equal rank value (e.g. 10 species scored 22.5 and were ranked equal 4th), therefore species with the next lowest score (e.g. 20.6) were given the next actual rank (e.g. 14th instead of 5th).

Table A3.2 Native plant species thought to be at risk from bitou bush invasion for which there was insufficient information available to model the threat posed to them (i.e. using the species model, see Appendix 2).

species	family name	threatened status ^a	justification
<i>Acacia longifolia</i> subsp. <i>sophorae</i>	Mimosoideae	not listed	species identified at risk too late to model
<i>Banksia serrata</i>	Proteaceae	not listed	species identified at risk too late to model
<i>Carpobrotus glaucescens</i>	Aizoaceae	not listed	species identified at risk too late to model
<i>Cynodon dactylon</i>	Poaceae	not listed	species identified at risk too late to model
<i>Dianella caerulea</i>	Phormiaceae	not listed	species identified at risk too late to model
<i>Eucalyptus parramattensis</i> subsp. <i>decadens</i>	Myrtaceae	Vulnerable (TSC Act and EPBC Act), ROTAP (2V)	species identified at risk too late to model
<i>Gonocarpus teucrioides</i>	Haloragaceae	not listed	species identified at risk too late to model
<i>Hakea teretifolia</i> subsp. <i>teretifolia</i>	Proteaceae	not listed	insufficient information available to model
<i>Hibbertia obtusifolia</i>	Dilleniaceae	not listed	species identified at risk too late to model
<i>Leonema carruthersii</i>	Rutaceae	ROTAP (3RC) ^b	insufficient information available to model
<i>Leucopogon parviflorus</i>	Ericaceae	not listed	species identified at risk too late to model
<i>Livistona australis</i>	Arecaceae	not listed	species identified at risk too late to model
<i>Lomandra longifolia</i>	Lomandraceae	not listed	species identified at risk too late to model
<i>Macadamia tetraphylla</i>	Proteaceae	Vulnerable (TSC Act and EPBC Act), ROTAP (2VC-)	species identified at risk too late to model
<i>Monotoca elliptica</i>	Ericaceae	not listed	species identified at risk too late to model
<i>Oxalis rubens</i>	Oxalidaceae	not listed	species identified at risk too late to model
<i>Persoonia pulchella</i>	Proteaceae	not listed	insufficient information available to model
<i>Picris angustifolia</i> subsp. <i>carolorum-hericorum</i>	Asteraceae	not listed	insufficient information available to model
<i>Pratia purpurascens</i>	Lobeliaceae	not listed	species identified at risk too late to model
<i>Rhagodia candolleana</i>	Chenopodiaceae	not listed	species identified at risk too late to model
<i>Ricinocarpus pinifolius</i>	Euphorbiaceae	not listed	species identified at risk too late to model
<i>Scaevola calendulacea</i>	Goodeniaceae	not listed	species identified at risk too late to model
<i>Senecio laetus</i> subsp. <i>maritimus</i>	Asteraceae	not listed	species identified at risk too late to model
<i>Solanum prinophyllum</i>	Solanaceae	not listed	species identified at risk too late to model
<i>Spinifex sericeus</i>	Poaceae	not listed	species identified at risk too late to model
<i>Tinospora tinosporoides</i>	Menispermaceae	Vulnerable (TSC Act and EPBC Act), ROTAP (3RC-)	species identified at risk too late to model
<i>Viola hederacea</i> forma G	Violaceae	not listed	species identified at risk too late to model
<i>Xylosma parvifolium</i>	Flacourtiaceae	Endangered (TSC Act)	insufficient information available to model

^a As listed and defined under the TSC Act (NSW *Threatened Species Conservation Act 1995*), the EPBC ACT (Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*) or ROTAP (Rare Or Threatened Australian Plants, see Briggs and Leigh 1996).

^b As cited on PlantNet website (<http://plantnet.rbgsyd.nsw.gov.au/>)

Table A3.3 Threatened status of species considered in the species model.

species name	Threatened status ^a			Endangered Ecological Communities in which the species also occurs ^d
	TSC Act ^{a,b}	EPBC Act ^{a,b}	ROTAP ^c	
high priority species				
<i>Plectranthus cremus</i>			3K	Themeda grasslands
<i>Zieria prostrata</i>	E	E	2E	Themeda grasslands
<i>Chamaesyce psammogeton</i>	E			
<i>Senecio spathulatus</i>	E			
<i>Acianthus exiguus</i>			3RC-	
<i>Calystegia soldanella</i>				
<i>Chamaecrista maritima</i>				Themeda grasslands
<i>Sophora tomentosa</i>	E			Littoral rainforest
<i>Lepturus repens</i>				
<i>Pultenaea maritima</i>	V			
<i>Stackhousia spathulata</i>				Themeda grasslands
<i>Ischaemum triticeum</i>				
<i>Vigna marina</i>				
<i>Gleichenia mendellii</i>				
<i>Actites megalocarpa</i>				
<i>Poa poiiformis</i>				Themeda grasslands
<i>Fontainea oraria</i>	E	E	2E	
<i>Diuris praecox</i>	V	V	2VC-	
<i>Westringia fruticosa</i>				Eastern Suburbs Banksia Scrub, Themeda grasslands
medium priority species				
<i>Asplenium difforme</i>				
<i>Pandanus tectorius</i> var. <i>australianus</i>				
<i>Acronychia littoralis</i>	E	E	3ECi	
<i>Pterostylis</i> no 15. (botany bay orchid)	E	E	2ECit	
<i>Viminaria juncea</i> (prostrate form)				
<i>Pterostylis woollsii</i>			3RC-	
<i>Acalypha nemorum</i> (prostrate form)				
<i>Pimelea spicata</i>	E	E	3ECi	
<i>Macarthuria neocambrica</i>				
<i>Acacia terminalis</i> subsp. <i>terminalis</i>	E	E		Eastern Suburbs Banksia Scrub
<i>Caladenia porphyrea</i>	E			
<i>Diuris superba</i>				
<i>Diuris curta</i>				
<i>Abildgaardia ovata</i>				
<i>Bossiaea stephensonii</i>				
<i>Dianella crinoides</i>				Bangalay Sand Forest

[continued on next page]

species name	Threatened status ^a			Endangered Ecological Communities in which the species also occurs ^d
	TSC Act ^{a,b}	EPBC Act ^{a,b}	ROTAP ^c	
medium priority species (continued)				
<i>Dianella congesta</i>				
<i>Cryptocarya foetida</i>	V	V	3VCi	Littoral Rainforest
<i>Syzygium paniculatum</i>	V	V	3VCi	
<i>Geodorum densiflorum</i>	E			
<i>Tricoryne simplex</i>				Coastal saltmarsh
<i>Wilsonia rotundifolia</i>				
<i>Casuarina equisetifolia</i>				
<i>Persoonia katerae</i>				
<i>Thesium australe</i>	V	V	3VCi+	Littoral Rainforest
<i>Acronychia imperforata</i>				
<i>Senna acclinis</i>	E		3RC-	
<i>Zieria granulata</i>	E		2VCi	
<i>Rulingia hermannifolia</i>			3RCa	
<i>Eucalyptus camfieldii</i>	V	V	2VCi	
<i>Tetradlea juncea</i>	V	V	3VCa	
<i>Vitex trifolia</i> var. <i>trifolia</i>				
<i>Diuris arenaria</i>	E			
<i>Hibiscus tiliaceus</i>				
<i>Liparis habenaria</i>				
<i>Pterostylis nigricans</i>	V		3V	
<i>Spyridium cinereum</i>			3RCa	
<i>Tylophora benthamii</i>				
<i>Xylosma terra-reginae</i>	E			
<i>Elyonurus citreus</i>	E			
<i>Grevillea humilis</i> subsp. <i>maritima</i>				
low priority species				
<i>Cynanchum carnosum</i>				
<i>Cyperus scaber</i>				
<i>Myoporum bateae</i>			3RC-	
<i>Persoonia conjuncta</i>				
<i>Wilsonia backhousei</i>	V			Coastal Saltmarsh
<i>Cynanchum elegans</i>	E	E	3ECi	Dry rainforest, Littoral rainforest
<i>Cordyline congesta</i>			2RC-	Littoral Rainforest
<i>Desmodium heterocarpon</i> var. <i>heterocarpon</i>				
<i>Typhonium eliosurum</i>			3RC-	
<i>Acacia georgensis</i>	V	V	2VCi	
<i>Phaius tancaevillae</i>	E	E	3VC+	
<i>Sarcostemma brunonianum</i>				
<i>Thozetia racemosa</i>				
<i>Wahlenbergia littorica</i>				
<i>Diuris byronensis</i>	E			Themeda grasslands
<i>Correa baeuerlenii</i>	V	V	3VCi	
<i>Geniostoma huttonii</i>	E			
<i>Haemodorum austroqueenslandicum</i>				
<i>Scaevola aemula</i>				
<i>Zieria tuberculata</i>	V	V	2VCi	
<i>Phaius australis</i>	E	E	3VCa	
<i>Gonocarpus salsoloides</i>			3RCa	
<i>Polyalthia nitidissima</i>				
<i>Comesperma sphaerocarpum</i>				
<i>Cyperus subulatus</i>				
<i>Galactia tenuiflora</i> var. <i>villosa</i>				
<i>Logania pusilla</i>				
<i>Olax angulata</i>	V	V	2VCi	
<i>Caladenia tessellata</i>	E	V	3V	
<i>Eucalyptus paniculata</i> subsp. <i>matutina</i>			2K	Pittwater spotted gum forest
<i>Macrozamia flexuosa</i>			2K	
<i>Calystegia affinis</i>	E	CE		
<i>Carmichaelia exsul</i>	E			
<i>Cupaniopsis anarcardiodes</i>				Littoral Rainforest, Kurnell Dune Forest, Swamp Oak floodplain
<i>Glochidion sumatranum</i>				Swamp Oak floodplain
<i>Haemodorum corymbosum</i>				
<i>Prostanthera densa</i>	V	V	3VC-	
<i>Acrostichum speciosum</i>				
<i>Celtis paniculata</i>				Littoral Rainforest
<i>Cyperus stradbrokeensis</i>				
<i>Finbristylis polytrichoides</i>				
<i>Hypserpa decumbens</i>				
<i>Pelargonium australe</i>				
<i>Pisonia umbellifera</i>				Littoral Rainforest
<i>Planchonella laurifolia</i>				
<i>Planchonella myrsiniodes</i>				
<i>Melaleuca groveana</i>	V		3RC-	
<i>Acianthus amplexicaulis</i>			3RC-	
<i>Pterostylis ophioglossa</i>				
<i>Thysanotus juncifolius</i>				
<i>Viola betonicifolia</i>				
<i>Arthraxon hispidis</i>	V	V	3VC+	
<i>Acmena hemilampra</i>				Littoral Rainforest
<i>Bridelia exaltata</i>				Littoral Rainforest
<i>Caesalpinia bonduc</i>	E			
<i>Grevillea hillianiana</i>	E			
<i>Ailanthus triphyssa</i>				
<i>Marsdenia lissae</i>			3RC-	
<i>Callistemon acuminatus</i>			3RC-	
<i>Coprosma inopinata</i>	E			
<i>Cryptandra propinqua</i>				
<i>Cryptandra scortechinii</i>				
<i>Cryptocarya triplinervis</i> var. <i>triplinervis</i>				Littoral Rainforest
<i>Cryptocarya triplinervis</i> var. <i>pubens</i>				Littoral Rainforest
<i>Darwinia leptantha</i>				Eastern Suburbs Banksia Scrub
<i>Gleichenia rupestris</i>				

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

species name	Threatened status ^a			Endangered Ecological Communities in which the species also occurs ^d
	TSC Act ^{a,b}	EPBC Act ^{a,b}	ROTAP ^c	
low priority species (continued)				
<i>Melicope vitiflora</i>	E			
<i>Endiandra globosa</i>			2RC-	
<i>Abildgaardia vaginata</i>				
<i>Coelospermum paniculatum</i>				
<i>Euphrasia collina</i> subsp. <i>paludosa</i>				
<i>Haloragis exalata</i> subsp. <i>exalata</i>	V	V	3VCa	
<i>Leucopogon esquamatus</i>				
<i>Lindsaea fraseri</i>	E			
<i>Lygodium microphyllum</i>				
<i>Niemeyera chartacea</i>	E			
<i>Pelargonium inodorum</i>				
<i>Persoonia linearis</i>				Dry Rainforest
<i>Streptothamnus moorei</i>				
<i>Cryptostylis hunteriana</i>	V	V	3VC-	
<i>Linum marginale</i>				
<i>Pultenaea villifera</i>	EP	V	3RC-	
<i>Allocasuarina defungens</i>	E	E	2E	
<i>Allocasuarina simulans</i>	V	V	2VCa	
<i>Syzygium moorei</i>	V	V	2VCi	
<i>Corybas undulatus</i>			3KC-	
<i>Aldrovanda vesiculosa</i>				
<i>Caesia parviflora</i> var. <i>minor</i>	E			
<i>Caladenia quadrifaria</i>				
<i>Oldenlandia galioides</i>				
<i>Isopogon anemonifolius</i>				
<i>Syzygium hodgkinsoniae</i>	V	V	3VC-	
<i>Acacia bakeri</i>	V			
<i>Acacia kydrensis</i>			2RCa	
<i>Archidendron hendersonii</i>	V			
<i>Carex brownii</i>				
<i>Hoya australis</i> subsp. <i>australis</i>				
<i>Lipocarpha microcephala</i>				
Total	55	30	49	27

^a As listed and defined under the TSC Act (NSW *Threatened Species Conservation Act 1995*), the EPBC ACT (Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*) or ROTAP (Rare Or Threatened Australian Plants, see Briggs and Leigh 1996).

^b E = Endangered species; V = Vulnerable species; EP = Endangered Population

^c For information on ROTAP codes see Briggs and Leigh (1996). It should be noted that ROTAP has not been updated since 1996 which may influence the status of some species. Irrespective it is the only measure of the threatened status for some species.

^d The Endangered Ecological Communities as listed under the TSC Act, within which the species is known to occur.

Appendix 4 Development of a model to rank plant populations and ecological communities threatened by bitou bush invasion

In Appendix 2 a model was developed to assess the native plant species at risk from bitou bush invasion. While this model can be used to assess individual species, it was not designed to assess plant populations or ecological plant communities at risk. This is in part because of the difficulties of condensing information for multiple species (i.e. for ecological communities) into a single value for each attribute (e.g. for the *Persistence* attribute, see Appendix 2), or assuming that the attributes of a species are the same for all populations (i.e. many of the threatened populations listed are unique forms such as the broad leaf form of *Glycine clandestina*, and thus may possess different characteristics). An abridged version of the species model was therefore developed to rank plant populations and ecological plant communities at risk. This was not done in the draft TAP (see DEC 2004). By using this abridged model greater transparency for selecting priorities can be achieved.

The ranking of priority plant populations and ecological plant communities in the model uses three attributes: (S) susceptibility of the habitat to bitou bush invasion; (D) distribution of the population or ecological community relative to that of bitou bush; and (I) the susceptibility of the native species of each population or ecological community to bitou bush invasion. Each attribute is scored with the highest score implying the highest priority.

The model for ranking plant populations and ecological plant communities is:

$$\text{priority rank} = (\text{habitat susceptibility [S]} \times 1.25) \times \frac{\text{distribution [D]}}{\text{susceptibility to invasion [I]}}$$

Attribute S in the model was weighted [by 1.25] to account for its importance in determining the overall risk from invasion. If the habitat is not susceptible to invasion the susceptibility of the species of each plant population or ecological plant community is of little importance. The populations and ecological communities that were modelled are listed and ranked in Appendix 5 (Tables A5.1 and A 5.2). Ecological communities that were considered to be potentially at risk from bitou invasion, but were unable to be modelled are listed in Table A5.3.

The model presented here is not definitive. It should be noted that if for any reason the value of an attribute changes then the rankings within the models could be adjusted accordingly. For example, if a fire alters the susceptibility of a habitat to invasion its ranking can be adjusted to ensure that the biodiversity at risk is protected.

S Susceptibility of the habitat to bitou bush invasion

As outlined in Appendix 2 some habitats are more prone to invasion by bitou bush than others. The habitat in which each plant population and ecological plant community occurred was assessed for its invasibility. The density of bitou bush present is not necessarily a reflection (or measure) of the invasibility of that habitat, as many invasive plants exhibit a distinct lag period between initial occurrence and dominance. Therefore, a site with a light infestation of bitou bush may either present a barrier to invasion, or the invasion process is in the early stages and heavier infestations may occur in the future if untreated.

Score	<i>Habitat invasibility</i>
0	<i>Extremely low habitat invasibility</i> – non-coastal habitats or those habitats close to the coast in which boneseed (or rarely, bitou bush) occurs but are generally not susceptible to invasion
1	<i>Low habitat invasibility</i> – habitats with dense intact vegetation (e.g. closed forests), or water logged habitats (e.g. margins of swamps)
2	<i>Medium habitat invasibility</i> – habitats with open canopies (e.g. open woodlands or shrublands), or forest margins, or damaged canopies, or where the margin is large relative the interior (i.e. littoral rainforest)
3	<i>High habitat invasibility</i> – habitats with no or low vegetation (e.g. sand dunes), or habitats with a limited shrub layer, or sites where the native vegetation is disturbed such that there is no or patchy vegetation

D Distribution relative to bitou bush

This attribute describes the potential for bitou bush to have a major impact on the entire population or an ecological community based on its distribution relative to that of the threatened population or ecological community. For ecological communities the distribution refers to the entire distribution of all patches, not that of an individual patch (e.g. littoral rainforests are distributed throughout coastal New South Wales).

Score	<i>Distribution of the population or ecological community</i>
0	Not known from coastal habitats
1	Distributed across a range of habitats (some of which are coastal <50%) [populations excluded as they are typically only known from one location]
2	Known predominantly from coastal habitats (>50% but <100%)
3	Known only from coastal habitats
4	Known only from coastal habitats in which all locations are within the distribution of bitou bush (and/or boneseed)

I Susceptibility of populations and ecological communities to bitou bush invasion

As described in Appendix 2, the same broad measure was also used here to encompass the general susceptibility of plant populations and ecological plant communities to bitou bush invasion.

Score	<i>Susceptibility of biodiversity to invasion</i>
1	Population or ecological community persists or grows in invaded areas with limited or no sign of susceptibility to invasion
2	Information about susceptibility to invasion is unknown
3	Slightly sensitive to invasion (i.e. bitou bush occurs in part but not all of the population or ecological community e.g. forest margins only)
4	Sensitive to invasion (i.e. bitou bush readily invades populations or ecological communities).

Appendix 5 Plant populations and ecological communities considered in the TAP

Table A5.1 Threatened plant populations considered and their rank in the model.

populations ^b	family	threatened status ^b	attribute ^a			model (S*1.25)*D*I	species rank ^c
			S	D	I		
			0–3	0–4	1–4		
			habitat invasibility	distribution	susceptibility to invasion	max score (60)	
high priority populations							
<i>Glycine clandestina</i> (broad leaf form)	Fabaceae	Endangered (TSC Act)	3	4	4	60	1
<i>Zieria smithii</i> (low growing form)	Rutaceae	Endangered (TSC Act)	3	4	4	60	1
low priority populations							
<i>Chorizema parviflorum</i> (Wollongong / Shellharbour)	Fabaceae	Endangered (TSC Act)	2	3	2	15	3

^a Attributes are described in Appendix 4 along with their scores, the range for each is presented here for information (e.g. the range for S is 0–3).

^b As defined under the TSC Act (NSW *Threatened Species Conservation Act 1995*).

^c Populations with the same score were given an equal rank value (e.g. two species scored 60 and were ranked equal 1st), therefore the population(s) with the next lowest score (e.g. 15) was given the next actual rank (e.g. 3rd).

Table A5.2 Ecological Communities considered and their rank in the model.

ecological communities ^b	threatened status ^{c,d}	attribute ^a			model (S*1.25)*D*I	species rank ^e
		S	D	I		
		0–3	0–4	1–4		
		habitat invasibility	distribution	susceptibility to invasion	max score (60)	
high priority communities						
Eastern Suburbs Banksia Scrub	EEC ^f	3	4	4	60	1
Littoral Rainforest ^g	EEC, SEPP 26	3	4	4	60	1
Kurnell Dune Forest	EEC	3	4	4	60	1
Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)		3	4	3	45	4
Themeda (<i>Themeda triandra</i>) grassland on sea cliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner bioregions	EEC	3	3	4	45	4
Eastern Suburbs Banksia Scrub equivalent communities (i.e. Coastal Sand Wallum Heath)		3	4	3	45	4
Frontal Dune Vegetation Complex		3	3	4	45	4
Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)		3	3	4	45	4
medium priority communities						
Byron Bay Dwarf Gramminoid Clay Heath	EEC	2	4	3	30	9
Bangalay sand forest	EEC	2	4	3	30	9
Low Woodland with Heathland (Norah Head)	EEC	2	4	3	30	9
Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)		2	3	3	22.5	12
Coastal Scrub (<i>Drypetes australis</i> / <i>Elaeodendron australe</i>)		2	3	3	22.5	12
Headland Heath		2	3	3	22.5	12
Headland Woodland		2	3	3	22.5	12
Dune Grasslands (<i>Spinifex hirsutus</i>)		3	3	2	22.5	12
low priority communities						
Coastal Wetlands	SEPP 14	1	4	3	15	17
Sydney Coastal Estuary Swamp Forest Complex		1	4	3	15	17
Sydney Freshwater Wetlands	EEC	1	4	3	15	17
Pittwater Spotted Gum and equivalent communities (i.e. Wagstaff Spotted Gum forest)	EEC	2	2	3	15	17
Swamp oak floodplain	EEC	2	3	2	15	17
Coastal Saltmarsh	EEC	1	3	2	7.5	22
Fresh water wetlands	EEC	1	2	3	7.5	22
Swamp Sclerophyll forest on coastal floodplains	EEC	1	3	2	7.5	22
River Flat Eucalypt Forest	EEC	1	2	2	5	25
Dry Rainforest	EEC	1	2	2	5	25

^a Attributes are described in Appendix 4 along with their scores, the range for each is presented here for information (e.g. the range for S is 0–3).

^b The species named are the dominant species which depict the ecological community.

^c As defined under the TSC Act (NSW *Threatened Species Conservation Act 1995*) or SEPP (State Environmental Planning Policy)

^d EEC = Endangered Ecological Community as defined under the TSC Act or EPBC Act (Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*).

^e Ecological communities with the same score were given an equal rank value (e.g. five species scored 45 and were ranked equal 4th), therefore ecological communities with the next lowest score (e.g. 30) were given the next actual rank (e.g. 9th instead of 5th).

^f Also listed under the EPBC Act.

^g Includes those littoral rainforests encompassed under SEPP26 and the TSC Act (which includes the formerly listed Sutherland Shire Littoral Rainforest).

Table A5.3 Threatened populations and ecological communities thought to be at risk from bitou bush invasion for which there was insufficient information available to model the threat posed to them (i.e. using the model outlined in Appendix 4).

ecological communities	threatened status ^a	justification
Coastal low forest	potentially at risk ^b	insufficient information available to model
Coastal sand dune vegetation communities	potentially at risk ^b	insufficient information available to model
Dune dry heath (<i>Acacia longifolia</i> var. <i>sophorae</i> / <i>Leucopogon parviflorus</i> / <i>Scaevola calendulacea</i>)	potentially at risk ^b	insufficient information available to model
Gramminoid Clay Heath (<i>Hibbertia vestita</i> / <i>Pimelea linifolia</i> / <i>Pultenaea villosa</i> plus <i>Themeda triandra</i>)	potentially at risk ^b	insufficient information available to model
Kurri Sand Swamp Woodland in the Sydney Basin Bioregion	EEC (TSC Act)	EEC identified at risk too late to model
Sclerophyll forest (<i>Banksia integrifolia</i> / <i>Allocasuarina littoralis</i>)	potentially at risk ^b	insufficient information available to model
Sclerophyll forest (<i>Eucalyptus pilularis</i> / <i>E. gummifera</i> / <i>E. intermedia</i> / <i>Angophora costata</i>)	potentially at risk ^b	insufficient information available to model
Sclerophyll mallee (<i>Eucalyptus planchioriana</i> or <i>E. intermedia</i>)	potentially at risk ^b	insufficient information available to model
Umina Coastal Sandplain Woodland in the Sydney Basin Bioregion	EEC (TSC Act)	EEC identified at risk too late to model

^a As listed and defined under the TSC Act (NSW *Threatened Species Conservation Act 1995*). EEC = Endangered Ecological Community.

^b As identified in Dodkin and Gilmore (1984).

Appendix 6* **Selecting priority sites for bitou bush control*

Determining the species, populations and ecological communities at risk from bitou bush invasion is only the first stage in the process of abating the impact of bitou bush on biodiversity. The second stage requires an assessment of the locations at which the entities at risk occur (hereafter referred to as ‘entity locations’). Entity location assessment involves determining the feasibility of control, the actual impact of bitou bush, the condition of the entity present and the other threats present.

While the entity location assessment process has not changed since the publication of the draft (see DEC 2004), the processes for determining and selecting priority sites for implementing the TAP have been changed. Also, an additional 95 species, one population and 17 ecological communities have been incorporated into the TAP, and thus additional site information for these entities is included here. Many of the sites marked as ‘A’ (requiring further assessment) in the draft have now also been modelled. Finally, sites presented in the draft TAP were not grouped when multiple species occurred at either the same site or within close proximity. This has been resolved here.

A6.1 Stage one – assessment of entity locations

In order to establish priority sites for bitou bush control, the locations of all species, populations and ecological communities considered to be at risk from bitou bush invasion (i.e. as identified in Appendices 3 and 5) were examined here (hereafter referred to as entity locations). The assessment of entity locations in the model uses three attributes: (E) the ability to achieve **effective** bitou bush control at the location; (AI) the **actual impact** of bitou bush at each location; and (C) the **condition** of the entity present at each location.

It should be noted that in this initial assessment stage, entity locations were modelled. The second assessment stage outlined below in Section A6.2 accounts for sites that encompass multiple entities within close proximity to each other (hereafter referred to as multi-species sites).

The model for assessing the entity locations is:

$$\text{Entity location priority} = \text{effective control [E]} + \text{actual impact [AI]} + \text{condition [C]}$$

Each attribute is scored with the highest score implying the highest priority. The score for each attribute is based on a subjective assessment for each entity at each site, being either Low, Low–Medium, Medium, Medium–High or High for each of the three attributes. These subjective scores were then converted into a numerical value shown in Table A6.1.

Table A6.1 Numerical value of each of the subjective assessment scores given to each of the three location attributes (i.e. E, AI and C - see text for more details).

subjective assessment values given to each of the three location attribute (i.e. E, AI and C)	numerical value
Low	1
Low – Medium	2
Medium	3
Medium – High	4
High	5

The scores for each attribute were added to give a total score (maximum of 15) that was converted to a priority rank (i.e. High, Medium or Low priority) based on the following division:

- ▶ Low priority (L) if an entity location scored ≤ 5
- ▶ Medium priority (M) if an entity location scored >5 and ≤ 10
- ▶ High priority (H) if an entity location scored >10

Entity locations were listed as requiring further assessment (A) where there was insufficient information.

E Effective

The ability to achieve effective bitou bush control at an entity location was based on the *density of bitou bush* present, and the feasibility of undertaking bitou bush control, particularly **with respect to protecting the entities at risk**. Locations with high densities of bitou bush where the feasibility of control is relatively high were given a high value. In contrast, locations with low densities of bitou bush where the feasibility of control is low (i.e. logistically difficult and/or expensive) were assessed as low. These are the extreme scenarios, with a range of combinations in between.

AI Actual impact

The actual impact of bitou bush at each entity location was determined by considering the degree of impact posed by bitou bush (and associated weeds - as outlined/specified in Section 7.2). The level of infestation of bitou bush and its proximity to the threatened entity were also considered here. Locations at which bitou bush and associated weed species were well established and in close proximity to the threatened entity were assessed as high.

C Condition

This attribute was separated into two components: the condition of the entity and the physical condition of the location.

Entity condition – The condition of the entity present (i.e. plant population health) at each entity location, and the importance of the entity location to the entity’s overall status. Factors considered in rating entity locations included the size of the population (i.e. few or many individuals) in relation to the its natural occurrence (e.g. some species only occur in small populations, which are common), the area occupied or distribution of the population at the location, whether it occurred on the edge of the entity’s range, and the overall health of the population present (i.e. individuals in poor health or where there are limited seedlings present, or all are old and sick plants, etc.).

Location condition – The condition of the location where the entity is present (i.e. based on the presence of threats other than bitou bush which may reduce the success of the control program). While the control of other weed species, particularly those that will replace bitou bush following control, must occur within the confines of this TAP (as specified in Section 7.2), reduction of all other threats is outside its scope. Thus, locations where there were major threats other than bitou bush and associated weed species were assessed as low.

Locations where the entity condition was high and the physical condition was high (i.e. limited other threats were present), were assessed as high.

The assessment of condition was determined in consultation with relevant threatened species recovery teams, species experts (including botanists) and people managing these sites in the field.

A6.2 Stage two – categorising sites for control

The first stage outlined above (assessment of entity locations), prioritises each entity location, however, the majority of locations could be grouped into larger sites based on their geographic locations or their relative proximity. Thus a second assessment stage is needed to amalgamate the entity location information into a single value for multi-species sites. This second stage uses five steps:

- i) each entity location is **assigned a cell in a matrix** based on the combination of the **entity location priority** (H, M or L as determined in stage one, Section A6.1 above) and the **entity priority** (H, M or L as determined in Appendices 3 and 5)
- ii) the entity locations were amalgamated into multi-species sites, and assigned a cell in the matrix
- iii) sites were divided into **five control categories**
- iv) each entity location in each site was assigned an **entity matrix value** according to the **cell within the matrix** that was assigned in step i). The **entity matrix values** were summed for all entities occurring at a site, giving a **site matrix score**
- v) the **site matrix score** was used to **rank the sites** within each control category.

i assigning cells in the matrix to entity locations

The results of the species, population and ecological community models (see Appendices 3 and 5), and the site model can be presented as a matrix, in which every combination is expressed from a high priority species at a high priority location to a low priority species at a low priority location (Figure A6.1). For example, the *Wooli River* site is a high priority location for the high priority species *Sophora tomentosa*, and would therefore be assigned the cell marked with an x in the matrix in Figure A6.1 (i.e. HH).

		entity location priority		
		H	M	L
entity priority	H	X		
	M			
	L			

Figure A6.1 Matrix of entity location priority by entity priority (High (H), Medium (M) and Low (L) priority).

Sites marked with an ‘A’ could not be given a cell in the matrix due to insufficient information and are thus not accounted for.

ii assigning cells in the matrix to multi-species sites

As outlined above, every entity priority – entity location combination can be assigned one of nine cells in the matrix. When entity locations were grouped into multi-species sites, the highest value matrix cell for all entity locations was assigned as the overall matrix cell for the site. For example, the *Broken Head Nature Reserve* site encompasses 17 entity locations, representing six cells in the matrix: 2 x HH, 3 x HM, 2 x MH,

3 x MM, 3 x LH, 4 x LM. Thus, *Broken Head Nature Reserve* site is assigned a matrix cell of HH, being the highest value. Single-species sites keep their initial matrix cell.

iii five control categories

Accounting for multi-species sites in the matrix reduces the number of sites to 349 across coastal New South Wales. This process enables priorities for control to be determined for all sites from the matrix by assigning the sites encompassed by each cell a control category using the system presented in Figure A6.2. For example, the *Broken Head Nature Reserve* site was assigned to control category 1 (C1), as it was assigned a matrix cell of HH in step iii) – see above. Every site was assigned to a control category.

		entity location priority						
		H	M	L				
entity priority	H	HH	HM	HL	translates to →	C1	C2	C3
	M	MH	MM	ML		C2	C3	C4
	L	LH	LM	LL		C3	C4	C5

Figure A6.2 The five control categories given to each cell in the matrix.

iv assigning entity matrix values

To assign priority to sites within each control category, each entity location was assigned an **entity matrix value** ranging from 5 to 1 according to the matrix cell assigned to the entity location in step i). For example, *Sophora tomentosa* at Woolli River was assigned to matrix cell HH, which gives an **entity matrix value** of 5. This process is illustrated below in Figure A6.3.

		entity location priority					entity location priority		
		H	M	L			H	M	L
entity priority	H	HH	HM	HL	translates to →	entity priority	5	4	3
	M	MH	MM	ML			4	3	2
	L	LH	LM	LL			3	2	1

Figure A6.3 The entity matrix value (from 5 to 1) given to each entity location according to the matrix cell assigned in step i).

For multi-species sites, the **entity matrix values** for each entity location were added to give a total **site matrix score**. For example, the *Broken Head Nature Reserve* site encompassed 17 entity locations, which were assigned the following cells in the matrix from step ii):

2 x HH, 3 x HM, 2 x MH, 3 x MM, 3 x LH, 4 x LM.

Therefore the total **site matrix score** would be:

$(2 \times 5) + (3 \times 4) + (2 \times 4) + (3 \times 3) + (3 \times 3) + (4 \times 2) = 56.$

For single species sites, the total **site matrix score** is simply the **entity matrix value**.

v ranking sites within each control category

Given that each of the five control categories contain numerous sites, a process is needed to prioritise sites for implementation. In order to establish priorities for bitou bush control, the sites within each category were ranked using the total **site matrix score** (step iv).

Sites with a greater **site matrix score** were ranked highest, giving sites with high priority entities that contain the largest number of other entities at risk the greatest priority for control. A full list of the sites within each of the five categories ranked according to the process described above is presented in Appendix 7.

Appendix 7 Sites for bitou bush control considered in the TAP

Table A7.1 Category 1 sites for implementing control (n = 169 sites).

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h				
				E	AI	C							
NR133	Arakoon SCA / Hat Head NP	<i>Chamaecrista maritima</i>	High	M	H	M	11 (H)	66	1				
		<i>Actites megalocarpa</i>	High	H	L	H	11 (H)						
		<i>Asplenium difforme</i>	Medium	H	L	H	11 (H)						
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	L	H	11 (H)						
		<i>Viminaria juncea</i> (prostrate form)	Medium	H	L	H	11 (H)						
		<i>Acalypha nemorum</i> (prostrate form)	Medium	H	L	H	11 (H)						
		<i>Abildgaardia ovata</i>	Medium	H	L	H	11 (H)						
		<i>Dianella crinoides</i>	Medium	H	L	H	11 (H)						
		<i>Cynanchum carnosum</i>	Low	H	L	H	11 (H)						
		<i>Sarcostemma brunonianum</i>	Low	H	L	H	11 (H)						
		<i>Haemodorum austroqueenslandicum</i>	Low	H	L	H	11 (H)						
		<i>Scaevola aemula</i>	Low	H	L	H	11 (H)						
		<i>Comesperma sphaerocarpum</i>	Low	H	L	H	11 (H)						
		<i>Galactia tenuiflora</i> var. <i>villosa</i>	Low	H	L	H	11 (H)						
		<i>Logania pusilla</i>	Low	H	L	H	11 (H)						
		<i>Cryptandra propinqua</i>	Low	H	L	H	11 (H)						
		<i>Pelargonium inodorum</i>	Low	H	L	M	9 (M)						
		<i>Isopogon anemonifolius</i>	Low	H	L	H	11 (H)						
		<i>Linum marginale</i>	Low	H	L	H	11 (H)						
		NR29	Cape Byron SCA (including SEPP26 no. 27, 27A, 27B)	<i>Plectranthus crennus</i>	High	M	M-H			M	10 (M)	57	2
<i>Plectranthus crennus</i>	High			M-H	M	M	10 (M)						
<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium			M-H	M-H	M	11 (H)						
<i>Acronychia littoralis</i>	Medium			H	L-M	M	10 (M)						
<i>Acronychia littoralis</i>	Medium			H	M-H	M	12 (H)						
<i>Acronychia littoralis</i>	Medium			H	M	H	13 (H)						
<i>Cryptocarya foetida</i>	Medium			M	M-H	M-H	11 (H)						
<i>Xylosma terra-reginae</i>	Medium			M	M	M	9 (M)						
<i>Cordyline congesta</i>	Low			M	M	M	9 (M)						
<i>Correa bauerlenii</i>	Low			M	M-H	M-H	11 (H)						
<i>Acianthus amplexicaulis</i>	Low			H	M-H	M	12 (H)						
<i>Acmena hemilampra</i>	Low			M	M-H	M-H	11 (H)						
<i>Ailanthus triphysa</i>	Low			M	M-H	M-H	11 (H)						
<i>Syzygium moorei</i>	Low			M	M-H	M-H	11 (H)						
Littoral Rainforest	High			M	H	H	13 (H)						
Grassy Headlands (<i>Themeda triandra</i>)	High			M	M-H	M-H	11 (H)						
NR36	Broken Head NR (including SEPP26 no. 32, 33B, 34A)			<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	M	H	M-H	12 (H)	56	3		
				<i>Acronychia littoralis</i>	Medium	M-H	H	M-H	13 (H)				
				<i>Acronychia littoralis</i>	Medium	M	M	M	9 (M)				
				<i>Cryptocarya foetida</i>	Medium	M	M	M	9 (M)				
		<i>Xylosma terra-reginae</i>	Medium	M-H	L-M	M	9 (M)						
		<i>Cordyline congesta</i>	Low	M	M	M	9 (M)						
		<i>Diuris byronensis</i>	Low	H	M	M-H	12 (H)						
		<i>Acmena hemilampra</i>	Low	M	M	M	9 (M)						
		<i>Acmena hemilampra</i>	Low	H	M	M	11 (H)						
		<i>Ailanthus triphysa</i>	Low	H	M	M	11 (H)						
		<i>Syzygium moorei</i>	Low	M	M	M	9 (M)						
		<i>Archidendron hendersonii</i>	Low	M	M	M	9 (M)						
		Littoral Rainforest	High	H	H	M	13 (H)						
		Littoral Rainforest	High	H	L-M	M-H	11 (H)						
		Littoral Rainforest	High	H	L-M	L-M	9 (M)						
		Littoral Rainforest	High	M	M	M	9 (M)						
		Grassy Headlands (<i>Themeda triandra</i>)	High	M-H	L-M	M	9 (M)						
		NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	<i>Chamaesyce psammogeton</i>	High	H	H	H	15 (H)			53	4
				<i>Acianthus exiguus</i>	High	M	M	M	9 (M)				
				<i>Acianthus exiguus</i>	High	H	H	M	13 (H)				
<i>Sophora tomentosa</i>	High			H	H	M	13 (H)						
<i>Sophora tomentosa</i>	High			H	M	L	9 (M)						
<i>Stackhousia spathulata</i>	High			M	H	H	13 (H)						
<i>Stackhousia spathulata</i>	High			H	H	M	13 (H)						
<i>Stackhousia spathulata</i>	High			H	H	H	15 (H)						
<i>Vigna marina</i>	High			H	H	M	13 (H)						
<i>Gleichenia mendellii</i>	High			M	H	H	13 (H)						
<i>Acrostichum speciosum</i>	Low			H	H	M	13 (H)						
<i>Marsdenia liisae</i>	Low			M	M	M	9 (M)						
NR157	Crowdy Bay NP (north)			<i>Actites megalocarpa</i>	High	H	L	H	11 (H)	50	5		
		<i>Viminaria juncea</i> (prostrate form)	Medium	H	L	H	11 (H)						
		<i>Bossiaea stephensonii</i>	Medium	H	L	H	11 (H)						
		<i>Tricoryne simplex</i>	Medium	H	L	H	11 (H)						
		<i>Persoonia conjuncta</i>	Low	H	L	H	11 (H)						
		<i>Comesperma sphaerocarpum</i>	Low	H	L	H	11 (H)						
		<i>Logania pusilla</i>	Low	H	L	H	11 (H)						
		<i>Haemodorum corymbosum</i>	Low	H	L	H	11 (H)						
		<i>Thysanotus juncifolius</i>	Low	H	L	H	11 (H)						
		<i>Cryptandra scortechinii</i>	Low	H	L	H	11 (H)						
		<i>Darwinia leptantha</i>	Low	H	L	H	11 (H)						
		<i>Gleichenia rupestris</i>	Low	H	L	H	11 (H)						
		<i>Euphrasia collina</i> subsp. <i>paludosa</i>	Low	H	L	H	11 (H)						
		<i>Leucopogon esquamatus</i>	Low	H	L	H	11 (H)						
		<i>Isopogon anemonifolius</i>	Low	H	L	H	11 (H)						

[continued on next page]

Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h				
				E	AI	C							
SM40	Towra Point NR	<i>Westringia fruticosa</i>	High	H	H	L	11 (H)	50	5				
		<i>Viminaria juncea</i> (prostrate form)	Medium	H	M	M	11 (H)						
		<i>Bossiaea stephensonii</i>	Medium	H	L	H	11 (H)						
		<i>Syzygium paniculatum</i>	Medium	M	M	?	6 (M)						
		<i>Cupaniopsis anarcardiodes</i>	Low	H	H	M	13 (H)						
		<i>Glycine clandestina</i> (bif) ¹	High	H	M	L	9 (M)						
		Littoral Rainforest	High	L	M	L	5 (L)						
		Littoral Rainforest	High	L	M	M	7 (M)						
		Littoral Rainforest	High	M	H	H	13 (H)						
		Littoral Rainforest	High				0 (A)						
		Littoral Rainforest	High	L	M	L	5 (L)						
		Kumell Dune Forest	High	H	H	L	11 (H)						
		Swamp Oak Floodplain	Low	H	M	M	11 (H)						
		Sydney Freshwater Wetlands	Low	L	M	L	5 (L)						
		Coastal Saltmarsh	Low	H	L	H	11 (H)						
		SR16	Warrain Beach / Currarong Beach	<i>Chamaesyce psammogeton</i>	High	H	M			H	13 (H)	49	7
<i>Westringia fruticosa</i>	High			H	L	H	11 (H)						
<i>Wilsonia backhousei</i>	Low			H	L	H	11 (H)						
Littoral Rainforest	High			H	L	H	11 (H)						
Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High			H	L	H	11 (H)						
Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High			H	L	H	11 (H)						
Frontal Dune Vegetation Complex	High			H	L	H	11 (H)						
Bangalay Sand Forest	Medium			H	L	H	11 (H)						
Sydney Freshwater Wetlands	Low			H	L	H	11 (H)						
Coastal Wetlands (SEPP14)	Low			H	L	H	11 (H)						
Swamp Oak Floodplain	Low			H	L	H	11 (H)						
Sydney Coastal Estuary Swamp Forest Complex	Low			H	L	H	11 (H)						
HCR108	Wamberal Lagoon NR			<i>Chamaesyce psammogeton</i>	High	M	H	L	9 (M)	49	7		
				<i>Senecio spathulatus</i>	High	M	H	L	9 (M)				
		<i>Stackhousia spathulata</i>	High	M	H	L	9 (M)						
		<i>Westringia fruticosa</i>	High	M-H	M-H	M	11 (H)						
		<i>Macarthuria neocambrica</i>	Medium	H	H	M	13 (H)						
		<i>Syzygium paniculatum</i>	Medium	H	H	M	13 (H)						
		Littoral Rainforest	High	H	M	M-H	12 (H)						
		Frontal Dune Vegetation Complex	High	M-H	M-H	M	11 (H)						
		Headland Heath	Medium	M-H	M-H	M	11 (H)						
		Headland Woodland	Medium	M-H	M-H	M	11 (H)						
		Dune Grasslands (<i>Spinifex hirsutus</i>)	Medium	M-H	M	M	10 (M)						
		Swamp Oak Floodplain	Low	M	M	H	11 (H)						
		HCR96	Munmorah SCA	<i>Pultenaea maritima</i>	High	H	M	M	11 (H)			49	7
<i>Diuris praecox</i>	High			H	M	M	11 (H)						
<i>Westringia fruticosa</i>	High			M	M	H	11 (H)						
<i>Macarthuria neocambrica</i>	Medium			H	H	M	13 (H)						
<i>Syzygium paniculatum</i>	Medium			M	M	L	7 (M)						
<i>Rulingia hermannifolia</i>	Medium			H	L	H	11 (H)						
<i>Eucalyptus camfieldii</i>	Medium			H	L	H	11 (H)						
<i>Tetratheca juncea</i>	Medium			H	L	M	9 (M)						
<i>Macrozamia flexuosa</i>	Low			H	L	M	9 (M)						
<i>Caladenia tessellata</i>	Low			H	L	L	7 (M)						
<i>Caladenia tessellata</i>	Low			H	L	L	7 (M)						
Littoral Rainforest	High			M	H	M	11 (H)						
Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High			?	?	?	0 (A)						
Grassy Headlands (<i>Themeda triandra</i>)	High			M	M-H	M-H	11 (H)						
Frontal Dune Vegetation Complex	High			?	?	?	0 (A)						
Freshwater Wetlands	Low			?	?	?	0 (A)						
Swamp Sclerophyll Forest on Coastal Floodplains	Low			?	?	?	0 (A)						
NR148	Sea Acres NR / Tacking Point			<i>Sophora tomentosa</i>	High	H	H	M	13 (H)	48	10		
				<i>Vigna marina</i>	High	H	M	H	13 (H)				
		<i>Ischaemum triticeum</i>	High	H	H	H	15 (H)						
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	M	H	H	13 (H)						
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	H	H	15 (H)						
		<i>Acronychia littoralis</i>	Medium	H	L	H	11 (H)						
		<i>Casuarina equisetifolia</i>	Medium	M	H	H	13 (H)						
		<i>Hibiscus tiliaceus</i>	Medium	H	H	H	15 (H)						
		<i>Cynanchum elegans</i>	Low	H	H	H	15 (H)						
		<i>Zieria smithii</i> (lgf) ¹	High	H	M	H	13 (H)						
		Littoral Rainforest	High	H	H	H	15 (H)						
		NR25	Brunswick Heads NR (including SEPP26 no. 18)	<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	M	M-H	12 (H)			45	11
				<i>Acronychia littoralis</i>	Medium	H	H	M	13 (H)				
				<i>Cryptocarya foetida</i>	Medium	M	H	M	11 (H)				
				<i>Xylosma terra-reginae</i>	Medium	H	L-M	M	10 (M)				
<i>Acianthus amplexicaulis</i>	Low			H	H	M	13 (H)						
<i>Acmena hemilampira</i>	Low			H	H	M	13 (H)						
<i>Melicope vitiiflora</i>	Low			M-H	M	M	10 (M)						
<i>Grevillea hilliana</i>	Low			H	H	M	13 (H)						
<i>Ailanthus triphysa</i>	Low			M-H	M	M	10 (M)						
<i>Endiandra globosa</i>	Low			M-H	M	M	10 (M)						
<i>Niemeyera chartacea</i>	Low			M-H	M	M	10 (M)						
<i>Syzygium moorei</i>	Low			H	H	M	13 (H)						
Littoral Rainforest	High			H	H	M	13 (H)						
Coastal Wetlands (SEPP14)	Low			H	H	M	13 (H)						
Coastal Wetlands (SEPP14)	Low			M	M	M	9 (M)						
NR3	Tweed Coastal Reserve (including SEPP26 no. 2A – Fingal Head)			<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	M	M	11 (H)	41	12		
		<i>Cryptocarya foetida</i>	Medium	H	M	M	11 (H)						
		<i>Hibiscus tiliaceus</i>	Medium	H	M	M	11 (H)						
		<i>Cordyline congesta</i>	Low	H	M	M	11 (H)						
		<i>Polyalthia nitidissima</i>	Low	H	M	M	11 (H)						

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h				
				E	AI	C							
NR3	Tweed Coastal Reserve (including SEPP26 no. 2A – Fingal Head) – continued	<i>Glochidion sumatranum</i>	Low	H	M	M	11 (H)						
		<i>Celtis paniculata</i>	Low	H	M	M	11 (H)						
		<i>Cryptocarya triplinervis</i> var. <i>triplinervis</i>	Low	H	M	M	11 (H)						
		<i>Coelospermum paniculatum</i>	Low	H	M	M	11 (H)						
		<i>Syzygium moorei</i>	Low	H	M	M	11 (H)						
		<i>Archidendron hendersonii</i>	Low	H	M	M	11 (H)						
SR13	Seven Mile Beach NP (including SEPP 26 no. 175, 175A)	Littoral Rainforest	High	H	M	M	11 (H)	40	13				
		<i>Chamaesyce psammogeton</i>	High	L	L	M	5 (L)						
		<i>Stackhousia spathulata</i>	High	L	L	M	5 (L)						
		Littoral Rainforest	High	H	M	H	13 (H)						
		Littoral Rainforest	High	H	M	H	13 (H)						
		Littoral Rainforest	High	M	H	M	11 (H)						
		Frontal Dune Vegetation Complex	High	M	H	M	11 (H)						
		Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M	H	M	11 (H)						
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M	H	M	11 (H)						
		Bangalay Sand Forest	Medium	M	H	M	11 (H)						
HCR76	Glenrock SCA (various locations throughout park)	<i>Diuris praecox</i>	High	M	M	H	11 (H)	40	13				
		<i>Diuris praecox</i>	High	M	M	H	11 (H)						
		<i>Tetratheca juncea</i>	Medium	H	M	H	13 (H)						
		<i>Tetratheca juncea</i>	Medium	M	M	H	11 (H)						
		<i>Macrozamia flexuosa</i>	Low	M-H	M	M-H	11 (H)						
		<i>Macrozamia flexuosa</i>	Low	H	M	H	13 (H)						
		<i>Macrozamia flexuosa</i>	Low	M	M	M	9 (M)						
		Grassy Headlands (<i>Themeda triandra</i>)	High	M	H	M	11 (H)						
		Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M	H	M	11 (H)						
		Headland Heath	Medium	M	H	M	11 (H)						
HCR43	Mungo Brush, Myall Lakes NP	<i>Chamaesyce psammogeton</i>	High	M	M	M	9 (M)	40	13				
		<i>Chamaesyce psammogeton</i>	High	H	H	M	13 (H)						
		<i>Stackhousia spathulata</i>	High	H	H	M	13 (H)						
		<i>Stackhousia spathulata</i>	High	H	H	L	11 (H)						
		<i>Senecio spathulatus</i>	High	H	H	M	13 (H)						
		<i>Senecio spathulatus</i>	High	H	H	M	13 (H)						
		<i>Syzygium paniculatum</i>	Medium	M	H	M	11 (H)						
		<i>Senna acclimis</i>	Medium	L	L	L	3 (L)						
		<i>Cynanchum elegans</i>	Low	M	L	L	5 (L)						
		Littoral Rainforest	High	L	L	H	7 (M)						
NR154	Kattang NR	<i>Ischaemum triticeum</i>	High	H	L	M	9 (M)	39	16				
		<i>Poa poiformis</i>	High	H	L	M	9 (M)						
		<i>Abildgaardia ovata</i>	Medium	H	L	M	9 (M)						
		<i>Dianella crinoides</i>	Medium	H	L	H	11 (H)						
		<i>Casuarina equisetifolia</i>	Medium	H	L	H	11 (H)						
		<i>Thesium australe</i>	Medium	H	H	H	15 (H)						
		<i>Fimbristylis polytrichoides</i>	Low	H	L	M	9 (M)						
		<i>Gleichenia rupestris</i>	Low	H	L	M	9 (M)						
		<i>Isopogon anemonifolius</i>	Low	H	L	M	9 (M)						
		<i>Zieria smithii</i> (Igf) ¹	High	H	L	H	11 (H)						
		Littoral Rainforest	High	H	L	H	11 (H)						
		NR142	Crescent Head	<i>Pultenaea maritima</i>	High	H	H			H	15 (H)	39	16
				<i>Stackhousia spathulata</i>	High	H	H			H	15 (H)		
<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium			H	H	H	15 (H)						
<i>Viminaria juncea</i> (prostrate form)	Medium			H	H	H	15 (H)						
<i>Acalypha nemorum</i> (prostrate form)	Medium			H	H	H	15 (H)						
<i>Casuarina equisetifolia</i>	Medium			H	H	H	15 (H)						
<i>Thesium australe</i>	Medium			H	M	H	13 (H)						
<i>Sarcostemma brunonianum</i>	Low			H	H	H	15 (H)						
<i>Pelargonium australe</i>	Low			H	H	H	15 (H)						
<i>Thysanotus juncifolius</i>	Low			H	H	H	15 (H)						
NR145	Limeburners Creek NR	<i>Vigna marina</i>	High	H	M	H	13 (H)	38	18				
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	M	H	13 (H)						
		<i>Acronychia littoralis</i>	Medium	H	L	H	11 (H)						
		<i>Abildgaardia ovata</i>	Medium	H	M	H	13 (H)						
		<i>Dianella crinoides</i>	Medium	H	M	H	13 (H)						
		<i>Casuarina equisetifolia</i>	Medium	H	M	H	13 (H)						
		<i>Cynanchum carnosum</i>	Low	H	M	H	13 (H)						
		<i>Allocasuarina defungens</i>	Low				0 (A)						
		<i>Zieria smithii</i> (Igf) ¹	High	H	L	H	11 (H)						
		Littoral Rainforest	High	H	M	H	13 (H)						
SR20	Bherwerre Peninsula Booderee NP	<i>Stackhousia spathulata</i>	High	L	M	M	7 (M)	35	19				
		<i>Westringia fruticosa</i>	High	M	M	M	9 (M)						
		<i>Rulingia hermannifolia</i>	Medium	M	L	H	9 (M)						
		Littoral Rainforest	High	M	L-M	M	8 (M)						
		Frontal Dune Vegetation Complex	High	M	H	M	11 (H)						
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	L-M	H	M	10 (M)						
		Bangalay Sand Forest	Medium	L	H	M	9 (M)						
		Headland Heath	Medium	M	H	M	11 (H)						
HCR105	Wyrribalong NP and Council Rd Reserve	Coastal Wetlands (SEPP14)	Low	M-H	M	M	10 (M)	35	19				
		Swamp Oak Floodplain	Low	L	H	M	9 (M)						
		<i>Acianthus exiguus</i>	High	M	M	H	11 (H)						
		<i>Syzygium paniculatum</i>	Medium	H	M-H	M	12 (H)						
		<i>Eucalyptus camfieldii</i>	Medium	M	M	M	9 (M)						
		<i>Acianthus amplexicaulis</i>	Low	M	M	H	11 (H)						
		Littoral Rainforest	High	L	H	M	9 (M)						
		Frontal Dune Vegetation Complex	High	H	M-H	M-H	13 (H)						
		Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	M-H	M-H	13 (H)						
		Coastal Wetlands (SEPP14)	Low	H	H	H	15 (H)						
Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	L	H	11 (H)								

[continued on next page]

Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h				
				E	AI	C							
HCR95	Wallarrah NP	<i>Pullenaea maritima</i>	High	H	M	H	13 (H)	34	21				
		<i>Diuris praecox</i>	High	H	H	M	13 (H)						
		<i>Westringia fruticosa</i>	High	M	M	H	11 (H)						
		<i>Tetratheca juncea</i>	Medium	M-H	M-H	L-M	10 (M)						
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M	M	L-M	8 (M)						
		Frontal Dune Vegetation Complex	High	M	M	L-M	8 (M)						
		Grassy Headlands (<i>Themeda triandra</i>)	High	M	M	H	11 (H)						
NR110	Look at me now headland, Moonee Beach NR	Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M	M	M-H	10 (M)	29	22				
		<i>Plectranthus crermus</i>	High	H	M	H	13 (H)						
		<i>Zieria prostrata</i>	High	H	M	H	13 (H)						
		<i>Zieria prostrata</i>	High	H	M	H	0 (A)						
		<i>Chamaesyce psammogeton</i>	High	H	M	M	11 (H)						
		<i>Lepturus repens</i>	High	H	M	M	11 (H)						
		<i>Thesium australe</i>	Medium	H	M	H	13 (H)						
NR70	Woody Head (including SEPP 26 no. 52, 52A)	Grassy Headlands (<i>Themeda triandra</i>)	High	H	M	H	13 (H)	29	22				
		<i>Acianthus exiguus</i>	High	M	L	L	5 (L)						
		<i>Vigna marina</i>	High	H	H	M	13 (H)						
		<i>Sophora tomentosa</i>	High	H	M	M	11 (H)						
		<i>Phaius tankervilleae</i>	Low				0 (A)						
		<i>Acianthus amplexicaulis</i>	Low	M	L	L	5 (L)						
		<i>Acmena hemilampra</i>	Low	M	H	H	13 (H)						
		<i>Ailanthus triphysa</i>	Low	H	M	H	13 (H)						
		Littoral Rainforest	High	M	L	M	7 (M)						
		Littoral Rainforest	High	H	M	M	11 (H)						
		SM37	Kurnell, Botany Bay	<i>Senecio spathulatus</i>	High						0 (A)	29	22
<i>Poa poiformis</i>	High			M	H	M	11 (H)						
<i>Westringia fruticosa</i>	High			H	H	M	13 (H)						
<i>Viminaria juncea</i> (prostrate form)	Medium			H	M	H	13 (H)						
<i>Bossiaea stephensoni</i>	Medium			H	H	H	15 (H)						
<i>Isopogon anemonifolius</i>	Low			H	H	M	13 (H)						
<i>Glycine clandestina</i> (bf)	High			H	M	H	13 (H)						
Sydney Coastal Estuary Swamp Forest Complex	Low			H	M	M	11 (H)						
SR14	Comerong Island NP, and Crown land to the north			<i>Stackhousia spathulata</i>	High	M-H	H	M	12 (H)	28	25		
				Littoral Rainforest	High	M-H	M	M	10 (M)				
				Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M-H	M	M	10 (M)				
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M-H	M	M	10 (M)						
		Frontal Dune Vegetation Complex	High	M-H	M	M	10 (M)						
		Bangalay Sand Forest	Medium	M-H	M	M	10 (M)						
		Sydney Coastal Estuary Swamp Forest Complex	Low	M-H	M	M	10 (M)						
HCR107	Wyrrabalong NP South (Bateau Bay to Wamberal North)	Swamp Sclerophyll Forest on Coastal Floodplains	Low	M-H	M	M	10 (M)	28	25				
		<i>Diuris praecox</i>	High	H	H	M	13 (H)						
		<i>Westringia fruticosa</i>	High	M	M	H	11 (H)						
		<i>Eucalyptus camfieldii</i>	Medium	H	L	M	9 (M)						
		Grassy Headlands (<i>Themeda triandra</i>)	High	H	M	M	11 (H)						
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	H	M-H	14 (H)						
		Eastern Suburbs Banksia Scrub equivalent communities (Coastal Sand Wallum Heath)	High	H	L	H	11 (H)						
HCR48	Yacaaba Peninsula	<i>Stackhousia spathulata</i>	High	M-H	H	L-M	11 (H)	28	25				
		<i>Senecio spathulatus</i>	High	M-H	H	L-M	11 (H)						
		Frontal Dune Vegetation Complex	High	M-H	H	L-M	11 (H)						
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M-H	H	L-M	11 (H)						
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M-H	H	L-M	11 (H)						
HCR109	Bouddi NP	Dune Grasslands (<i>Spinifex hirsutus</i>)	Medium	M-H	H	L-M	11 (H)	27	28				
		<i>Westringia fruticosa</i>	High	M	M	H	11 (H)						
		<i>Rulingia hermannifolia</i>	Medium	H	L	H	11 (H)						
		Littoral Rainforest	High	H	L	M	9 (M)						
		Eastern Suburbs Banksia Scrub equivalent communities (Coastal Sand Wallum Heath)	High	H	L	H	11 (H)						
		Grassy Headlands (<i>Themeda triandra</i>)	High	M	M	M-H	10 (M)						
		Pittwater Spotted Gum and equivalent communities (i.e. Wagstaff Spotted Gum Forest)	Low	M-H	M	M-H	11 (H)						
SR26	Haven, Alamin, and Farnham Headland (Conjola NP)	Swamp Sclerophyll Forest on Coastal Floodplains	Low	L	H	L	7 (M)	26	29				
		<i>Stackhousia spathulata</i>	High	H	L	M-H	10 (M)						
		<i>Wilsonia backhousei</i>	Low	H	L	M-H	10 (M)						
		<i>Cryptostylis hunteriana</i>	Low	H	L	M	9 (M)						
		<i>Corybas undulatus</i>	Low	H	L	M-H	10 (M)						
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	L	H	11 (H)						
		Frontal Dune Vegetation Complex	High	H	L	M-H	10 (M)						
HCR20	One Mile Beach, Forster	Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	L	M-H	10 (M)	26	29				
		Headland Heath	Medium	H	L	M-H	10 (M)						
		<i>Syzygium paniculatum</i>	Medium	H	L	H	11 (H)						
		<i>Senna acclinis</i>	Medium	H	L	H	11 (H)						
		<i>Cynanchum elegans</i>	Low	H	L	H	11 (H)						
HCR20	One Mile Beach, Forster	Littoral Rainforest	High	H	L	H	11 (H)	26	29				
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	M	H	13 (H)						
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	M	H	13 (H)						

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h
				E	AI	C			
NR32	Arakwal NP	<i>Chamaesyce psammogeton</i>	High	H	M	?	8 (M)	25	31
		<i>Geodorum densiflorum</i>	Medium	H	M	M	11 (H)		
		<i>Correa baeuerlenii</i>	Low	H	L-M	?	7 (M)		
		<i>Diuris byronensis</i>	Low	H	L-M	M	10 (M)		
		<i>Allocasuarina defungens</i>	Low	H	L-M	?	7 (M)		
		Littoral Rainforest	High	H	M	M	11 (H)		
NR66	Snapper Rock, Bundjalung NP	Byron Bay Dwarf Gramminoid Clay Heath Community	Medium	M	H	H	13 (H)	25	31
		Coastal Wetlands (SEPP14)	Low	M	H	L	9 (M)		
		<i>Pultenaea maritima</i>	High	H	H	M	13 (H)		
		<i>Stackhousia spathulata</i>	High	H	H	M	13 (H)		
		<i>Ischaemum triticeum</i>	High	M	H	M	11 (H)		
		<i>Gleichenia mendellii</i>	High	M	H	M	11 (H)		
NR9	Cudgen NR - SEPP26 no. 4	<i>Senna acclinis</i>	Medium				0 (A)	24	33
		Grassy Headlands (<i>Themeda triandra</i>)	High	H	M	H	13 (H)		
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	M	H	13 (H)		
		<i>Cryptocarya foetida</i>	Medium	H	L	M-H	10 (M)		
		<i>Elyonurus citreus</i>	Medium	M	M	M	9 (M)		
		<i>Ailanthus triphysa</i>	Low	H	L	M	9 (M)		
SR15	Culburra beach, Crookhaven Heads	Littoral Rainforest	High	H	M	H	13 (H)	24	33
		Coastal Wetlands (SEPP14)	Low	L	M	M	7 (M)		
		<i>Chamaesyce psammogeton</i>	High	M-H	M-H	M	11 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M-H	M-H	M	11 (H)		
		Frontal Dune Vegetation Complex	High	M-H	M-H	M	11 (H)		
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M-H	M-H	M	11 (H)		
HCR44	Banksia Green, Myall Lakes NP	Bangalay Sand Forest	Medium	M-H	M-H	M	11 (H)	24	33
		<i>Chamaesyce psammogeton</i>	High	H	H	H	15 (H)		
		<i>Stackhousia spathulata</i>	High	H	H	H	15 (H)		
		<i>Senecio spathulatus</i>	High	H	M	H	13 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M	H	M	11 (H)		
		Headland Heath	Medium	M	H	M	11 (H)		
HCR42	Coastline from Big Gibber to Banksia Green, Myall Lakes NP	<i>Chamaesyce psammogeton</i>	High	M	H	M	11 (H)	24	33
		<i>Senecio spathulatus</i>	High	M	H	M	11 (H)		
		<i>Stackhousia spathulata</i>	High	M	H	M	11 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M	H	M	11 (H)		
		Headland Heath	Medium	M	H	M	11 (H)		
HCR1	Crowdy Bay NP (south)	<i>Ischaemum triticeum</i>	High	H	L	H	11 (H)	24	33
		<i>Stackhousia spathulata</i>	High	H	H	H	15 (H)		
		<i>Thesium australe</i>	Medium	H	L	H	11 (H)		
		<i>Allocasuarina defungens</i>	Low	H	L	M	9 (M)		
		<i>Allocasuarina simulans</i>	Low	H	L	H	11 (H)		
		Littoral Rainforest	High	H	L	H	11 (H)		
NR94	Bare Point–Wilson's Headland Yuraygir NP	<i>Plectranthus crennus</i>	High	L	M	H	9 (M)	24	33
		<i>Chamaecrista maritima</i>	High	H	H	M	13 (H)		
		<i>Ischaemum triticeum</i>	High	M	L	H	9 (M)		
		<i>Pultenaea maritima</i>	High	M	M	H	11 (H)		
		<i>Thesium australe</i>	Medium	L	L	L	3 (L)		
		Grassy Headlands (<i>Themeda triandra</i>)	High	L	M	H	9 (M)		
HCR59	Boat Harbour	<i>Pultenaea maritima</i>	High	H	M	H	13 (H)	23	39
		<i>Westringia fruticosa</i>	High	H	L	H	11 (H)		
		Grassy Headlands (<i>Themeda triandra</i>)	High	H	M	M	11 (H)		
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	M	L	9 (M)		
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	H	M	H	13 (H)		
NR61	Broadwater NP	<i>Gleichenia mendellii</i>	High	M-H	M-H	?	8 (M)	23	39
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	M	H	13 (H)		
		<i>Phaius australis</i>	Low	H	M	M	11 (H)		
		<i>Phaius australis</i>	Low	H	M	M	11 (H)		
		<i>Acianthus amplexicaulis</i>	Low	M-H	M-H	?	8 (M)		
		Littoral Rainforest	High	H	M	M	11 (H)		
SR17	Callala Bay and Beach (Miola Peninsula)	Coastal Wetlands (SEPP14)	Low	M	H	L	9 (M)	22	41
		<i>Westringia fruticosa</i>	High	H	L	H	11 (H)		
		<i>Cryptostylis hunteriana</i>	Low	H	L	H	11 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	L	H	11 (H)		
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	L	H	11 (H)		
		Bangalay Sand Forest	Medium	H	L	H	11 (H)		
SR18	Beecroft Peninsula Jervis Bay	<i>Syzygium paniculatum</i>	Medium	H	L	H	11 (H)	22	41
		<i>Prostanthera densa</i>	Low	H	L	H	11 (H)		
		<i>Cryptostylis hunteriana</i>	Low	H	L	H	11 (H)		
		Littoral Rainforest	High	H	L	H	11 (H)		
		Bangalay Sand Forest	Medium	H	L	H	11 (H)		
		Coastal Saltmarsh	Low	H	L	H	11 (H)		
HCR46	Bennetts Beach	<i>Chamaesyce psammogeton</i>	High	M-H	M-H	L	9 (M)	22	41
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M-H	M-H	M	11 (H)		
		Frontal Dune Vegetation Complex	High	M-H	M-H	L	9 (M)		
		Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M-H	M-H	M	11 (H)		
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M-H	M-H	M	11 (H)		
NR150	Lord Howe Island	<i>Chamaesyce psammogeton</i>	High	H	L	H	11 (H)	22	41
		<i>Geniostoma huttonii</i>	Low	L	L	H	7 (M)		
		<i>Calystegia affinis</i>	Low	H	L	M	9 (M)		

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h
				E	AI	C			
NR150	Lord Howe Island – continued	<i>Calystegia affinis</i>	Low	M	L	H	9 (M)		
		<i>Carmichaelia exsul</i>	Low	M	M	M	9 (M)		
		<i>Calystegia affinis</i>	Low	L	L	H	7 (M)		
		<i>Caesalpinia bonduc</i>	Low	H	L	H	11 (H)		
		<i>Caesalpinia bonduc</i>	Low	H	L	L	7 (M)		
		<i>Coprosma inopinata</i>	Low	L	L	H	7 (M)		
NR64	Bundjalung NP (north)	<i>Stackhousia spathulata</i>	High	M	H	H	13 (H)	22	41
		<i>Gleichenia mendellii</i>	High	M	L	H	9 (M)		
		<i>Phaius australis</i>	Low	H	H	H	15 (H)		
		<i>Acianthus amplexicaulis</i>	Low	M	M	M	9 (M)		
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	H	M	13 (H)		
		Coastal Wetlands (SEPP14)	Low	H	M	H	13 (H)		
NR47	Boulder Beach, Ballina (including SEPP26 no. 38 – Boulder Beach south)	<i>Plectranthus crennus</i>	High	H	H	M-H	14 (H)	22	41
		<i>Arthraxon hispidus</i>	Low	H	M	H	13 (H)		
		<i>Syzygium hodgkinsoniae</i>	Low	H	M	M	11 (H)		
		Littoral Rainforest	High	H	H	M	13 (H)		
		Freshwater Wetlands	Low	H	H	L	11 (H)		
		Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	H	M	13 (H)		
SR19	Beecroft Head, Jervis Bay	<i>Westringia fruticosa</i>	High	H	L	H	11 (H)	21	47
		<i>Syzygium paniculatum</i>	Medium	H	L	M	9 (M)		
		<i>Prostanthera densa</i>	Low	H	L	H	11 (H)		
		Littoral Rainforest	High	H	L	M	9 (M)		
		Bangalay Sand Forest	Medium	H	L	H	11 (H)		
		Coastal Wetlands (SEPP14)	Low	H	L	M-H	10 (M)		
HCR37	South of Bald Head	<i>Cynanchum elegans</i>	Low	M-H	M-H	M	11 (H)	21	47
		Littoral Rainforest	High	M-H	M-H	M	11 (H)		
		Grassy Headlands (<i>Themeda triandra</i>)	High	M-H	M-H	M	11 (H)		
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M-H	M-H	M	11 (H)		
		Dune Grasslands (<i>Spinifex hirsutus</i>)	Medium	M-H	M-H	M	11 (H)		
NR18	Wooyung NR (including SEPP26 no. 11 – Wooyung NR South)	<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	M	H	13 (H)	20	49
		<i>Cryptocarya foetida</i>	Medium	M	H	?	8 (M)		
		<i>Polyalthia nitidissima</i>	Low	M	M	M	9 (M)		
		Littoral Rainforest	High	?	H	H	10 (M)		
		Littoral Rainforest	High	M	H	M	11 (H)		
		Coastal Wetlands (SEPP14)	Low	L	M	M	7 (M)		
NR56	South of Lennox Head (including SEPP 26 no. 37)	<i>Fontainea oraria</i>	High	H	M	H	13 (H)	20	49
		<i>Fontainea oraria</i>	High	H	M	H	13 (H)		
		<i>Xylosma terra-reginae</i>	Medium	H	M	H	13 (H)		
		Littoral Rainforest	High	H	M	H	13 (H)		
HCR28	Tiona (including SEPP26 no. 155B – Seven Mile Beach Tiona)	Littoral Rainforest	High	M	H	M-H	12 (H)	19	51
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M	H	M-H	12 (H)		
		Frontal Dune Vegetation Complex Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M	H	M-H	12 (H)		
HCR17	Forster Breakwall / Pilot Hill	Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	M	M	11 (H)	19	51
		Frontal Dune Vegetation Complex	High	H	M	M	11 (H)		
		Coastal Sand Dune complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	M	M	11 (H)		
		Dune Grasslands (<i>Spinifex hirsutus</i>)	Medium	H	M	M	11 (H)		
NR52	Angels Beach, Ballina	<i>Acronychia littoralis</i>	Medium	H	L-M	H	12 (H)	19	51
		<i>Cryptocarya foetida</i>	Medium	H	H	L	11 (H)		
		<i>Archidendron hendersonii</i>	Low	H	H	L	11 (H)		
		Littoral Rainforest	High	H	H	L	11 (H)		
		Freshwater Wetlands	Low	H	H	L	11 (H)		
		Swamp Sclerophyll Forest on Coastal Floodplains	Low				0 (A)		
SM26	La Perouse (Jennifer St sites 1 and 2 and Botany Bay NP)	<i>Rulingia hermannifolia</i>	Medium	L	L	M	5 (L)	18	54
		<i>Gonocarpus salsoloides</i>	Low	L	L	L	3 (L)		
		Eastern Suburbs Banksia Scrub	High	M	H	H	13 (H)		
		Eastern Suburbs Banksia Scrub	High	H	H	M	13 (H)		
		Eastern Suburbs Banksia Scrub	High	H	M	H	13 (H)		
HCR12	Diamond Head, Red Head, Black Head, Hallidays Point (including SEPP 26 no. 150, 152C)	<i>Stackhousia spathulata</i>	High	L	L	?	2 (L)	18	54
		<i>Senna acclinis</i>	Medium	L	L	?	2 (L)		
		<i>Cynanchum elegans</i>	Low	L	L	?	2 (L)		
		Littoral Rainforest	High	H	M	M-H	12 (H)		
		Littoral Rainforest	High	?	L	L	2 (L)		
NR138	Hat Head NP	<i>Ischaemum triticeum</i>	High	H	H	M	13 (H)	18	54
<i>Vigna marina</i>	High	H	H	M	13 (H)				
<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	H	H	M	13 (H)				
<i>Casuarina equisetifolia</i>	Medium	H	H	M	13 (H)				
NR107	Dammerels Head, Moonee Beach NR	<i>Plectranthus crennus</i>	High	H	M	H	13 (H)	18	54
		<i>Zieria prostrata</i>	High	H	M	H	13 (H)		
		<i>Thesium australe</i>	Medium	M	M	M	9 (M)		
		Grassy Headlands (<i>Themeda triandra</i>)	High	H	M	H	13 (H)		
SR10	Killalea State Park	<i>Pimelea spicata</i>	Medium	H	H	H	15 (H)	17	58
		<i>Pimelea spicata</i>	Medium	H	H	H	15 (H)		
		<i>Zieria granulata</i>	Medium	H	L	H	11 (H)		
		Littoral Rainforest	High	M	H	H	13 (H)		
HCR57	Fingal Beach / Barry Park	<i>Westringia fruticosa</i>	High	M	M	M	9 (M)	17	58
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M	H	H	13 (H)		
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M	H	H	13 (H)		
		Headland Heath	Medium	M	H	H	13 (H)		

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h
				E	AI	C			
NR121	Bongil Bongil NP (including SEPP26 no. 75, 76, 77, 78)	<i>Chamaesyce psammogeton</i> <i>Acronychia littoralis</i> <i>Zieria smithii</i> (lgf) ¹ Littoral Rainforest	High Medium High High	M L M M	H H H H	L M M M	9 (M) 9 (M) 11 (H) 11 (H)	17	58
NR82	Angourie Point, Yuraygir NP	<i>Chamaesyce psammogeton</i> <i>Pultenaea maritima</i> <i>Ischaemum triticeum</i> <i>Allocastrum defungens</i> Grassy Headlands (<i>Themeda triandra</i>)	High High High Low High	H L L L L	M L L L L	M M H L H	11 (H) 5 (L) 7 (M) 3 (L) 7 (M)	17	58
NR73	Iluka NR	<i>Acianthus amplexicaulis</i> <i>Bridelia exaltata</i> <i>Acmena hemilampra</i> <i>Aitanthus triphysa</i> Littoral Rainforest	Low Low Low Low High	M H H H H	M H H H H	H H H H H	11 (H) 15 (H) 15 (H) 15 (H) 15 (H)	17	58
NR22	Fern Beach – South Golden Beach	<i>Acronychia littoralis</i> <i>Cryptocarya foetida</i> Littoral Rainforest Littoral Rainforest	Medium Medium High High	H H M M	L L M M	M M M M	9 (M) 9 (M) 11 (H) 11 (H)	16	63
SR9	Bass Point (including SEPP26 no. 173A)	<i>Pimelea spicata</i> <i>Zieria granulata</i> <i>Typhonium eliosurum</i> <i>Cynanchum elegans</i> Littoral Rainforest	Medium Medium Low Low High	H M ? H H	H M ? H H	M H ? M H	13 (H) 11 (H) 0 (A) 13 (H) 15 (H)	16	63
HCR97	Budgewoi	<i>Chamaesyce psammogeton</i> <i>Diuris praecox</i> <i>Syzygium paniculatum</i> Littoral Rainforest	High High Medium High	M M M M	M-H M M M	? M ? M-H	7 (M) 11 (H) 6 (M) 10 (M)	16	63
HCR26	Booti Booti NP	<i>Stackhousia spathulata</i> <i>Syzygium paniculatum</i> <i>Senna acclinis</i> <i>Senna acclinis</i> <i>Cynanchum elegans</i> Littoral Rainforest	High Medium Medium Medium Low High	H L L L M L	H L L L M L	H M M L L L	15 (H) 5 (L) 5 (L) 3 (L) 7 (M) 3 (L)	16	63
NR85	Redcliff, Yuraygir NP	<i>Sophora tomentosa</i> <i>Pultenaea maritima</i> <i>Thesium australe</i> Grassy Headlands (<i>Themeda triandra</i>)	High High Medium High	M M L M	M H L M	M H L H	9 (M) 13 (H) 3 (L) 11 (H)	16	63
NR51	Sharps Beach, Ballina	<i>Cryptocarya foetida</i> Littoral Rainforest Freshwater Wetlands Swamp Sclerophyll Forest on Coastal Floodplains	Medium High Low Low	H H H H	H H H M	M M M H	13 (H) 13 (H) 13 (H) 13 (H)	15	68
NR88	Sandon north & Sandon North beach, Yuraygir NP	<i>Chamaesyce psammogeton</i> <i>Acianthus exiguus</i> <i>Stackhousia spathulata</i> <i>Acianthus amplexicaulis</i>	High High High Low	H H H L	H L H L	H L M M	15 (H) 7 (M) 13 (H) 3 (L)	15	68
NR71	Middle Bluff Bundjalung NP	<i>Chamaesyce psammogeton</i> <i>Calystegia soldanella</i> Grassy Headlands (<i>Themeda triandra</i>)	High High High	H M M	H H H	H H L	15 (H) 13 (H) 11 (H)	15	68
NR63	Bundjalung NP – Ten Mile Beach and Bombing Range	<i>Ischaemum triticeum</i> <i>Vigna marina</i> Littoral Rainforest	High High High	H H H	H H H	H H H	15 (H) 15 (H) 15 (H)	15	68
HCR41	Yagon Gibber, Myall Lakes NP	<i>Chamaesyce psammogeton</i> <i>Stackhousia spathulata</i> Grassy Headlands (<i>Themeda triandra</i>)	High High High	H M M	M M H	M M M	11 (H) 9 (M) 11 (H)	14	72
HCR39	Seal Rocks, Myall Lakes NP	<i>Syzygium paniculatum</i> <i>Senna acclinis</i> Littoral Rainforest Headland Heath	Medium Medium High Medium	H L L L	H L H M-H	L L H M	11 (H) 3 (L) 11 (H) 8 (M)	14	72
HCR14	Nine Mile Beach, North Tuncurry	Frontal Dune Vegetation Complex Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>) Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	High High Medium	H H H	L L L	H H H	11 (H) 11 (H) 11 (H)	14	72
NR114	Diggers Head	<i>Plectranthus crennus</i> <i>Thesium australe</i> <i>Zieria smithii</i> (lgf) ¹	High Medium High	H H H	M M H	M M H	11 (H) 11 (H) 15 (H)	14	72
NR106	Bare Bluff, Moonee Beach NR	<i>Plectranthus crennus</i> <i>Zieria prostrata</i> <i>Thesium australe</i>	High High Medium	H H H	M H H	H M M	13 (H) 13 (H) 13 (H)	14	72
NR91	Rocky Pt, Yuraygir NP	<i>Pultenaea maritima</i> <i>Vigna marina</i> <i>Gleichenia mendellii</i>	High High High	M M M	H H H	M L M	11 (H) 9 (M) 11 (H)	14	72
NR65	Bundjalung NP (Iluka Bluff)	<i>Sophora tomentosa</i> Littoral Rainforest Grassy Headlands (<i>Themeda triandra</i>)	High High High	H H L	M H M	M H H	11 (H) 15 (H) 9 (M)	14	72
NR62	Dirrawong Reserve	<i>Pultenaea maritima</i> <i>Stackhousia spathulata</i> <i>Gleichenia mendellii</i>	High High High	H H M	M M L	M M H	11 (H) 11 (H) 9 (M)	14	72
NR46	Lennox Head, inland from Boulder Beach (including SEPP26 no. 37, 37A, 37B, 37C)	<i>Fontainea oraria</i> <i>Acronychia littoralis</i> Littoral Rainforest	High Medium High	H M H	M H H	M H M	11 (H) 13 (H) 13 (H)	14	72
NR21	Billinudgel NR (including SEPP26 no. 13A, 13B, 13C – Billinudgel NR – Crabbes Creek Beach north)	<i>Pandanus tectorius</i> var. <i>australianus</i> <i>Endiandra globosa</i> Littoral Rainforest Coastal Wetlands (SEPP14)	Medium Low High Low	H M M M	M-H M H M	M M H M	12 (H) 9 (M) 13 (H) 9 (M)	13	81
SM22	Malabar Headland	<i>Prerostylis</i> no 15. (Botany Bay orchid) Eastern Suburbs Banksia Scrub Eastern Suburbs Banksia Scrub	Medium High High	M M M	L M M	H H H	9 (M) 11 (H) 11 (H)	13	81

[continued on next page]

Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h
				E	AI	C			
HCR50	Yacaaba Head, Myall Lakes NP	<i>Syzygium paniculatum</i>	Medium	H	H	L	11 (H)	13	81
		<i>Cynanchum elegans</i>	Low	L	L	M	5 (L)		
		Littoral Rainforest	High	L	H	H	11 (H)		
NR132	Arakoon SCA	Headland Heath	Medium	L	H	M	9 (M)	13	81
		<i>Ischaemum triticeum</i>	High	H	L	L	7 (M)		
		<i>Vigna marina</i>	High	H	L	L	7 (M)		
HCR35	Blueys Beach (including SEPP 26 no. 157, 158)	Littoral Rainforest	High	H	L	H	11 (H)	13	81
		Frontal Dune Vegetation Complex	High	M	M	H	11 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	L-M	H	M	10 (M)		
NR34	Clarkes Beach Caravan Park	Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	L-M	H	M	10 (M)	12	86
		<i>Acmena hemilampra</i>	Low	M-H	M-H	M-H	12 (H)		
		Littoral Rainforest	High	H	M	M	11 (H)		
SR24	Cudmirrah Beach	Byron Bay Dwarf Gramminoid Clay Heath Community	Medium	M-H	M-H	M-H	12 (H)	12	86
		<i>Stackhousia spathulata</i>	High	H	M	M-H	12 (H)		
		Bangalay Sand Forest	Medium	H	M	M-H	12 (H)		
SR25	Berrara Beach, Monument Beach	Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	M	M-H	12 (H)	12	86
		<i>Stackhousia spathulata</i>	High	H	L	H	11 (H)		
		Bangalay Sand Forest	Medium	H	L	H	11 (H)		
NR156	Crowdy Bay NP – Diamond Head	Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	L	H	11 (H)	12	86
		<i>Thesium australe</i>	Medium	H	L	H	11 (H)		
		<i>Gonocarpus salsoloides</i>	Low	H	L	H	11 (H)		
NR105	Woolgoolga Beach and headland, Coffs Coast Regional Park	<i>Zieria smithii</i> (lgf) ¹	High	H	L	H	11 (H)	12	86
		<i>Sophora tomentosa</i>	High	L	L	M	5 (L)		
		<i>Sophora tomentosa</i>	High	?	?	?	0 (A)		
NR97	Yuraygir NP	<i>Sophora tomentosa</i>	High	H	H	M	13 (H)	12	86
		<i>Thesium australe</i>	Medium	H	M	M	11 (H)		
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	?	?	?	0 (A)		
NR54	Shaws Bay Ballina	<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	?	?	?	0 (A)	12	86
		<i>Casuarina equisetifolia</i>	Medium	?	?	?	0 (A)		
		<i>Elyonurus citreus</i>	Medium	?	?	?	0 (A)		
NR39	Seven Mile Beach North – 1km south of Jews Point (SEPP26 no. 34)	<i>Hibiscus tiliaceus</i>	Medium	?	?	?	0 (A)	10	93
		<i>Allocastraria defungens</i>	Low	L	L	L	3 (L)		
		Littoral Rainforest	High	M	M	M	9 (M)		
SR29	Inyadda Beach	Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	H	M	13 (H)	10	93
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	?	?	?	0 (A)		
		Frontal Dune Vegetation Complex	High	?	?	?	0 (A)		
SM35	Charlotte Breen Reserve (and south-east of reserve)	<i>Acronychia littoralis</i>	Medium	?	H	M	8 (M)	10	93
		<i>Cryptocarya foetida</i>	Medium	H	H	L	11 (H)		
		Littoral Rainforest	High	H	H	L	11 (H)		
SM3	Long reef	<i>Cryptocarya foetida</i>	Medium	M-H	L-M	M	9 (M)	10	93
		<i>Cordylone congesta</i>	Low	M-H	L-M	M	9 (M)		
		Littoral Rainforest	High	H	L-M	M-H	11 (H)		
HCR11	Saltwater and Khappinghat NP – Wallabi Pt Headland (SEPP26 no. 147, 148, 148A, 149)	<i>Stackhousia spathulata</i>	High	H	L	H	11 (H)	10	93
		<i>Cryptostylis hunteriana</i>	Low	H	L	M-H	10 (M)		
		Bangalay Sand Forest	Medium	H	L	M-H	10 (M)		
NR147	Port Macquarie, Flynn's Beach and Shelly Beach	<i>Acronychia littoralis</i>	Medium	?	H	M	8 (M)	10	93
		<i>Cryptocarya foetida</i>	Medium	H	H	L	11 (H)		
		Littoral Rainforest	High	H	H	L	11 (H)		
NR83	Shelley Headland Yuragir NP	<i>Pultenaea maritima</i>	High	H	H	H	15 (H)	10	93
		Grassy Headlands (<i>Themeda triandra</i>)	High	H	H	H	15 (H)		
		<i>Plectranthus crennus</i>	High	H	H	M	13 (H)		
NR50	Sharps Beach Ballina (White's Head)	Grassy Headlands (<i>Themeda triandra</i>)	High	H	H	M	13 (H)	10	93
		<i>Plectranthus crennus</i>	High	H	H	M	13 (H)		
		Grassy Headlands (<i>Themeda triandra</i>)	High	H	H	M	13 (H)		
HCR32	Boomerang Beach	Frontal Dune Vegetation Complex	High	H	H	M	13 (H)	10	93
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	H	M	13 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	H	M	13 (H)		
SR27	Narrawallee Creek NR and Conjola Beach	Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M-H	M	H	12 (H)	9	102
		Bangalay Sand Forest	Medium	M-H	M	H	12 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	H	H	15 (H)		
SM38	Yena, Muru, Cape Sol, Tabbigai, Kurnell Botany Bay NP	Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	H	H	15 (H)	9	102
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	H	H	H	15 (H)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	H	H	H	15 (H)		
SM39	Kurnell, Boat Harbour area, Botany Bay NP	Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	H	H	H	15 (H)	9	102
		Kurnell Dune Forest	High	H	M	M	11 (H)		
		Sydney Freshwater Wetlands	Low	H	H	M	13 (H)		
SM20	Bunnerong Rd, Chifley (including Wassell St)	Sydney Freshwater Wetlands	Low	L	M	L	5 (L)	9	102
		<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	M	H	H	13 (H)		
		Eastern Suburbs Banksia Scrub	High	H	H	M	13 (H)		
HCR85	Lake Macquarie SCA	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	M	H	H	13 (H)	9	102
		<i>Eucalyptus camfieldii</i>	Medium	H	L	H	11 (H)		
		Littoral Rainforest	High	H	M	M	11 (H)		
HCR72	Tomaree NP, Fishermans Bay	<i>Eucalyptus camfieldii</i>	Medium	H	L	H	11 (H)	9	102
		Littoral Rainforest	High	H	M-H	H	14 (H)		
		<i>Westringia fruticosa</i>	High	M	M	H	11 (H)		
NR134	Hat Head NP – Big Smoky section	Headland Heath	Medium	M	M	H	11 (H)	9	102
		<i>Acronychia littoralis</i>	Medium	H	L	H	11 (H)		
		Littoral Rainforest	High	H	M-H	H	14 (H)		
NR135	Hat Head NP – Connors-Hat Head	<i>Acronychia littoralis</i>	Medium	H	L	H	11 (H)	9	102
		<i>Plectranthus crennus</i>	High	H	H	M	13 (H)		
		<i>Thesium australe</i>	Medium	H	H	H	15 (H)		
NR136	Hat Head NP – east of town and headland near camping ground	<i>Plectranthus crennus</i>	High	H	M	H	13 (H)	9	102
		<i>Thesium australe</i>	Medium	H	M	M	11 (H)		
		<i>Plectranthus crennus</i>	High	H	M	H	13 (H)		

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h
				E	AI	C			
NR137	Hat Head NP, O'Connors Beach	<i>Diuris superba</i> <i>Zieria smithii</i> (lgf) ^j	Medium High	H H	H H	H H	15 (H) 15 (H)	9	102
NR115	Macauleys Headland	<i>Plectranthus crennus</i> <i>Thesium australe</i>	High Medium	M M	H H	M M	11 (H) 11 (H)	9	102
NR109	Moonee Beach NR	<i>Pultenaea maritima</i> Littoral Rainforest	High High	L M	L H	H M	7 (M) 11 (H)	9	102
NR99	Station Creek Beach Yuraygir NP	<i>Actites megalocarpa</i> <i>Geodorum densiflorum</i>	High Medium	M M	M M	H H	11 (H) 11 (H)	9	102
HCR69	Fingal Spit	<i>Senecio spathulatus</i> Headland Heath	High Medium	H L	H M	L M	11 (H) 7 (M)	8	115
NR131	Smoky Cape (Macleay River)	<i>Chamaesyce psammogeton</i> <i>Corybas undulatus</i>	High Low	H H	M M	M H	11 (H) 13 (H)	8	115
NR67	Bundjalung NP – many locations	<i>Pandanus tectorius</i> var. <i>australianus</i> <i>Pandanus tectorius</i> var. <i>australianus</i> <i>Acronychia littoralis</i> <i>Casuarina equisetifolia</i> <i>Hibiscus tiliaceus</i> <i>Pterostylis ophioglossa</i> Littoral Rainforest Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>) Frontal Dune Vegetation Complex	Medium Medium Medium Medium Medium Low High High	? ? L ? ? M H ?	? ? L ? ? L M ?	? ? L ? ? L M ?	0 (A) 0 (A) 3 (L) 0 (A) 0 (A) 5 (L) 11 (H) 0 (A)	8	115
NR53	Shelley Beach Ballina	Littoral Rainforest Freshwater Wetlands	High Low	H H	H H	L L	11 (H) 11 (H)	8	115
NR2	Ukerabagh NR including Tweed Heads Historic Site	Littoral Rainforest Coastal Wetlands (SEPP14)	High Low	M ?	H M	M-H M	12 (H) 6 (M)	7	119
NR5	Fingal Southwest – Shallow Bay (SEPP26 no. 2C)	<i>Acronychia littoralis</i> Littoral Rainforest	Medium High	? H	L M	L M	2 (L) 11 (H)	7	119
HCR53	John Goulds NR / Cabbage Tree Island	<i>Pisonia umbellifera</i> Littoral Rainforest	Low High	L H	L L	H H	7 (M) 11 (H)	7	119
NR155	Dooragan NP	<i>Plectranthus crennus</i> <i>Melaleuca groveana</i>	High Low	H H	L L	H L	11 (H) 7 (M)	7	119
HCR36	between Blueys head and Bald Head (SEPP26 no. 159, 160 – 2 large patches)	Littoral Rainforest	High	M	M	H	11 (H)	5	123
HCR54	Shoal Bay Beach	<i>Chamaesyce psammogeton</i>	High	H	M	H	13 (H)	5	123
NR4	Fingal West – Golf Course (SEPP26 no. 2B)	Littoral Rainforest	High	H	M	M	11 (H)	5	123
NR16	Wooyung NR North (SEPP26 no. 10)	Littoral Rainforest	High	M-H	M-H	H	13 (H)	5	123
NR19	Wooyung Rd junction, near Caravan park Wooyung beach (SEPP26 no. 12)	Littoral Rainforest	High	H	M	M	11 (H)	5	123
SR30	Manyanah Beach	<i>Chamaesyce psammogeton</i> <i>Stackhousia spathulata</i>	High High	? H	? L	? H	0 (A) 11 (H)	5	123
SR31	Cunjurong Beach / Point	<i>Stackhousia spathulata</i> Littoral Rainforest	High High	H ?	L ?	H ?	11 (H) (A)	5	123
SR32	Bannister Headland Mollymook (SEPP26 no. 184A)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
SR39	Tomakin	Littoral Rainforest	High	M	H	H	13 (H)	5	123
SR55	Fuller's Beach Wagonga	Frontal Dune Vegetation Complex	High	H	M-H	M	12 (H)	5	123
SM27	NSW Golf Club / Botany Bay NP (Cape Banks area)	Eastern Suburbs Banksia Scrub	High	M	M	H	11 (H)	5	123
SM29	Potter Point, Kurnell, Botany Bay NP	Frontal Dune Vegetation Complex	High	H	H	L	11 (H)	5	123
SM30	Pott Pt, Cooks Knoll, Kurnell	Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	H	H	L	11 (H)	5	123
SM25	St Michaels Golf Course, Little Bay	Eastern Suburbs Banksia Scrub	High	M	H	H	13 (H)	5	123
HN1	Lion Island (north east face)	Grassy Headlands (<i>Themeda triandra</i>)	High	H	M-H	M	12 (H)	5	123
HN2	Barrenjoey (northern and eastern slopes of headland)	Grassy Headlands (<i>Themeda triandra</i>)	High	M-H	H	M	12 (H)	5	123
HN8	Mona Vale cliff	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	M-H	11 (H)	5	123
HN9	Turrismetta headland	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	M-H	11 (H)	5	123
SM1	Narrabeen Headland	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	M-H	11 (H)	5	123
SM2	Warriewood beach / cliff	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	M-H	11 (H)	5	123
HCR60	Anna Bay, Jessie Rd to Rd 1074	<i>Diuris praecox</i>	High	H	H	M	13 (H)	5	123
HCR29	Booti Booti (west of Flat Rock) in Booti Booti NP (SEPP26 no. 155)	Littoral Rainforest	High	H	H	H	15 (H)	5	123
HCR2	The Gap – southern end of Crowdy Bay NP (SEPP26 no. 125 126)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
HCR3	Harrington – Crowdy Head Rd – part Crowdy Bay NP (SEPP26 no. 131)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
HCR5	North Harrington (SEPP26 no. 132)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
HCR6	Manning Pt, Manning River (SEPP26 no. 134A, 135)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
HCR8	Farquhar park (SEPP26 no. 142)	Littoral Rainforest	High	H	M	M	11 (H)	5	123
HCR9	Old Bar North (SEPP26 no. 144)	Littoral Rainforest	High	H	M	M	11 (H)	5	123
HCR10	Old Bar South (SEPP26 no. 145)	Littoral Rainforest	High	H	M	M	11 (H)	5	123
NR149	Miner's Beach, South of Sea Acres NR – near Tacking Pt (SEPP26 no. 113)	Littoral Rainforest	High	H	L	H	11 (H)	5	123
NR144	Delicate Nobby Headland – 1.5km N of Limeburner's Creek NR (SEPP26 no. 105B)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
NR140	Hat Head NP (Crescent head)	Littoral Rainforest	High	H	M	H	13 (H)	5	123
NR141	South Hat Head	<i>Zieria smithii</i> (lgf) ^j	High	H	H	H	15 (H)	5	123
NR130	Clybucca Historic Site – northern section (SEPP26 no. 101B)	Littoral Rainforest	High	H	M-H	H	14 (H)	5	123
NR127	Scotts Head	<i>Vigna marina</i> <i>Acronychia littoralis</i> <i>Melaleuca groveana</i> <i>Glycine clandestina</i> (blf) ^j	High Medium Low High				0 (A) 0 (A) 0 (A) 13 (H)	5	123
NR128	1km North of Grassy Head (SEPP26 no. 96)	Littoral Rainforest	High	H	M	H	13 (H)	5	123

[continued on next page]

site no. ^a	site name ^b	priority entities occurring at site ^c	entity priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	site matrix score ^g	site rank ^h
				E	AI	C			
NR113	Sapphire Gardens, Coffs Harbour (including SEPP26 no. 69)	<i>Sophora tomentosa</i> Littoral Rainforest	High High				0 (A) 11 (H)	5	123
NR111	East of Crystal Waters (SEPP26 no. 68B)	Littoral Rainforest	High	M	H	M	11 (H)	5	123
NR98	Durrangan Lookout track Yuraygir NP	Grassy Headlands (<i>Themeda triandra</i>)	High	M	M	H	11 (H)	5	123
NR96	Wooli River	<i>Sophora tomentosa</i>	High	H	M	M	11 (H)	5	123
NR80	Angourie Reserve	<i>Gleichenia mendellii</i>	High	M	H	M	11 (H)	5	123
NR81	Angourie Back Beach, Yuraygir NP	<i>Gleichenia mendellii</i>	High	M	H	M	11 (H)	5	123
NR84	Plumbago Headland, Yuraygir NP	Grassy Headlands (<i>Themeda triandra</i>)	High	H	M	M	11 (H)	5	123
NR87	Pebbley-Freshwater Yuraygir NP	<i>Ischaemum triticeum</i>	High	H	H	M	13 (H)	5	123
NR89	Sandon River, Yuraygir NP	<i>Sophora tomentosa</i>	High	H	H	H	15 (H)	5	123
NR55	Lighthouse Beach Ballina	Littoral Rainforest	High	H	H	M	13 (H)	5	123
NR45	Lennox Head (Headland)	<i>Plectranthus cremus</i>	High	H	H	M-H	14 (H)	5	123

^a A unique numbering system for each site. The letters are an abbreviation of the five coastal NRM regions, being NR = Northern Rivers, HCR = Hunter Central Rivers, HN = Hawkesbury Nepean, SM = Sydney Metro, and SR = Southern Rivers Catchment Management Authorities, while the numbers reflect a general north to south order within each NRM region, where possible.

^b Abbreviations – SCA = State Conservation Area, NP = National Park, NR = Nature Reserve, SEPP = State Environmental Planning Policy.

^c Priority entities as determined in Appendices 3 and 5. Most sites encompass multiple entities at risk, so each entity location is modelled. Species are presented first in rank order, followed by populations and ecological communities also in rank order. At sites where multiple patches of an individual entity occurred (e.g. Littoral Rainforest is listed 4 times in Broken Head NR), each location was assessed and presented.

^d The species, population and ecological community priority as identified in Appendices 3 and 5.

^e Site attributes – E = Effective, AI = Actual Impact, C = Condition (see Appendix 6 for further details).

^f The numerical entity location score (see Appendix 6 for further details). The entity location priority is presented next to the score in brackets – H = High, M = Medium and L = Low. 'A' indicates that there was insufficient information available to model the site.

^g Site matrix score: the sum of the matrix value for each entity location (see Appendix 6 for further details).

^h Sites with the same score were given an equal rank value (e.g. two sites scored 50 and were ranked equal 5th), therefore sites with the next lowest score (e.g. 49) were given the next actual rank (e.g. 7th instead of 6th).

ⁱ Low growing form

^j Broad leaf form

Table A7.2 Category 2 sites for implementing control (n = 71 sites).

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C) max score (15) ^f	matrix value ^g	site rank ^h
				E	AI	C			
NR152	Grants Head	<i>Pandanus tectorius</i> var. <i>australianus</i> <i>Casuarina equisetifolia</i> <i>Thesium australe</i> <i>Viminaria juncea</i> (prostrate form) <i>Comesperma sphaerocarpum</i> <i>Leucopogon esquamatus</i> <i>Persoonia linearis</i> <i>Isopogon anemonifolius</i> <i>Zieria smithii</i> (lglf)	Medium Medium Medium Low Low Low Low Low High	H H H H H H H H H	M M M M M M M M L	M M M M M M L M M	11 (H) 11 (H) 11 (H) 11 (H) 11 (H) 11 (H) 9 (M) 11 (H) 9 (M)	31	170
NR23	Marshall's Creek NR (including SEPP26 no. 15, 16 and Ocean Shores estate)	<i>Pandanus tectorius</i> var. <i>australianus</i> <i>Syzygium moorei</i> <i>Archidendron hendersonii</i> <i>Archidendron hendersonii</i> Littoral Rainforest Littoral Rainforest Coastal Wetlands (SEPP14)	Medium Low Low Low High High Low	H M M M M M L	L-M M M M M M M	M-H M M M M M M	11 (H) 9 (M) 9 (M) 9 (M) 9 (M) 9 (M) 5 (L)	19	171
HCR13	Darawank NR (9 mile beach)	<i>Chamaesyce psammogeton</i> Littoral Rainforest Frontal Dune Vegetation Complex Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>) Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	High High High High Medium	M M M M M	L L L L L	M H M M M	7 (M) 9 (M) 7 (M) 7 (M) 7 (M)	19	171
NR43	North Creek, Lennox Head (including SEPP26 no. 39, 38A, 36)	<i>Acronychia littoralis</i> <i>Cryptocarya foetida</i> Littoral Rainforest Littoral Rainforest Littoral Rainforest	Medium Medium High High High	M M M M H	L L L L L	M-H M H L M	8 (M) 7 (M) 9 (M) 9 (M) 9 (M)	18	173
NR26	Tyagarah NR	<i>Cryptocarya foetida</i> <i>Cordylone congesta</i> <i>Acmena hemilampra</i> <i>Syzygium moorei</i> <i>Archidendron hendersonii</i> Littoral Rainforest Coastal Wetlands (SEPP14)	Medium Low Low Low Low High Low	M-H M-H M-H M-H H M-H L	L-M L-M L-M L-M L-M L-M L	M M M M M M M	9 (M) 9 (M) 9 (M) 9 (M) 10 (M) 9 (M) 7 (M)	17	174
HCR24	North Wallis Lake estuarine islands	Coastal Banksia Woodlands (<i>Banksia integrifolia</i>) Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>) Dune Grasslands (<i>Spinifex hirsutus</i>) Coastal Wetlands (SEPP14) Coastal Saltmarsh	High High Medium Low Low	M M M M M	M M M M M	M M M M M	9 (M) 9 (M) 9 (M) 9 (M) 9 (M)	15	175
HCR99	Budgewoi to Hargreaves Beach	Littoral Rainforest Frontal Dune Vegetation Complex Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>) Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	High High High Medium	M M M M	M M M M	M M M M	9 (M) 9 (M) 9 (M) 9 (M)	15	175

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			max score (15) ^f	matrix value ^g	site rank ^h
				E	AI	C			
HCR100	Curtis Parade (The Entrance) to Karagi Point	Littoral Rainforest	High	L	H	L-M	8 (M)	15	175
		Frontal Dune Vegetation Complex	High	L	H	L-M	8 (M)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	L	H	L-M	8 (M)		
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	L	H	L-M	8 (M)		
HCR101	Toowomb Bay to Shelley Beach NPWS boundary	Littoral Rainforest	High	L	H	L-M	8 (M)	15	175
		Frontal Dune Vegetation Complex	High	L	H	L-M	8 (M)		
		Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	L	H	L-M	8 (M)		
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	L	H	L-M	8 (M)		
NR10	Bogangar South (SEPP26 no. 5A)	<i>Acronychia littoralis</i>	Medium	H	L	M	9 (M)	14	179
		<i>Hibiscus tiliaceus</i>	Medium	H	L	M	9 (M)		
		<i>Cordyline congesta</i>	Low	H	L	M	9 (M)		
		<i>Coelospermum paniculatum</i>	Low	H	L	M	9 (M)		
		Littoral Rainforest	High	M	M	M	9 (M)		
HCR47	Winda Woppa	Coastal Sand Wallum Heath	High	M-H	M	M	10 (M)	14	179
		Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	M-H	M	M	10 (M)		
		Dune Grasslands (<i>Spinifex hirsutus</i>)	Medium	M-H	M	M	10 (M)		
		Coastal Wetlands (SEPP14)	Low	M-H	M	M	10 (M)		
HCR51	Pindimar environs	Coastal Saltmarsh	Low	M-H	M	M	10 (M)	14	179
		Littoral Rainforest	High	M	M	M	9 (M)		
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M	M	M	9 (M)		
HCR92	Crangan Bay to Galgala Pt, Swansea	Coastal Wetlands (SEPP14)	Low	M	M	M	9 (M)	13	182
		Swamp Oak Floodplain	Low	M	M	M	9 (M)		
		Coastal Saltmarsh	Low	M	M	M	9 (M)		
		<i>Diuris praecox</i>	High	H	L-M	M	10 (M)		
NR117	Coffs Harbour	<i>Tetradlea juncea</i>	Medium	H	L-M	M	10 (M)	12	183
		<i>Macrozamia flexuosa</i>	Low	H	L-M	M	10 (M)		
		Swamp Oak Floodplain	Low	H	L-M	M	10 (M)		
		Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	L-M	M	10 (M)		
		<i>Pultenaea maritima</i>	High	L	L	H	7 (M)		
HCR40	Treachery Head, Myall Lakes NP	<i>Vitex trifolia</i> var. <i>trifolia</i>	Medium	M	M	M	9 (M)	11	184
		<i>Marsdenia liisae</i>	Low	H	L	H	11 (H)		
		<i>Pterosstylis ophioglossa</i>	Low	M	M	M	9 (M)		
		Littoral Rainforest	High	L	M-H	M	8 (M)		
HCR75	Glenrock SCA	Grassy Headlands (<i>Themeda triandra</i>)	High	L	M-H	M	8 (M)	11	184
		Headland Heath	Medium	L	M-H	M	8 (M)		
		<i>Syzygium paniculatum</i>	Medium	M	M	H	11 (H)		
HCR77	Awabakal NR	<i>Cynanchum elegans</i>	Low	M	H	H	13 (H)	11	184
		Littoral Rainforest	High	L	H	M	9 (M)		
		<i>Eucalyptus camfieldii</i>	Medium	L	L	M	5 (L)		
HCR88	Cardiff Point	<i>Tetradlea juncea</i>	Medium	L	L	H	7 (M)	10	187
		Headland Heath	Medium	M	M	H	11 (H)		
		Sydney Freshwater Wetlands	Low	H	L	M	9 (M)		
		<i>Syzygium paniculatum</i>	Medium	M-H	M	L-M	9 (M)		
HCR104	Norah Head	<i>Tetradlea juncea</i>	Medium	M-H	M	M	10 (M)	10	187
		Littoral Rainforest	High	M-H	M	M	10 (M)		
		<i>Syzygium paniculatum</i>	Medium	L-M	M	M	8 (M)		
NR27	Belongil Beach	<i>Caladenia porphyrea</i>	Medium	M	M	M	9 (M)	9	189
		Low Woodland with Heathland (Norah Head)	Medium	H	H	H	15 (H)		
		<i>Cryptocarya foetida</i>	Medium	L-M	M-H	L-M	8 (M)		
HCR71	Sth Morna Point, Tomaree NP	<i>Cordyline congesta</i>	Low	L-M	M-H	L-M	8 (M)	9	189
		Littoral Rainforest	High	L-M	M-H	L-M	8 (M)		
		<i>Westringia fruticosa</i>	High	L	M	H	9 (M)		
NR146	Pelican Point (including SEPP 26 no. 107)	<i>Rulingia hermanniifolia</i>	Medium	L	M	L	5 (L)	8	191
		Headland Heath	Medium	L	M	H	9 (M)		
		<i>Chamaesyce psammogeton</i>	High	M-H	M	?	7 (M)		
SM28	Inscription Point, Kurnell, Botany Bay NP	Littoral Rainforest	High	M	M	M	9 (M)	8	191
		Headland Heath	Medium	H	H	M	13 (H)		
SR12	Minnamurra Headland	Headland Woodland	Medium	H	H	H	15 (H)	8	191
		<i>Pimelea spicata</i>	Medium	H	M	M	11 (H)		
SR28	Swan Lake	<i>Zieria granulata</i>	Medium	H	L	H	11 (H)	8	191
		<i>Poa poliformis</i>	High	M-H	L	M-H	9 (M)		
		Coastal Saltmarsh	Low	M-H	L	M-H	9 (M)		
NR41	Seven Mile Beach, Lennox Head	Swamp Oak Floodplain	Low	M-H	L	M-H	9 (M)	7	195
		<i>Acronychia littoralis</i>	Medium	H	M	H	13 (H)		
NR143	Racecourse Headland (including SEPP26 no. 104A, 105, 105A, 106)	Littoral Rainforest	High	L	M	L	5 (L)	7	195
		<i>Marsdenia liisae</i>	Low	H	M	H	13 (H)		
HCR18	Second Head / Pebbly Beach, Forster	Littoral Rainforest	High	M	M	M	9 (M)	7	195
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	M	H	L	9 (M)		
HCR25	Burgess Beach (including SEPP 26 152A)	Headland Heath	Medium	M	H	L	9 (M)	7	195
		Littoral Rainforest	High	M-H	L	M-H	9 (M)		
HCR33	Boomerang Point	Headland Woodland	Medium	H	H	M	13 (H)	7	195
		Grassy Headlands (<i>Themeda triandra</i>)	High	L-M	H	M	10 (M)		
HCR52	Broughton Island	Headland Heath	Medium	L-M	H	M	10 (M)	7	195
		Grassy Headlands (<i>Themeda triandra</i>)	High	L	M	H	9 (M)		
HCR64	Shelley Beach Anna Bay	Headland Heath	Medium	L	M	H	9 (M)	7	195
		Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	High	L	H	L	7 (M)		
HCR66	Tomaree NP, Stephens Peak, South Gan Gan	Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	L	H	L	7 (M)	7	195
		<i>Melaleuca groveana</i>	Low	H	M	H	13 (H)		
		Headland Heath	Medium	H	M	H	13 (H)		

[continued on next page]

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
HCR73	Anna Bay Headland, Tomaree NP	Grassy Headlands (<i>Themeda triandra</i>) Headland Heath	High Medium	M M	H H	L L	9 (M) 9 (M)	7	195
HCR103	Cantong Beach	<i>Syzygium paniculatum</i> Swamp Sclerophyll Forest on Coastal Floodplains	Medium Low	M-H M-H	M-H M-H	H H	13 (H) 13 (H)	7	195
SR35	Square Head, Cullendulla Creek NR and Long Beach	Littoral Rainforest Swamp Oak Floodplain	High Low	M H	M M	M M	9 (M) 13 (H)	7	195
NR92	Minnie Water Back beach and Foreshore Reserve	<i>Gleichenia mendellii</i> <i>Olax angulata</i>	High Low	M L	L L	M H	7 (M) 7 (M)	6	206
NR58	Richmond River NR	<i>Pandanus tectorius</i> var. <i>australianus</i> Coastal Wetlands (SEPP14)	Medium Low	M L	H M	M-H L	12 (H) 5 (L)	5	207
NR15	West of Wooyung NR (SEPP26 no. 9)	Littoral Rainforest	High	H	L-M	M	10 (M)	4	208
NR28	Crown lands – Byron Shire Council	Byron Bay Dwarf Gramminoid Clay Heath Community	Medium	H	L-M	M-H	11 (H)	4	208
NR31	Upslope of Arakwal NP adjoining water tower (Crown lands)	Byron Bay Dwarf Gramminoid Clay Heath Community	Medium	H	L-M	M-H	11 (H)	4	208
NR40	Seven Mile Beach – north of Newrybar Swamp (SEPP26 no. 34B)	Littoral Rainforest	High	H	L-M	L-M	9 (M)	4	208
NR69	Bundjalung NP (Shark Bay)	<i>Sophora tomentosa</i>	High	M	M	L	7 (M)	4	208
NR101	Coffs Coast Regional Park (400m NW of Arrawarra) (SEPP26 no. 62)	Littoral Rainforest	High	M	M	M	9 (M)	4	208
NR104	Cabins Beach, Mullaway. Coffs Harbour Regional Park	<i>Sophora tomentosa</i>	High	M	M	M	9 (M)	4	208
NR108	Diggers Point, Moonee Beach NR	<i>Zieria prostrata</i>	High	M	M	M	9 (M)	4	208
NR139	Hat Head NP – Third Beach, Hungry Hill	<i>Diuris curta</i>	Medium	H	H	H	15 (H)	4	208
NR151	South of Lake Cathie (SEPP26 no. 116)	Littoral Rainforest	High	M	M	M	9 (M)	4	208
NR153	Googleys Lagoon – Camden Head – West of Kattang NR (SEPP26 no. 122)	Littoral Rainforest	High	H	M	L	9 (M)	4	208
HCR4	Crowdy Head	Grassy Headlands (<i>Themeda triandra</i>)	High	M	M	M	9 (M)	4	208
HCR7	Beach Rd, Mitchell's Island (SEPP26 no. 138)	Littoral Rainforest	High	M	M	L	7 (M)	4	208
HCR19	Bennetts Head, Forster	Grassy Headlands (<i>Themeda triandra</i>)	High	L	M	M	7 (M)	4	208
HCR21	Reservoir Hill, Forster	Littoral Rainforest	High	M	L	M	7 (M)	4	208
HCR22	Royal Palm / Zamia Place Reserve, Forster	Littoral Rainforest	High	H	L	M	9 (M)	4	208
HCR34	Reserve behind Boomerang Beach shops	Littoral Rainforest	High	H	L	M	9 (M)	4	208
HCR55	Anzac Park	<i>Diuris arenaria</i>	Medium	H	L	H	11 (H)	4	208
HCR61	Bobs Farm – Salt Ash; Rd 1074 to Boyces Trail / Janet Pde	<i>Diuris arenaria</i>	Medium	H	M	M	11 (H)	4	208
HCR63	One Mile Beach	Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	Medium	H	M	H	13 (H)	4	208
HCR65	Nelson Bay Anna Bay / Shoal Bay Boreline, Nbay Rd	<i>Diuris arenaria</i>	Medium	H	L	H	11 (H)	4	208
HN3	Barrenjoey High School	Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	M-H	M	M	10 (M)	4	208
HN4	Governor Phillip Park dunes	Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	High	L-M	H	L	8 (M)	4	208
HN5	Careel Head	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	M	10 (M)	4	208
HN6	Bangallay headland	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	M	10 (M)	4	208
HN7	Bilgola headland	Grassy Headlands (<i>Themeda triandra</i>)	High	H	L-M	L-M	9 (M)	4	208
SM10	Nielsen Park, and Gap Bluff, Sydney Harbour NP	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	H	L	H	11 (H)	4	208
SM11	HMAS Watson – Watsons Bay	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	H	L	H	11 (H)	4	208
SM21	Bunnerong Sub-station, Matraville	Eastern Suburbs Banksia Scrub	High	?	H	M	8 (M)	4	208
SM36	Towra Pt	<i>Syzygium paniculatum</i>	Medium	H	M	M	11 (H)	4	208
SR6	Windang Island Shellharbour	<i>Pimelea spicata</i>	Medium	H	H	L	11 (H)	4	208
SR37	Tollgate Islands NR	<i>Westringia fruticosa</i>	High	M	M	M	9 (M)	4	208
SR59	Potato Point	<i>Thesium australe</i>	Medium	M	H	H	13 (H)	4	208

^{a-h} see Table A7.1 for details.

Table A7.3 Category 3 sites for implementing control (n = 67 sites).

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
NR126	Warrells Creek area (SEPP26 no. 90, 91, 92, 93, 94)	Littoral Rainforest Littoral Rainforest Littoral Rainforest Littoral Rainforest Littoral Rainforest	High High High High High	L L L L L	L L L L L	M M M M M	5 (L) 5 (L) 5 (L) 5 (L) 2 (L)	15	241
HCR81	Awaba Bay, Lake Macquarie SCA	<i>Syzygium paniculatum</i> <i>Tetratheca juncea</i> <i>Macrozamia flexuosa</i> Sydney Freshwater Wetlands Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Medium Medium Low Low Low Low	H H H H H H	L L L L L L	M-H M M L-M M-H M-H	10 (M) 9 (M) 9 (M) 8 (M) 10 (M) 10 (M)	14	242
HCR86	Pulbah Island NR, Lake Macquarie	<i>Syzygium paniculatum</i> <i>Macrozamia flexuosa</i> Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Medium Low Low Low	M H H H	M H H H	M H H H	9 (M) 15 (H) 15 (H) 15 (H)	12	243

[continued on next page]

Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
NR13	Hastings Point (SEPP26 no. 6)	<i>Pandanus tectorius</i> var. <i>australianus</i> <i>Glochidion sumatranum</i> <i>Celtis paniculata</i> <i>Cyperus stradbrokeensis</i> <i>Cryptocarya triplinervis</i> var. <i>triplinervis</i> Littoral Rainforest	Medium Low Low Low Low High	L L L L L L	M M M M M M	L L L L L L	5 (L) 5 (L) 5 (L) 5 (L) 5 (L) 5 (L)	9	244
SR49	Old man bed swamp	Swamp Oak Floodplain Freshwater Wetlands River Flat Eucalypt Forest	Low Low Low	M M M	H H H	H H H	13 (H) 13 (H) 13 (H)	9	244
SR21	Moona Moona Creek, Vincentia at the "coathanger"	<i>Cryptostylis hunteriana</i> Bangalay Sand Forest Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Low Medium Low Low	H H H H	L L L L	M M M M	9 (M) 9 (M) 9 (M) 9 (M)	9	244
HCR110	Riley's Island NR (north of St Hubert's Island)	Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains Coastal Saltmarsh	Low Low Low	H H H	M M L	M M H	11 (H) 11 (H) 11 (H)	9	244
NR38	Broken Head Resort	<i>Acronychia littoralis</i> <i>Cryptocarya foetida</i> <i>Archidendron hendersonii</i>	Medium Medium Low	M M M	M M M	M M M	9 (M) 9 (M) 9 (M)	8	248
SR40	Broulee Island NR	<i>Aldrovanda vesiculosa</i> Swamp Oak Floodplain Swamp Oak Floodplain	Low Low Low	L H H	M M H	M H H	7 (M) 13 (H) 15 (H)	8	248
NR1	Ukerabagh Island NR	<i>Cryptocarya foetida</i> <i>Cordyline congesta</i>	Medium Low	L M	H H	L M	7 (M) 11 (H)	6	250
SR57	Blackfellows Point	<i>Correa baeuerlenii</i> Swamp Oak Floodplain	Low Low	M M	H H	M H	11 (H) 13 (H)	6	250
SR44	Williga swamp	Swamp Oak Floodplain Freshwater Wetlands	Low Low	M M	H H	H H	13 (H) 13 (H)	6	250
SR45	Moruya Heads including Toragy Headland, Eurobodalla NP	<i>Thesium australe</i> Swamp Oak Floodplain	Medium Low	M M	M H	? H	6 (M) 13 (H)	6	250
SR42	Waldrons Swamp	Swamp Oak Floodplain Freshwater Wetlands	Low Low	H M	H H	H H	15 (H) 13 (H)	6	250
HCR102	Jenny Dickson Beach and Werribee Street, Norville	<i>Syzygium paniculatum</i> Swamp Sclerophyll Forest on Coastal Floodplains	Medium Low	L H	H L	L-M H	8 (M) 11 (H)	6	250
HCR84	Pt Wollstonecraft, Lake Macquarie SCA	Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Low Low	M M	H H	M M	11 (H) 11 (H)	6	250
HCR56	Fingal Cycleway / Firetrail	Coastal Banksia Woodlands (<i>Banksia integrifolia</i>) Coastal Scrub (<i>Leptospermum laevigatum</i> / <i>Acacia longifolia</i> var. <i>sophorae</i>)	High Medium	L M	L M	M M	5 (L) 9 (M)	6	250
NR37	Broken Head	<i>Ailanthus triphysa</i> <i>Acianthus amplexicaulis</i>	Low Low	M M	M H	M M	9 (M) 11 (H)	5	258
SR53	Bingi / Meringo	Swamp Oak Floodplain River Flat Eucalypt Forest	Low Low	M M	H M	H M	13 (H) 9 (M)	5	258
SR38	Tomaga River Estuary	Swamp Oak Floodplain River Flat Eucalypt Forest	Low Low	H M	M M	H M	13 (H) 9 (M)	5	258
SM17	Bundock Rd Army Base / Randwick Environmental Park, Kingsford	<i>Acacia terminalis</i> subsp. <i>terminalis</i> Eastern Suburbs Banksia Scrub	Medium High	L L	L L	M M	5 (L) 5 (L)	5	258
SM5	North Head, Sydney Harbour NP	<i>Acacia terminalis</i> subsp. <i>terminalis</i> <i>Eucalyptus camfieldii</i>	Medium Medium	M-H M-H	L L	H L	6 (M) 2 (L)	5	258
HCR106	Wyrabalong NP, Terilbah and Pelican Island & Nth Entrance Road Reserve	<i>Syzygium paniculatum</i> Coastal Saltmarsh	Medium Low	M M	L L-M	M M	7 (M) 8 (M)	5	258
HCR87	Jewells Swamp	<i>Tetradlea juncea</i> Sydney Freshwater Wetlands Sydney Freshwater Wetlands	Medium Low Low	H L L	L M L	M L M	9 (M) 5 (L) 5 (L)	5	258
HCR62	Gan-Gan Hill, Pillinda Crescent	<i>Prostanthera densa</i> <i>Cryptostylis hunteriana</i>	Low Low	H L	M M	M L	11 (H) 9 (M)	5	258
NR79	Angourie	<i>Pterostylis woollsii</i> <i>Grevillea humilis</i> subsp. <i>maritima</i> <i>Phaius australis</i>	Medium Medium Low	M M L	M M L	L M M	7 (M) 0 (A) 5 (L)	4	266
NR9a	Wollumbin Scout Camp, Cudgen NR	<i>Acronychia littoralis</i>	Medium	M	M	?	6 (M)	3	267
NR20	Wooyung Field Studies Centre	<i>Acronychia littoralis</i>	Medium	M	L	H	9 (M)	3	267
SR66	Cape Howe	<i>Senecio spathulatus</i>	High	L	L	?	2 (L)	3	267
SR60	Coila Lake	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR58	South Tuross	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR54	Kellys Beach	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR50	Meringo Creek	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR51	Ryans Creek	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR52	Malabar Lagoon	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR46	Quandolo Island	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR47	Pedros Swamp	Freshwater Wetlands	Low	M	H	H	13 (H)	3	267
SR48	Congo Creek	Swamp Oak Floodplain	Low	M	H	H	13 (H)	3	267
SR41	Illawong NR	Freshwater Wetlands	Low	H	M	M	11 (H)	3	267
SR36	Quiriga Beach / Reef Point–Three Islet Point (Murramarang NP)	Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	L	H	11 (H)	3	267
SR22	Sanctuary Point (edge of St Georges basin, south of Wright beach in Booderee NP)	<i>Syzygium paniculatum</i>	Medium	H	L	L-M	8 (M)	3	267
SR23	St Georges Basin, Jervis Bay	<i>Syzygium paniculatum</i>	Medium	H	L	L-M	8 (M)	3	267
SR7	Mt Warrigul	<i>Pimelea spicata</i>	Medium	H	L	M	9 (M)	3	267
SR3	Coomaditchie Lagoon	Sydney Freshwater Wetlands	Low	H	M	M	11 (H)	3	267
SR4	Korungalla Swamp	Sydney Coastal Estuary Swamp Forest Complex	Low	H	H	M	13 (H)	3	267
SM41	Bass and Flinders Point, near Cronulla	<i>Prostanthera densa</i>	Low	H	L	H	11 (H)	3	267
SR1	Belambi Dunes	Sydney Coastal Estuary Swamp Forest Complex	Low	H	M	H	13 (H)	3	267
SR2	Puckeys Estate	Sydney Coastal Estuary Swamp Forest Complex	Low	M	H	M	11 (H)	3	267
SM23	Botany Bay NP	<i>Pterostylis</i> no 15. (Botany Bay orchid)	Medium	H	L	L	7 (M)	3	267

[continued on next page]

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
SM24	Prince Henry Hospital, Little Bay North	Eastern Suburbs Banksia Scrub	High	L	L	M	5 (L)	3	267
SM18	Eastlakes & The Lakes Golf Course, Eastlakes	Eastern Suburbs Banksia Scrub	High	L	L	M	5 (L)	3	267
SM19	Banksmeadow Primary School	Eastern Suburbs Banksia Scrub	High	M	L	L	5 (L)	3	267
SM15	Centennial Park	Eastern Suburbs Banksia Scrub	High	L	L	M	5 (L)	3	267
SM16	Australian Golf Course, Kensington	Eastern Suburbs Banksia Scrub	High	L	L	L	3 (L)	3	267
SM9	Gap Park, Watsons Bay	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	H	L	M	9 (M)	3	267
HCR58	Taylor's Beach	Swamp Sclerophyll Forest on Coastal Floodplains	Low	H	M	H	13 (H)	3	267
NR116	Park Beach, Coffs Harbour	<i>Sophora tomentosa</i> <i>Actianthus amplexicaulis</i>	High Low	L	L	M	5 (L) 0 (A)	3	267
NR76	Carrs road boat ramp, Maclean	<i>Calystegia soldanella</i>	High	L	L	L	3 (L)	3	267
NR77	Aboriginal land south of Yamba	<i>Phaius australis</i> / <i>Phaius tankervilleae</i>	Low	M	M	H	11 (H)	3	267
NR78	Joss Island, Oyster Channel – Wooloweyah Lagoon	<i>Calystegia soldanella</i>	High	L	L	L	3 (L)	3	267
NR75	Yamba Beach	<i>Ischaemum triticeum</i>	High	L	L	M	5 (L)	3	267
NR72	Bundjalung NP (Iluka Bluff)	<i>Vigna marina</i>	High	L	L	L	3 (L)	3	267
NR59	South of Pimlico (SEPP26 no. 44)	Littoral Rainforest	High	L	L	?	2 (L)	3	267
NR60	Little Pimlico Island NR (SEPP26 no. 45)	Littoral Rainforest	High	L	L	?	2 (L)	3	267
NR44	Lennox Head	Freshwater Wetlands	Low	H	H	L-M	12 (H)	3	267
NR86	Plover Island, Yuraygir NP	<i>Viminaria juncea</i> (prostrate form)	Medium	L	L	H	7 (M)	3	267
NR57	Stokers Park, East Ballina	<i>Acronychia littoralis</i>	Medium	H	L-M	L	8 (M)	3	267

^{a-h} see Table A7.1 for details.

Table A7.4 Category 4 sites for implementing control (n = 37 sites).

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
HCR30	Foreshore Reserve, Coomba Park	Coastal Wetlands (SEPP14) Swamp Oak Floodplain Coastal Saltmarsh Swamp Sclerophyll Forest on Coastal Floodplains	Low Low Low Low	M-H M-H M-H M-H	M M M M	M M M M	10 (M) 10 (M) 10 (M) 10 (M)	8	308
HCR45	Myall River / Swan Bay / Witts Island	Coastal Wetlands (SEPP14) Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains Coastal Saltmarsh	Low Low Low Low	L L L L	M M M M	M-H M-H M-H M-H	8 (M) 8 (M) 8 (M) 8 (M)	8	308
NR8	Casuarina Beach, north of Cudgen NR	<i>Sophora tomentosa</i> <i>Geodorum densiflorum</i>	High Medium	M L	M L	L M	7 (M) 5 (L)	6	310
HCR15	Darawakh Creek / Froggalla Swamp Wetland	Swamp Oak Floodplain Freshwater Wetland Coastal Wetlands (SEPP14)	Low Low Low	M M M	L L L	M M M	7 (M) 7 (M) 7 (M)	6	310
HCR31	Foreshore Reserve, Green Point	Swamp Oak Floodplain Coastal Saltmarsh Swamp Sclerophyll Forest on Coastal Floodplains	Low Low Low	M-H M-H M-H	M M M	L L L	8 (M) 8 (M) 8 (M)	6	310
NR33	Cumbebin Swamp NR	<i>Phaius tankervilleae</i> Coastal Wetlands (SEPP14)	Low Low	L-M L	L H	M L	6 (M) 7 (M)	4	313
HCR16	Charlotte Ohma Reserve, Tuncurry	Swamp Oak Floodplain Coastal Wetlands (SEPP14)	Low Low	H H	L L	M M	7 (M) 7 (M)	4	313
HCR27	Green Point, Booti Booti NP	<i>Allocasuarina simulans</i> <i>Allocasuarina defungens</i>	Low Low	M L	L L	H H	9 (M) 7 (M)	4	313
HCR38	Foreshore Reserve, Smiths Lake	Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Low Low	M-H M-H	M M	L L	8 (M) 8 (M)	4	313
HCR49	Limekilns Road Wetland, Tea Gardens	Coastal Wetlands (SEPP14) Coastal Saltmarsh	Low Low	H H	L L	M M	9 (M) 9 (M)	4	313
HCR82	Wanji, Lake Macquarie SCA	Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Low Low	M M	M M	M M	9 (M) 9 (M)	4	313
HCR94	Morrisset	Swamp Oak Floodplain Swamp Sclerophyll Forest on Coastal Floodplains	Low Low	M M	M M	M-H M-H	10 (M) 10 (M)	4	313
SR11	Minnamurra Spit and Beach	<i>Cynanchum elegans</i> <i>Typhonium eliosurum</i>	Low Low	M H	L M	H ?	9 (M) 8 (M)	4	313
NR6	Tweed Estuary NR	Coastal Wetlands (SEPP14)	Low	?	M	M	6 (M)	2	321
NR24	New Brighton	<i>Archidendron hendersonii</i>	Low	L	H	L	7 (M)	2	321
NR42	Ballina NR	Coastal Wetlands (SEPP14)	Low	M	L	L-M	6 (M)	2	321
NR95	Wooli, Yuraygir NP	<i>Olax angulata</i>	Low	L	L	H	7 (M)	2	321
HCR23	Golden Ponds Reserve, Forster	Swamp Sclerophyll Forest on Coastal Floodplains	Low	M	L	M	7 (M)	2	321
HCR68	Tomaree NP, Sth Gan Gan Fire Trail	<i>Euphrasia collina</i> subsp. <i>paludosa</i>	Low	L	L	H	7 (M)	2	321
HCR74	Adamstown Heights, Defence Reserve	<i>Tetratheca juncea</i>	Medium	L	L	?	2 (L)	2	321
HCR90	Pelican Flat, Council Reserve	<i>Tetratheca juncea</i>	Medium	?	M-H	?	4 (L)	2	321
HCR91	Blacknet's Bay, Swansea	Coastal Saltmarsh	Low	L-M	M-H	M	9 (M)	2	321
HCR98	Budgewoi, Mackenzie Reserve	<i>Syzygium paniculatum</i>	Medium	M	L	L	5 (L)	2	321
SM6	Middle Head	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	L-M	L	L-M	3 (L)	2	321
SM7	Ashton Park, Bradleys Head (Mosman) Sydney Harbour NP	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	L-M	L	M	4 (L)	2	321

[continued on next page]

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
SM8	Chowder Head	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	L-M	L	L-M	3 (L)	2	321
SM12	Onslow St, Rose Bay	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	?	L	M	4 (L)	2	321
SM13	Dover Rd, Rose Bay	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	?	L	L	2 (L)	2	321
SM14	Loombah Rd, Dover Heights	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Medium	?	L	L	2 (L)	2	321
SR8	Blackbutt Reserve	<i>Pimelea spicata</i>	Medium	L	L	M	5 (L)	2	321
SR33	Burrill Lake	<i>Cryptostylis hunteriana</i>	Low	H	M	?	8 (M)	2	321
SR34	Clear Point	Swamp Oak Floodplain	Low	H	L	M	9 (M)	2	321
SR43	Nth Moruya	<i>Aldrovanda vesiculosa</i>	Low	M	M	M	9 (M)	2	321
SR61	Kianga	Swamp Oak Floodplain	Low	M	L	H	9 (M)	2	321
SR62	Tilba Lake	Coastal Saltmarsh	Low	M	M	M	9 (M)	2	321
SR63	Tathra Reserve	<i>Acacia georgensis</i>	Low	H	L	M	9 (M)	2	321
SR65	Pambula Beach, Ben Boyd NP	<i>Cryptostylis hunteriana</i>	Low	H	L	M	9 (M)	2	321

^{a-h} see Table A7.1 for details.

Table A7.5 Category 5 sites for implementing control (n = 5 sites).

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site attributes ^e			model (E+AI+C)		
				E	AI	C	max score (15) ^f	matrix value ^g	site rank ^h
NR35	Suffolk Park	<i>Acmena hemilampra</i>	Low	L-M	M	?	5 (L)	1	345
NR93	Diggers Camp	<i>Oxalys angulata</i>	Low	L	L	M	5 (L)	1	345
HCR83	Myana, Lake Macquarie SCA	Swamp Oak Floodplain	Low	L	L	M	5 (L)	1	345
SM32	Botany Bay NP (Cape Baily area)	Sydney Freshwater Wetlands	Low	L	M	L	5 (L)	1	345
SR64	Kianinny Bay, Bournda NP	<i>Acacia georgensis</i>	Low	L	L	M	5 (L)	1	345

^{a-h} see Table A7.1 for details.

Table A7.6 Sites which could not be modelled due to insufficient information (n = 25).

site no. ^a	site name ^b	priority biodiversity occurring at site ^c	priority ^d	site rank ^h
NR7	Fingal, south of Wommin Lake	<i>Acronychia littoralis</i>	Medium	A
NR11	Bogangar Beach	<i>Chamaesyce psammogeton</i>	High	A
NR12	Norries Head	<i>Plectranthus cremulus</i>	High	A
		Grassy Headlands (<i>Themeda triandra</i>)	High	A
		<i>Pandanus tectorius</i> var. <i>australianus</i>	Medium	A
NR14	Hastings Point	Grassy Headlands (<i>Themeda triandra</i>)	High	A
NR17	Wooyung far north (SEPP26 no. 10A)	Littoral Rainforest	High	A
NR74	Clarence Estuary NR (SEPP26 no. 54A)	Littoral Rainforest	High	A
NR100	Red Rock, Woolgoolga (including SEPP 26 no. 60A)	<i>Acronychia littoralis</i>	Medium	A
		<i>Acianthus amplexicaulis</i>	Low	A
		Littoral Rainforest	High	A
NR102	Ararwarra Headland	<i>Plectranthus cremulus</i>	High	A
NR103	Halfway btwn Woolgoolga and Sandy Beach (SEPP26 no. 64B)	Littoral Rainforest	High	A
NR112	1.3 km NE of Korora (SEPP26 no. 68C)	Littoral Rainforest	High	A
NR118	North of Sawtell (SEPP26 no. 70, 70A)	Littoral Rainforest	High	A
		Littoral Rainforest	High	A
NR119	Sawtell Headland	<i>Plectranthus cremulus</i>	High	A
		<i>Zieria prostrata</i>	High	A
		<i>Pterostylis ophioglossa</i>	Low	A
NR120	South-East of Sawtell (SEPP26 no. 71A, 71B)	Littoral Rainforest	High	A
NR122	Urunga Lagoon	<i>Syzygium paniculatum</i>	Medium	A
		Coastal Wetlands (SEPP14)	Low	A
NR123	South-East of Urunga, Hungry Head (SEPP26 no. 81, 82)	Littoral Rainforest	High	A
NR124	Valla Headland and Beach (including SEPP26 no. 86)	<i>Zieria smithii</i> (lgf) ⁱ	High	A
		Littoral Rainforest	High	A
NR125	Nambucca Heads (including Shelley Beach)	<i>Chamaesyce psammogeton</i>	High	A
		<i>Casuarina equisetifolia</i>	Medium	A
NR129	North-East of Clybucca Historic Site (Near Sth West Rocks) (SEPP26 no. 100, 101 – 4 patches)	Littoral Rainforest	High	A
HCR89	9 mile beach, Belmont	<i>Chamaesyce psammogeton</i>	High	A
HCR93	1km SW of Valentine near Lake Macquarie (SEPP26 no. 170)	Littoral Rainforest	High	A
SM31	North of Continental Carbon	Kurnell Dune Forest	High	A
SM33	Kurnell	<i>Rulingia hermannifolia</i>	Medium	A
SM34	Connell Hill, Kurnell	<i>Senecio spathulatus</i>	High	A
SR5	Windang, Port Kembla	<i>Calystegia soldanella</i>	High	A
		<i>Dianella crinoides</i>	Medium	A
SR56	Tuross Head (SEPP26 no. 188D, 188E, 188G, 188H, 188I)	Littoral Rainforest	High	A

^{a-h} see Table A7.1 for details.

Table A7.7 Biodiversity identified as being at risk for which no sites were identified.

biodiversity for which no sites were identified ^a	priority ^b	rank ^c
species		
<i>Dianella congesta</i>	Medium	33
<i>Liparis habenarina</i>	Medium	49
<i>Persoonia katerae</i>	Medium	43
<i>Pterostylis nigricans</i>	Medium	49
<i>Spyridium cinereum</i>	Medium	49
<i>Tylophora benthamii</i>	Medium	49
<i>Wilsonia rotundifolia</i>	Medium	37
<i>Abildgaardia vaginata</i>	Low	128
<i>Acacia bakeri</i>	Low	153
<i>Acacia kydrensis</i>	Low	153
<i>Caesia parviflora</i> var. <i>minor</i>	Low	146
<i>Caladenia quadrifaria</i>	Low	146
<i>Callistemon acuminatus</i>	Low	116
<i>Carex brownii</i>	Low	153
<i>Cryptocarya triplinervis</i> var. <i>pubens</i>	Low	116
<i>Cyperus scaber</i>	Low	61
<i>Cyperus subulatus</i>	Low	84
<i>Desmodium heterocarpon</i> var. <i>heterocarpon</i>	Low	65
<i>Haloragis exalata</i> subsp. <i>exalata</i>	Low	128
<i>Hoya australis</i> subsp. <i>australis</i>	Low	153
<i>Hypserpa decumbens</i>	Low	98
<i>Lindsaea fraseri</i>	Low	128
<i>Lipocarpha microcephala</i>	Low	153
<i>Lygodium microphyllum</i>	Low	128
<i>Myoporum bateae</i>	Low	61
<i>Oldenlandia galioides</i>	Low	146
<i>Planchonella laurifolia</i>	Low	98
<i>Planchonella myrsiniodes</i>	Low	98
<i>Pultenaea villifera</i>	Low	140
<i>Streptothamnus moorei</i>	Low	128
<i>Thozetia racemosa</i>	Low	70
<i>Viola betonicifolia</i>	Low	107
<i>Wahlenbergia littoricola</i>	Low	70
<i>Zieria tuberculata</i>	Low	75
ecological communities		
Coastal Scrub (<i>Drypetes australiscia</i> / <i>Elaeodendron australe</i>)	Medium	EC 12
Dry Rainforest	Low	EC 25

^a Biodiversity as determined in Appendices 3 and 5. Species are presented first in rank order, followed by ecological communities also in rank order.

^b Priorities as per Appendices 3 and 5.

^c Rank order as per Appendices 3 and 5.

Appendix 8 Category 1 sites for each of the high priority species, populations and ecological communities

Table A8.1 Category 1 sites for each of the high priority species. Some of these sites contain more than one high priority entity and thus are listed under each.

species ^b	rank ^b	site no. ^c	Category 1 – site name ^{a, d}	no. of entities present ^e tenure ^f		site rank ^g		
<i>Plectranthus crennus</i>	1	NR29	Cape Byron SCA (including SEPP26 no. 27, 27A, 27B)	13	DEC	2		
		NR110	Look at me now headland, Moonee Beach NR	6	DEC	22		
		NR94	Bare Point–Wilson's Headland Yuraygir NP	6	DEC	33		
		NR47	Boulder Beach, Ballina (including SEPP26 no. 38 – south end)	6	BaSC	41		
		NR107	Dammerels Head, Moonee Beach NR	4	DEC	54		
		NR114	Diggers Head	3	DEC	72		
		NR106	Bare Bluff, Moonee Beach NR	3	DEC	72		
		NR50	Sharps Beach Ballina (White's Head)	2	BaSC	93		
		NR135	Hat Head NP – Connors-Hat Head	2	DEC	102		
		NR136	Hat Head NP – east of town and headland near camping ground	2	DEC	102		
		NR115	Macauleys Headland	2	DEC	102		
		NR155	Dooragan NP	2	DEC	119		
		NR45	Lennox Head (Headland)	1	BaSC	123		
		<i>Zieria prostrata</i>	2	NR110	Look at me now headland, Moonee Beach NR	6	DEC	22
				NR107	Dammerels Head, Moonee Beach NR	4	DEC	54
NR106	Bare Bluff, Moonee Beach NR			3	DEC	72		
<i>Chamaesyce psammogeton</i>	3	NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	8	DEC	4		
		SR16	Warrain Beach / Currarong Beach	12	ShoalCC, DEC, FH	7		
		HCR108	Wamberal Lagoon NR	12	DEC	7		
		SR13	Seven Mile Beach NP (including SEPP26 no. 175, 175A)	7	DEC	13		
		HCR43	Mungo Brush, Myall Lakes NP	7	DEC	13		
		NR110	Look at me now headland, Moonee Beach NR	6	DEC	22		
		NR32	Arakwal NP	8	DEC	31		
		SR15	Culburra beach, Crookhaven Heads	5	DoL, AL	33		
		HCR44	Banksia Green, Myall Lakes NP	5	DEC	33		
		HCR42	Coastline from Big Gibber to Banksia Green, Myall Lakes NP	5	DEC	33		
		HCR46	Bennetts Beach	5	GLC	41		
		NR150	Lord Howe Island	6	LHIB	41		
		NR121	Bongil Bongil NP (including SEPP26 no. 75, 76, 77, 78)	4	DEC	58		
		NR82	Angourie Point, Yuraygir NP	5	DEC	58		
		HCR97	Budgewoi	4	DEC, DoL, WySC	63		
		NR88	Sandon north and Sandon North beach, Yuraygir NP	4	DEC	68		
		NR71	Middle Bluff Bundjalung NP	3	DEC	68		
		HCR41	Yagon Gibber, Myall Lakes NP	3	DEC	72		
		NR131	Smoky Cape (Macleay River)	2	DoL	115		
HCR54	Shoal Bay Beach	1	PSC	123				
SR30	Manyanah Beach	2	ShoalCC	123				
<i>Senecio spathulatus</i>	4	HCR108	Wamberal Lagoon NR	12	DEC	7		
		HCR43	Mungo Brush, Myall Lakes NP	7	DEC	13		
		SM37	Kurnell, Botany Bay	8	DEC	22		
		HCR48	Yacaaba Peninsula	6	DoL	25		
		HCR44	Banksia Green, Myall Lakes NP	5	DEC	33		
		HCR42	Coastline from Big Gibber to Banksia Green, Myall Lakes NP	5	DEC	33		
		HCR69	Fingal Spit	2	DEC	115		
		<i>Acianthus exiguus</i>	4	NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	8	DEC	4
HCR105	Wyrrabalong NP and Council Rd Reserve			9	DEC, WySC	19		
NR70	Woody Head (including SEPP 26 no. 52, 52A)			8	DEC	22		
NR88	Sandon north and Sandon North beach, Yuraygir NP			4	DEC	68		
<i>Calystegia soldanella</i>	4	NR71	Middle Bluff Bundjalung NP	3	DEC	68		
<i>Chamaecrista maritima</i>	4	NR133	Arakoon SCA / Hat Head NP	19	DEC	1		
		NR94	Bare Point–Wilson's Headland Yuraygir NP	6	DEC	33		
<i>Sophora tomentosa</i>	4	NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	8	DEC	4		
		NR148	Sea Acres NR / Tacking Point	10	DEC	10		
		NR70	Woody Head (including SEPP 26 no. 52, 52A)	8	DEC	22		
		NR85	Redcliff, Yuraygir NP	4	DEC	63		
		NR65	Bundjalung NP (Iluka Bluff)	3	DEC	72		
		NR105	Woolgoolga Beach and headland, Coffs Coast Regional Park	2	DEC, CHC	86		
		NR147	Port Macquarie, Flynn's Beach and Shelly Beach	1	HC	93		
		NR113	Sapphire Gardens, Coffs Harbour (including SEPP26 no. 69)	2	DEC	123		
		NR96	Wooli River	1	DoL, CVC	123		
NR89	Sandon River, Yuraygir NP	1	DEC	123				
<i>Lepturus repens</i>	4	NR110	Look at me now Headland, Moonee Beach NR	6	DEC	22		
<i>Pultenaea maritima</i>	4	HCR96	Munmorah SCA	16	DEC	7		
		NR142	Crescent Head	10	?	16		
		HCR95	Wallarrah NP	8	DEC	21		
		NR66	Snapper Rock, Bundjalung NP	6	DEC	31		
		NR94	Bare Point–Wilson's Headland Yuraygir NP	6	DEC	33		
		HCR59	Boat Harbour	5	PSC	39		
		NR82	Angourie Point, Yuraygir NP	5	DEC	58		
		NR85	Redcliff, Yuraygir NP	4	DEC	63		
		NR91	Rocky Pt, Yuraygir NP	3	DEC	72		
		NR62	Dirrawong Reserve	3	DoL, Community trust	72		
		NR83	Shelley Headland Yuraygir NP	2	DEC	93		
NR109	Moonee Beach NR	2	DEC	102				
<i>Stackhousia spathulata</i>	4	NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	8	DEC	4		
		HCR108	Wamberal Lagoon NR	12	DEC	7		
		SR13	Seven Mile Beach NP (including SEPP26 no. 175, 175A)	7	DEC	13		
		HCR43	Mungo Brush, Myall Lakes NP	7	DEC	13		

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

species ^b	rank ^b	site no. ^c	Category 1 – site name ^{a, d}	no. of entities present ^e	tenure ^f	site rank ^g
<i>Stackhousia spathulata</i> – continued	4	NR142	Crescent Head	10	?	16
		SR20	Bherwerre Peninsula Booderee NP	10	DEH	19
		SR14	Comerong Island NP and Crown land to the north	8	DEC	25
		HCR48	Yacaaba Peninsula	6	DoL	25
		SR26	Haven, Alamin and Farnham Headland (Conjola NP)	8	DEC, DoL	29
		NR66	Snapper Rock, Bundjalung NP	6	DEC	31
		HCR44	Banksia Green, Myall Lakes NP	5	DEC	33
		HCR42	Coastline from Big Gibber to Banksia Green, Myall Lakes NP	5	DEC	33
		HCR1	Crowdy Bay NP (south)	6	DEC	33
		NR64	Bundjalung NP (north)	6	DEC	41
		HCR12	Diamond Head, Red Head, Black Head, Hallidays Point (including SEPP26 no. 150, 152C)	4	DoL, GTCC	54
		HCR26	Booti Booti NP	5	DEC	63
		NR88	Sandon north and Sandon North beach, Yuraygir NP	4	DEC	68
		HCR41	Yagon Gibber, Myall Lakes NP	3	DEC	72
		NR62	Dirrawong Reserve	3	DoL, Community trust	72
		SR24	Cudmirrah Beach	3	ShoalCC, DEC	86
		SR25	Berrara Beach, Monument Beach	3	ShoalCC, DEC	86
		SR29	Inyadda Beach	3	ShoalCC	93
		SR30	Manyanah Beach	2	ShoalCC	123
		SR31	Cunjurong Beach / Point	2	ShoalCC, DoL	123
<i>Ischaemum triticeum</i>	4	NR148	Sea Acres NR / Tacking Point	10	DEC	10
		NR154	Kattang NR	11	DEC	16
		NR66	Snapper Rock, Bundjalung NP	6	DEC	31
		HCR1	Crowdy Bay NP (south)	6	DEC	33
		NR94	Bare Point–Wilsons Headland Yuraygir NP	6	DEC	33
		NR138	Hat Head NP	4	DEC	54
		NR82	Angourie Point, Yuraygir NP	5	DEC	58
		NR63	Bundjalung NP – Ten Mile Beach and Bombing Range	3	DEC	68
		NR132	Arakoon SCA	3	DEC	81
		NR87	Pebbly-Freshwater Yuraygir NP	1	DEC	123
<i>Vigna marina</i>	4	NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	8	DEC	4
		NR148	Sea Acres NR / Tacking Point	10	DEC	10
		NR145	Limeburners Creek NR	10	DEC	18
		NR138	Hat Head NP	4	DEC	54
		NR63	Bundjalung NP – Ten Mile Beach and Bombing Range	3	DEC	68
		NR91	Rocky Pt, Yuraygir NP	3	DEC	72
		NR132	Arakoon SCA	3	DEC	81
		NR127	Scotts Head	4	DoL, NaSC	123
<i>Gleichenia mendellii</i>	14	NR90	Sandon backtrack, Sandon bluffs and Sandon south (Yuraygir NP)	8	DEC	4
		NR66	Snapper Rock, Bundjalung NP	6	DEC	31
		NR61	Broadwater NP	6	DEC	39
		NR64	Bundjalung NP (north)	6	DEC	41
		NR91	Rocky Pt, Yuraygir NP	3	DEC	72
		NR62	Dirrawong Reserve	3	DoL, Community trust	72
		NR80	Angourie Reserve	1	CVC	123
NR81	Angourie Back Beach, Yuraygir NP	1	DEC	123		
<i>Actites megalocarpa</i>	14	NR133	Arakoon SCA / Hat Head NP	19	DEC	1
		NR157	Crowdy Bay NP (north)	15	DEC	5
		NR99	Station Creek Beach Yuraygir NP	2	DEC	102
<i>Poa poliformis</i>	14	NR154	Kattang NR	11	DEC	16
		SM37	Kurnell, Botany Bay	8	DEC	22
<i>Fontainea oraria</i>	17	NR56	South of Lennox Head	3	P	49
		NR46	Lennox Head, inland from Boulder Beach (including SEPP26 no. 37, 37A, 37B, 37C – 4 patches)	3	P, BaSC	72
<i>Diuris praecox</i>	17	HCR96	Munmorah SCA	16	DEC	7
		HCR76	Glenrock SCA (various locations throughout park)	6	DEC	13
		HCR95	Wallarah NP	8	DEC	21
		HCR107	Wyrrabalong NP South (Bateau Bay to Wamberal North)	6	DEC	25
		HCR97	Budgewoi	4	DEC, DoL, WySC	63
		HCR60	Anna Bay; Jessie Rd to Rd 1074	1	EA, DoL	123
<i>Westringia fruticosa</i>	19	SM40	Towra Point NR	11	DEC	5
		SR16	Warrain Beach / Currarong Beach	12	ShoalCC, DEC, FH	7
		HCR108	Wamberal Lagoon NR	12	DEC	7
		HCR96	Munmorah SCA	16	DEC	7
		SR20	Bherwerre Peninsula Booderee NP	10	DEH	19
		HCR95	Wallarah NP	8	DEC	21
		SM37	Kurnell, Botany Bay	8	DEC	22
		HCR107	Wyrrabalong NP South (Bateau Bay to Wamberal North)	6	DEC	25
		HCR109	Bouddi NP	7	DEC	28
		HCR59	Boat Harbour	5	PSC	39
		SR17	Callala Bay and Beach (Miola Peninsula)	5	ShoalCC, DoL	41
		SR19	Beecroft Head, Jervis Bay	3	DoD, P	47
		HCR57	Fingal Beach / Barry Park	4	PSC	58
		HCR11	Saltwater and Khappinghat NP – Wallabi Pt Headland (SEPP26 no. 147, 148, 148A, 149)	2	DEC	93
		HCR72	Tomaree NP, Fishermans Bay	2	DEC	102

^a Control categories as determined in Appendix 6.

^b Priority species and their rank as determined in Appendix 3.

^c A unique numbering system for each site. The letters are an abbreviation of the five coastal NRM regions, being NR = Northern Rivers, HC = Hunter Central Rivers, HN = Hawkesbury–Nepean, SM = Sydney Metro, and SR = Southern Rivers Catchment Management Authorities, while the numbers reflect a general north to south order within each NRM region, where possible.

^d Abbreviations – SCA = State Conservation Area, NP = National Park, NR = Nature Reserve, HS = Historic Site, SEPP = State Environmental Planning Policy.

^e Entities (i.e. species, populations and ecological communities) as identified in Appendices 3 and 5.

^f The tenure of the sites – abbreviations used: AL = Aboriginal land; ALC = Aboriginal Land Council; BaSC = Ballina Shire Council; BySC = Byron Shire Council; CHC = Coffs Harbour Council; CVC = Clarence Valley Council; DEC = Department of Environment and Conservation; DEH = Department of Environment and Heritage; DoD = Department of Defence; DoFA = Department of Finance and Admin; DoL = Department of Lands; DoP = Department of Planning; EA = Energy Australia; EuSC = Eurobodalla Shire Council; FH = Freehold land; GLC = Great Lakes Council; GTCC = Greater Taree City Council; HC = Hastings Council; KT = Killalea Trust; LHIB = Lord Howe Island Board; NaSC = Nambucca Shire Council; P = Private; PSC = Port Stephens Council; PWC = Pittwater Council; RC = Randwick Council; ShellCC = Shellharbour City Council; ShoalCC = Shoalhaven City Council; SuthSC = Sutherland Shire Council; SW = Sydney Water; TSC = Tweed Shire Council; WarC = Warringah Council; WLALC = Wagonga Local Aboriginal Land Council; WySC = Wyong Shire Council

^g Sites with the same score were given an equal rank value (e.g. two sites scored 50 and were ranked equal 5th), therefore sites with the next lowest score (e.g. 49) were given the next actual rank (e.g. 7th instead of 6th).

Table A8.2 Category 1 sites for each of the high priority populations.

population ^b	rank ^b	site no. ^c	Category 1 – site name ^{a,d}	no. of entities		site rank ^g
				present ^e	tenure ^f	
<i>Glycine clandestina</i> (broad leaf form)	1	SM40	Towra Point NR	11	DEC	5
		SM37	Kurnell, Botany Bay	8	DEC	22
		NR127	Scott's Head	4	DoL, NaSC	123
<i>Zieria smithii</i> (low growing form)	1	NR148	Sea Acres NR / Tacking Point	10	DEC	10
		NR154	Kattang NR	11	DEC	16
		NR145	Limeburners Creek NR	10	DEC	18
		NR121	Bongil Bongil NP (including SEPP26 sites 75, 76, 77, 78)	4	DEC	58
		NR114	Diggers Head	3	DEC	72
		NR156	Crowdy Bay NP – Diamond Head	3	DEC	86
		NR137	Hat Head NP, O'Connors Beach	2	DEC	102
		NR141	South Hat Head	1	?	123

*g see Table A8.1 for details

Table A8.3 Category 1 sites for each of the high priority ecological communities.

species ^b	rank ^b	site no. ^c	Category 1 – site name ^{a,d}	no. of entities		site rank ^g
				present ^e	tenure ^f	
Eastern Suburbs Banksia Scrub	1	SM26	La Perouse (Jennifer St sites 1 and 2 plus Botany Bay NP)	3	DEC, Telstra, ALC	54
		SM22	Malabar Headland	2	DoFA, RC	81
		SM20	Bunnerong Rd, Chifley (including Wassell St)	2	DoL, RC	102
		SM27	NSW Golf Club / Botany Bay NP (Cape Banks area)	1	DoL	123
		SM25	St Michaels Golf Course, Little Bay	1	DoL	123
Littoral Rainforest (including SEPP 26 and Sutherland Shire Littoral Rainforest)	1	NR29	Cape Byron SCA (including SEPP26 no. 27, 27A, 27B)	13	DEC	2
		NR36	Broken Head NR (including SEPP26 no. 32, 33B, 34A)	12	DoL, DEC, P	3
		SM40	Towra Point NR	11	DEC	5
		SR16	Warrain Beach / Currarong Beach	12	ShoaCC, DEC, FH	7
		HCR108	Wamberal Lagoon NR	12	DEC	7
		HCR96	Munmorah SCA	16	DEC	7
		NR148	Sea Acres NR / Tacking Point	10	DEC	10
		NR25	Brunswick Heads NR (including SEPP26 no. 18)	14	DEC	11
		NR3	Fingal Head, Tweed Coastal Reserve (SEPP26 no. 2A)	12	TSC	12
		SR13	Seven Mile Beach NP (including SEPP 26 no. 175, 175A)	7	DEC, DoL	13
		HCR43	Mungo Brush, Myall Lakes NP	7	DEC	13
		NR154	Kattang NR	11	DEC	16
		NR145	Limeburners Creek NR	10	DEC	18
		SR20	Bherwerre Peninsula Booderee NP	10	DEH	19
		HCR105	Wyrrabalong NP and Council Rd Reserve	9	DEC, WySC	19
		NR70	Woody Head (including SEPP 26 no. 52, 52A)	8	DEC	22
		SR14	Comerong Island NP and Crown land to the north	8	DEC	25
		HCR109	Bouddi NP	7	DEC	28
		HCR20	One Mile Beach, Forster	6	GLC	29
		NR32	Arakwal NP	8	DEC	31
		NR9	Cudgen NR (SEPP26 no. 4)	7	DEC	33
		HCR1	Crowdy Bay NP (south)	6	DEC	33
		NR61	Broadwater NP	6	DEC	39
		SR18	Beecroft Peninsula Jervis Bay	6	DoD	41
		NR47	Boulder Beach, Ballina (including SEPP26 no. 38 – Boulder Beach south)	6	BaSC	41
		SR19	Beecroft Head, Jervis Bay	6	DoD, P	47
		HCR37	South of Bald Head	5	DoL	47
		NR18	Wooyung NR (including SEPP26 no. 11 – South)	5	DEC, P	49
		NR56	South of Lennox Head (including SEPP 26 no. 37)	3	P	49
		HCR28	Tiona (including SEPP26 no. 155B – Seven Mile Beach)	4	P	51
		NR52	Angels Beach, Ballina	6	BaSC	51
		HCR12	Diamond Head, Red Head, Black Head, Hallidays Point (including SEPP 26 no. 150, 152C)	4	DoL, DEC, GTCC	54
		SR10	Killalea State Park	3	DoL, KT, ShellCC	58
		NR121	Bongil Bongil NP (including SEPP26 no. 75, 76, 77, 78)	4	DEC	58
		NR73	Iluka NR	5	DEC	58
		NR22	Fern Beach – South Golden Beach	3	BySC, DoL	63
		SR9	Bass Point (including SEPP26 no. 173A)	5	DoP, ShellCC	63
		HCR97	Budgewoi	4	DEC, DoL, WySC	63
		HCR26	Booti Booti NP	5	DEC	63
		NR51	Sharps Beach, Ballina	4	BaSC	68
NR63	Bundjalung NP – Ten Mile Beach and Bombing Range	3	DEC	68		
HCR39	Seal Rocks, Myall Lakes NP	4	DEC	72		
NR65	Bundjalung NP (Iluka Bluff)	3	DEC	72		
NR46	Lennox Head, inland from Boulder Beach (including SEPP26 no. 37, 37A, 37B, 37C – 4 patches)	3	BaSC, Private	72		
NR21	Billinudgel NR (including SEPP26 no. 13A, 13B, 13 C – Crabbes Creek Beach north)	4	DEC	81		
HCR50	Yacaaba Head, Myall Lakes NP	4	DEC	81		
NR132	Arakoon SCA	3	DEC	81		
HCR35	Blueys Beach (including SEPP 26 no. 157–158)	3	DoL, P	81		
NR34	Clarkes Beach Caravan Park	3	DoL	86		
NR97	Yuraygir NP	9	DEC	86		
NR54	Shaws Bay Ballina	3	BaSC, P	86		

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

species ^b	rank ^b	site no. ^c	Category 1 – site name ^{a, d}	no. of entities present ^e	tenure ^f	site rank ^g	
Littoral Rainforest (including SEPP 26 and Sutherland Shire Littoral Rainforest) – continued		NR39	Seven Mile Beach North – 1km south of Jews Point (SEPP26 no. 34)	3	P	93	
		HCR11	Saltwater and Khappinghat NP – Wallabi Pt Headland (SEPP26 no. 147, 148, 148A, 149)	2	DEC	93	
		HCR85	Lake Macquarie SCA	2	DEC	102	
		NR134	Hat Head NP – Big Smoky section	2	DEC	102	
		NR109	Moonee Beach NR	2	DEC	102	
		NR67	Bundjalung NP – many locations	8	DEC	115	
		NR53	Shelley Beach Ballina	2	BaSC	115	
		NR2	Ukerabagh NR including Tweed Heads Historic Site	2	DEC	119	
		NR5	Fingal Southwest – Shallow Bay (SEPP26 no. 2C)	2	DEC	119	
		HCR53	John Goulds NR / Cabbage Tree Island	2	DEC	119	
		HCR36	Between Blueys head & Bald Head (SEPP26 no. 159, 160 – 2 large patches)	1	DoL	123	
		NR4	Fingal West – Golf Course (SEPP26 no. 2B)	1	P	123	
		NR16	SEPP26 (10 – Wooyung NR North)	1	DEC	123	
		NR19	SEPP26 (12 – at Wooyung Rd junction, near Caravan park Wooyung beach)	1	P	123	
		SR31	Cunjurong Beach / Point	2	ShoalCC, DoL	123	
		SR32	Bannister Headland Mollymook (SEPP26 no. 184A)	1	ShoalCC	123	
		SR39	Tomakin	1	EuSC	123	
		HCR29	Booti Booti (west of Flat Rock) in Booti Booti NP (SEPP26 no. 155)	1	DEC	123	
		HCR2	The Gap – southern end of Crowdy Bay NP (SEPP26 no. 125, 126)	1	DEC	123	
		HCR3	Harrington – Crowdy Head Rd – part Crowdy Bay NP (SEPP26 no. 131)	1	DEC, GTCC	123	
		HCR5	North Harrington (SEPP26 no. 132)	1	GTCC	123	
		HCR6	Manning Pt, Manning River (SEPP26 no. 134A, 135)	1	GTCC	123	
		HCR8	Farquhar Park (SEPP26 no. 142)	1	GTCC	123	
		HCR9	Old Bar North (SEPP26 no. 144)	1	GTCC	123	
		HCR10	Old Bar South (SEPP26 no. 145)	1	GTCC	123	
		NR149	Miner's Beach, South of Sea Acres NR – near Tacking Pt (SEPP26 no. 113)	1	DoL	123	
		NR144	Delicate Nobby Headland – 1.5km N of Limeburner's Creek NR (SEPP26 no. 105B)	1	FH	123	
		NR140	Hat Head NP (Crescent head)	1	DEC	123	
		NR130	Clybucca HS – northern section (SEPP26 no. 101B)	1	DEC	123	
		NR128	1km North of Grassy Head (SEPP26 no. 96)	1	FH	123	
		NR113	Sapphire Gardens, Coffs Harbour (including SEPP26 no. 69)	2	DEC	123	
		NR111	East of Crystal Waters (SEPP26 no. 68B)	1	DEC	123	
		NR55	Lighthouse Beach Ballina	1	BaSC	123	
Kurnell Dune Forest	1	SM40	Towra Point NR	11	DEC	5	
		SM35	Charlotte Breen Reserve (and south-east of the reserve)	1	SW, SuthSC	93	
		SM39	Boat Harbour Reserve	2	DoL, SuthSC	102	
Coastal Banksia Woodlands (<i>Banksia integrifolia</i>)	4	SR16	Warrain Beach / Currarong Beach	12	ShoalCC, DEC, FH	7	
		SR13	Seven Mile Beach NP (including SEPP 26 no. 175, 175A)	7	DEC, DoL	13	
		SR20	Bherwerre Peninsula Booderee NP	10	DEH	19	
		SR14	Comerong Island NP and Crown land to the north	8	DEC, DoL	22	
		SR26	Haven, Alamin & Farnham Headland (Conjola NP)	8	DEC, DoL	29	
		HCR20	One Mile Beach, Forster	6	GLC	29	
		SR15	Culburra beach, Crookhaven Heads	5	DoL, PSC, AL	33	
		HCR59	Boat Harbour	5	PSC	39	
		SR17	Callala Bay & Beach (Miola Peninsula)	5	ShoalCC	41	
		HCR46	Bennetts Beach	5	GLC	41	
		NR64	Bundjalung NP (north)	6	DEC	41	
		HCR28	Tiona (including SEPP26 no. 155B – Seven Mile Beach Tiona)	4	P	51	
		HCR17	Forster Breakwall / Pilot Hill	4	DoL	51	
		HCR57	Fingal Beach / Barry Park	4	PSC	58	
		NR97	Yuraygir NP	9	DEC	86	
		SM3	Long Reef	2	P, WarC	93	
		SR27	Narrawallee Creek NR and Conjola Beach	2	DEC, DoL	102	
		SM30	Pott Pt, Cooks Knoll, Kurnell	1	DEC	123	
	Themeda (<i>Themeda triandra</i>) grassland on sea cliffs & coastal headlands in the NSW North Coast, Sydney Basin and South East Corner bioregions	4	NR29	Cape Byron SCA (including SEPP26 no. 27, 27A, 27B)	13	DEC	2
			NR36	Broken Head NR (including SEPP26 no. 32, 33B, 34A)	12	DoL, DEC, P	3
		HCR96	Munmorah SCA	16	DEC	7	
		HCR76	Glenrock SCA (various locations throughout park)	6	DEC	13	
		HCR95	Wallarah NP	8	DEC	21	
		NR110	Look at me now Headland, Moonee Beach NR	6	DEC	22	
		HCR107	Wyrabalong NP South (Bateau Bay to Wamberal North)	6	DEC	25	
		HCR109	Bouddi NP	7	DEC	28	
		NR66	Snapper Rock, Bundjalung NP	6	DEC	31	
		NR94	Bare Point–Wilson's Headland Yuraygir NP	6	DEC	33	
		HCR59	Boat Harbour	5	PSC	39	
		HCR37	South of Bald Head	5	DoL	47	
		NR107	Dammerels Head, Moonee Beach NR	4	DEC	54	
		NR82	Angourie Point, Yuraygir NP	5	DEC	58	
		NR85	Redcliff, Yuraygir NP	4	DEC	63	
		NR71	Middle Bluff Bundjalung NP	3	DEC	68	
		HCR41	Yagon Gibber, Myall Lakes NP	3	DEC	72	
		NR65	Bundjalung NP (Iluka Bluff)	3	DEC	72	
		SM3	Long Reef	2	P, WarC	93	
		NR83	Shelley Headland Yuraygir NP	2	DEC	93	
		NR50	Sharps Beach Ballina (White's Head)	2	BaSC	93	
		HN1	Lion Island (north east face)	1	DEC	123	
		HN2	Barrenjoey (northern and eastern slopes of headland)	1	DEC	123	
		HN8	Mona Vale cliff	1	PwC	123	
		HN9	Turrimetta headland	1	PwC	123	
		SM1	Narrabeen Headland	1	PwC	123	
		SM2	Warriewood beach / cliff	1	PwC	123	
		NR98	Dirrangan Lookout track Yuraygir NP	1	DEC	123	
	NR84	Plumbago Headland, Yuraygir NP	1	DEC	123		
Eastern Suburbs Banksia Scrub equivalent communities (Coastal Sand Wallum Heath)	4	HCR107	Wyrabalong NP South (Bateau Bay to Wamberal North)	6	DEC	25	
		HCR109	Bouddi NP	7	DEC	28	

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Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

species ^b	rank ^b	site no. ^c	Category 1 – site name ^{a, d}	no. of entities		site rank ^g
				present ^e	tenure ^f	
Frontal Dune Vegetation Complex	4	SR16	Warrain Beach / Currarong Beach	12	ShoalCC, DEC, FH	7
		HCR108	Wamberal Lagoon NR	12	DEC	7
		HCR96	Munmorah SCA	16	DEC	7
		SR13	Seven Mile Beach NP (including SEPP 26 no. 175, 175A)	7	DEC, DoL	13
		SR20	Bherwerre Peninsula Booderee NP	10	DEH	19
		HCR105	Wyrabalong NP and Council Rd Reserve	9	DEC, WySC	19
		HCR95	Wallarah NP	8	DEC	21
		SR14	Comerong Island NP & Crown land to the north	8	DEC, DoL	25
		HCR48	Yacaaba Peninsula	6	DoL	25
		SR26	Haven, Alamin & Farnham Headland (Conjola NP)	8	DEC, DoL	29
		SR15	Culburra beach, Crookhaven Heads	5	DoL, AL	33
		HCR46	Bennetts Beach	5	GLC	41
		HCR28	Tiona (including SEPP26 no. 155B – Seven Mile Beach Tiona)	4	P	51
		HCR17	Forster Breakwall / Pilot Hill	4	DoL	51
		HCR14	Nine Mile Beach, North Tuncurry	3	DoL	72
		HCR35	Blueys Beach (including SEPP 26 no. 157, 158)	3	DoL	81
		NR97	Yuraygir NP	9	DEC	86
		HCR32	Boomerang Beach	2	DoL	93
		NR67	Bundjalung NP – many locations	8	DEC	115
		SR55	Fuller's Beach Wagonga	1	WLALC	123
SM29	Potter Point, Kurnell – Botany Bay NP	1	DEC	123		
Coastal Sand Dune Complex (<i>Acacia longifolia</i> var. <i>sophorae</i>)	4	SR16	Warrain Beach / Currarong Beach	12	ShoalCC, DEC, FH	7
		HCR96	Munmorah SCA	16	DEC	7
		SR13	Seven Mile Beach NP (including SEPP 26 no. 175, 175A)	7	DEC, DoL	13
		HCR76	Glenrock SCA (various locations throughout park)	6	DEC	13
		HCR105	Wyrabalong NP and Council Rd Reserve	9	DEC, WySC	19
		HCR95	Wallarah NP	8	DEC	21
		SR14	Comerong Island NP and Crown land to the north	8	DEC	25
		HCR107	Wyrabalong NP South (Bateau Bay to Wamberal North)	6	DEC	25
		HCR48	Yacaaba Peninsula	6	DoL	25
		SR26	Haven, Alamin & Farnham Headland (Conjola NP)	8	DEC, DoL	29
		HCR20	One Mile Beach, Forster	6	GLC	29
		SR15	Culburra beach, Crookhaven Heads	5	DoL, AL	33
		HCR44	Banksia Green, Myall Lakes NP	5	DEC	33
		HCR42	Coastline from Big Gibber to Banksia Green, Myall Lakes NP	5	DEC	33
		SR17	Callala Bay and Beach (Miola Peninsula)	5	ShoalCC, DoL	41
		HCR46	Bennetts Beach	5	GLC	41
		HCR17	Forster Breakwall / Pilot Hill	4	DoL	51
		HCR14	Nine Mile Beach, North Tuncurry	3	DoL	72
		HCR35	Blueys Beach (including SEPP 26 no. 157, 158)	3	DoL, P	81
		NR97	Yuraygir NP	9	DEC	86
HCR32	Boomerang Beach	2	DoL	93		
SM38	Yena/Muru Kurnell – Botany Bay NP	2	DEC	102		
NR67	Bundjalung NP – many locations	8	DEC	115		

^{a-g} see Table A8.1 for details

Section 1 – site map

- Map of the priority site (include scale, legend and north orientation, as well as locations of bitou bush and all species, populations and ecological communities listed in the TAP that are present). Use cross-hatching to illustrate the general area for those species, populations and ecological communities where the exact location is unknown, and for widely dispersed species, populations and ecological communities.

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Section 2 – site history

- Outline the long-term management of the site (i.e. site history – ideally over the last 5 years, if not whatever is readily available), including all bitou bush control and work on threatened species (i.e. listed under the NSW *Threatened Species Conservation Act 1995*), please include the year each activity took place and the stakeholders and costs involved. Also include information on any other weed control undertaken at the site.

Year	Control measure undertaken	List all threatened species, populations or ecological communities present	Stakeholders (community group and contractor)	Cost (\$ and in-kind) (where possible)	Other control measures and the target weed species

- Identify all programs or actions undertaken for those threatened species present (i.e. as per the Priority Action Statement (PAS), threat abatement or recovery plans, or park or reserve specific pest management plans (or other legislative requirement)), or any other high conservation value (i.e. HCV (high conservation vegetation), or cultural heritage values (also see below)).

List all species, populations or ecological communities present	Program or action undertaken	Reference (e.g. recovery plan)

- List all threat abatement and recovery plan actions relevant to the site (e.g. the Green and Gold Bell Frog Recovery Plan: see NPWS 2003b) and their likely interactions with the Bitou TAP. Also check with the Priority Action Statement to ensure that all actions have been accounted for.

List all species, populations or ecological communities present	Source	Action required	How this links with the Bitou TAP

Section 3 – site attributes

- Identify the physical attributes of the site which may affect control and thus the cost (e.g. terrain, access, and other local conditions like remediation works that may be needed and fencing). Physical attributes may also include visitation rates, e.g. in high visitation areas aerial spraying may not be an option due to the need for park closures.

Physical attributes that may affect control at the site	How they affect control

- Identify the priority native biodiversity present other than the priority species, populations and ecological communities listed in the TAP (i.e. herbicide sensitive species, locally/regionally significant species).

Other priority biodiversity present	Significance (e.g. southern limit)	Linkage with your control program and other plans

Section 4 – control

- 7A. Identify the stages of bitou bush control required and the proposed timetable for each stage over a 5 year period (i.e. stages 1–3 as outlined in Section 7.4 of the Bitou TAP).
- 7B. Identify the most appropriate management technique required for the level of bitou bush present and the stage of control identified above. Note: aerial spraying must be consistent with the best practice guidelines (Broese van Groenou and Downey 2006).
- 7C. Outline the follow-up control required in each stage to prevent re-invasion/re-infestation of the site after the initial control.

Year	Stages of control as per the TAP	Area/location to be treated (please also mark on map above in Section 1)	Initial control technique to be used (e.g. cut and paint, ground spraying, etc.)	Follow-up control technique to be used (e.g. for recruitment and resprouting plants)
1				
2				
3				
4				
5				

8. Identify any likely non-target effects of the control program outlined above.

Non-target effects of control	Specifics (i.e. the species affected)

Section 5 – other weeds

9. Identify all other significant weed species present and highlight those that are likely to invade following the removal of bitou bush.

Other significant weed species present (common/scientific name)	Density of weed species (i.e. scatter, scarce, dominant)	How these weed species influence your bitou bush control program (e.g. much harder to control and require other techniques)	Likely change following bitou control (i.e. increase, stay same, decrease, don't know)

10. Outline a control program that addresses the weed species identified above (e.g. do not move onto stage 2 until glory lily is controlled as well). Ensure that this information is also provided in the control Section above.

Stages of control as per the TAP	Other weed species present	Control measure to be implemented which differs from that used for bitou bush
Stage 1		
Stage 2		
Stage 3		

Section 6 – legislative requirements

- 11A. Ensure all pesticide applications comply with the Pesticides Act (see Chapter 2) and APVMA regulations.
- 11B. Ensure that all herbicides are used in accordance with the label recommendations.
- 11C. Ensure all regulations of the *NSW Pesticides Act 1999* are upheld (i.e. training, record keeping and notification).
12. Where required, a Section 132C Licence (see Section 2.2.2 of the TAP) can be applied for either individually (through DEC) or by completing this pro-forma and submitting it to the plan coordinator, who has applied for a generic licence, and agreeing to any conditions placed upon such a licence.
13. Assess the potential environmental impacts of the management strategies outlined and if needed undertake a risk assessment.
14. Ensure all activities comply with OH&S standards/guidelines and that a Job Safety Analysis (or similar) has been prepared where required.

Section 7 – monitoring

15. Outline any monitoring programs being undertaken to evaluate the effectiveness of bitou bush control or the response of native species to bitou bush control.

Monitoring method undertaken (e.g. photo points, quadrats)	Measures collected (i.e. what is being measured or recorded – seedling counts)	Interval of collection (frequency at which data is collected)	Where the data is stored and the collector of the data

Section 8 – stakeholder involvement

16. Identify and determine the roles and responsibilities of all stakeholders, especially for each stage of the plan (i.e. see point 9, Section 5 above).

Stakeholder's details	Responsibility of stakeholder	Stage as per the TAP

Section 9 – indigenous involvement

17. Where possible identify any Aboriginal cultural heritage sites present (where possible including those covered under the NPWS Aboriginal Heritage Information Management System). Check the sensitivity of any disclosure of this information before listing below.

Cultural heritage site name (if known officially)	Description of the site (e.g. midden)	Location (coordinates – if location details are sensitive ensure that knowledge of the site is passed on to personnel implementing the control)	Site number (i.e. NPWS Aboriginal Heritage Information Management System)	Protection works required

18. Identify and consult with indigenous people with respect to any special knowledge or interest in the site or the species, population or ecological community and control programs at that site, including the likely social, cultural and economic consequences.

Name of person contacted	Details of interest	Date contacted	Outcomes of consultation

Section 10 – community involvement

19. Identify the community groups that presently work in the area or any other groups that may wish to work in the area (either now or in the future) and the skills and qualifications of those volunteers.

Name of community group or individual/s working at the site	Frequency of work undertaken at the site	Number of people involved	Training/qualifications

Section 11 – other information

20. Outline any other aspect of your site and bitou bush control program that may influence the delivery of the Bitou TAP objectives.

Other aspects of the site which may influence delivery of the TAP	Effect

Appendix 10A Species at risk from herbicide application

There are approximately 850 plant species recorded within the distribution of bitou bush in New South Wales, however information on the impacts of herbicide on native plants from controlled laboratory and field studies is limited.

The species listed in Tables A10.1 and A10.2 are either known to be susceptible or are suspected of being vulnerable to herbicide used to control bitou bush. Consideration should be given to these species during bitou bush control programs and management plans. In addition, a list of species examined for herbicide sensitivity as part of the aerial bitou bush spraying program in New South Wales is presented in Appendix 10B below.

Table A10.1 List of native plants susceptible to herbicide which are not included in Tables A10.3 and Tables A10.4 – unfortunately the herbicide formulation was not noted/recorded, rather these are observations based on post herbicide application.

species at risk	status ^a	information	reference
<i>Baumea juncea</i>	nl	some dead plant observed	White pers. comm.
<i>Bracteantha brachteata</i>	nl	some dead plant observed	White pers. comm.
<i>Casuarina equisetifolia</i>	nl	some foliage burn evident	White pers. comm.
<i>Chamaesyce psammogeton</i>	E	susceptible to herbicide	Thomas pers. comm.
<i>Crinum pedunculatum</i>	nl	some foliage burn evident	White pers. comm.
<i>Cyperus</i> spp.	nl	some dead plant observed	White pers. comm.
<i>Dampiera stricta</i>	nl	some foliage burn evident	White pers. comm.
<i>Eragrostis interruptus</i>	nl	some dead plant observed	White pers. comm.
<i>Ficus watkinsiana</i>	nl	some foliage burn evident	White pers. comm.
<i>Gleichenia mendellii</i>	nl	susceptible to herbicide	Flower pers. comm.; White pers. comm.
<i>Ischaemum</i> spp.	nl	some dead plant observed	White pers. comm.
<i>Juncus krassii</i>	nl	some dead plant observed	White pers. comm.
<i>Melaleuca quinquenervia</i>	nl	some foliage burn evident	White pers. comm.
<i>Pandanus tectorius</i>	nl	some dead plant observed	White pers. comm.
<i>Plectranthus cremnus</i>	nl	question marks over susceptibility	NPWS (2001d)
<i>Pimelea spicata</i>	E	susceptible to herbicide	Matarczyk (1999)
<i>Senecio spathulatus</i>	E	susceptible to herbicide	Thomas pers. comm.
<i>Valleia paradoxa</i>	nl	some dead plant observed	White pers. comm.
<i>Zieria prostrata</i>	E	susceptible to herbicide	Thomas pers. comm.
<i>Zieria smithii</i> (lgf)	EP	susceptible to herbicide	Thomas pers. comm.
Orchids		susceptible to herbicide	Jones, Groves and Weston pers. comm.

^a E = Endangered, V = Vulnerable, EP = Endangered Population as defined under the TSC Act, and nl = not listed under the Act

Table A10.2 Preliminary list of fauna susceptible to herbicide

species at risk	status ^a	information	reference
amphibians			
<i>Crinia timnula</i> (Wallum froglet)	V	susceptible to herbicide contamination of aquatic habitats	Wellington pers. comm.
<i>Litoria aurea</i> (green and gold bell frog)	E	susceptible to herbicide contamination of aquatic habitats	Wellington pers. comm.
<i>Litoria brevipalmata</i> (green-thighed frog)	V	susceptible to herbicide contamination of aquatic habitats	Murphy pers. comm.
<i>Litoria ongburraensis</i> (Olongburra frog)	V	susceptible to herbicide contamination of aquatic habitats	Wellington pers. comm.
fish			
<i>Nannaperca oxleyana</i> (Oxleyan pygmy perch)	E	susceptible to herbicide contamination of aquatic habitats	Murphy pers. comm.
insects			
<i>Petalura gigantia</i> (giant dragonfly)	E	susceptible to herbicide contamination of aquatic habitats	Murphy pers. comm.

^a E = Endangered, V = Vulnerable, EP = Endangered Population as defined under the TSC Act, and NL= not listed under the Act

Appendix 10B Plant species examined for herbicide sensitivity

The information below was adapted from the *Best Practice Guidelines for Aerial Spraying of Bitou Bush in New South Wales* (see Broese van Groenou and Downey 2006).

Although a rigorous assessment of the species at risk from herbicide application as used to control bitou bush has not been undertaken, information on the toxic effects of aerial spraying of bitou bush (using population-based visual assessment of herbicide injury) has been compiled over the past 15 years for glyphosate and 12 years for metsulfuron methyl (John Toth unpublished data). These lists contain 220 species examined for glyphosate (Table 10.3) and 83 species for metsulfuron methyl (Table 10.4).

Table A10.3 Herbicide sensitivity to Roundup® (glyphosate 360g a.i./L) of native and some introduced plants – a compilation of results from 1989–2004 for the spraying of 2 L of Roundup® in 30 L water ha⁻¹ from a helicopter, during winter (1 June to 31 August) (John Toth unpublished data). **These results are for Roundup® 360 only**^a.

species name	plant condition ^b			species name	plant condition ^b		
	after 8 weeks	after 6 months	comments ^c		after 8 weeks	after 6 months	comments ^c
<i>Acacia binerua</i>	OK	OK	N	<i>Clematis glycinoides</i>	SL	OK	Y
<i>Acacia implexa</i>	SL	OK	Y	<i>Clerodendrum floribundum</i>	OK, M, SD	OK, M, SD	Y
<i>Acacia longifolia</i> var. <i>sophorae</i>	OK	OK	N	<i>Comesperma ericinum</i>	OK	OK	Y
<i>Acacia maidenii</i>	OK	OK	Y – insect gall damage	<i>Commelina cyanea</i>	OK, M	OK, SD	N
<i>Acacia myrtifolia</i>	OK	OK	N	<i>Commersonia fraseri</i>	OK	OK	Y
<i>Acacia saligna</i> *	SL	OK	Y	<i>Conospermum taxifolium</i>	OK	OK	Y
<i>Acacia suaveolens</i>	SL	SD, OK	Y	<i>Correa alba</i>	OK	OK	Y
<i>Acacia terminalis</i>	SL	OK	Y	<i>Corymbia gummifera</i>	OK	OK	Y
<i>Acacia ulicifolia</i>	OK	OK	Y	<i>Cotoneaster glaucophylla</i> *	OK	OK	Y
<i>Acmena smithii</i>	OK	OK	Y	<i>Crinum pedunculatum</i>	M	SL, OK	Y
<i>Acronychia imperforata</i>	M	OK	Y	<i>Cryptocarya triplinervis</i>	SL	M	Y
<i>Actinotus helianthi</i>	OK	OK	N	<i>Cypripopsis anarcardioides</i>	OK, SL	OK	Y
<i>Actinotus minor</i>	OK	OK	Y	<i>Cuscuta campestris</i> *	SD	SD	Y
<i>Aegiceras corniculatum</i>	OK	OK	Y	<i>Cyperus enervis</i>	OK	OK	Y
<i>Alectryon coriaceus</i>	SL	OK	Y	<i>Dianella caerulea</i>	OK	OK	Y
<i>Alectryon subcinerus</i>	OK	OK	Y	<i>Dianella caerulea</i> var. <i>producta</i>	OK	OK	Y
<i>Allocasuarina distyla</i>	OK	OK	Y	<i>Dianella congesta</i>	SL	OK	Y
<i>Allocasuarina littoralis</i>	OK	OK	Y	<i>Dianella revoluta</i>	OK	OK	N
<i>Allocasuarina nana</i>	OK	OK	Y	<i>Dichondra repens</i>	OK	OK	Y
<i>Alphitonia excelsa</i>	OK, M	OK, SD	Y	<i>Dillwynia floribunda</i>	OK	OK	Y
<i>Amphiphila arenaria</i> *	OK	OK	Y	<i>Dillwynia glaberrima</i>	OK	OK	Y
<i>Amperea xiphioclada</i>	OK	OK	Y	<i>Dodonaea triquetra</i>	OK, M	OK, D	Y
<i>Andropogon virginicus</i> *	OK	OK	Y	<i>Duboisia myoporoides</i>	SL, M	OK, D	Y
<i>Angophora costata</i>	OK	OK	Y	<i>Einadia hastata</i>	OK	OK	Y
<i>Anredera cordifolia</i>	OK	OK	Y	<i>Elaocarpus reticulatus</i>	OK	OK	Y
<i>Aotus ericoides</i>	OK	OK	Y	<i>Empodisma minus</i>	OK	OK	Y
<i>Araujia hortorum</i>	OK	OK	Y	<i>Endiandra sieberi</i>	OK	OK	Y
<i>Aristida ramosa</i>	M	OK	Y	<i>Entolasia stricta</i>	M	M	Y
<i>Astroloma pinifolium</i>	OK	OK	Y	<i>Epacris microphylla</i>	OK	OK	Y
<i>Austromyrtus dulcis</i>	OK	OK	Y	<i>Epacris obtusifolia</i>	SL	SL	Y
<i>Avicennia marina</i>	OK	OK	Y	<i>Erythrina X sikesii</i>	OK	OK	Y
<i>Baeckea brevifolia</i>	OK	OK	Y	<i>Eucalyptus botryoides</i>	OK, SL	OK	Y
<i>Baeckea imbricata</i>	OK	OK	Y	<i>Eucalyptus globoidea</i>	OK	OK	Y
<i>Banksia aemula</i>	SL	OK	Y	<i>Eucalyptus gummifera</i>	OK	OK	Y
<i>Banksia ericifolia</i>	OK	OK	Y	<i>Eucalyptus pilularis</i>	OK	OK	N
<i>Banksia integrifolia</i>	OK, SL	OK	Y – few died	<i>Eucalyptus punctata</i>	OK	OK	Y
<i>Banksia oblongifolia</i>	OK	OK	Y	<i>Eucalyptus robusta</i>	OK	OK	Y
<i>Banksia serrata</i>	OK	OK	N	<i>Eucalyptus signata</i>	OK	OK	Y
<i>Billardiera scandens</i>	OK, M	OK	Y	<i>Euroschinus falcata</i> var. <i>falcata</i>	OK	OK	Y
<i>Blechnum</i> sp.	OK	OK	Y	<i>Eustrephus latifolius</i>	OK, OK, SL	OK, OK, M	Y
<i>Bossiaea ensata</i>	OK	OK	N	<i>Excoecaria agallocha</i>	OK	OK	Y
<i>Bossiaea heterophylla</i>	OK	OK	N	<i>Exocarpos cupressiformis</i>	OK	OK	Y
<i>Brachyloma daphnoides</i>	OK	OK	Y	<i>Ficus fraseri</i>	M	M	Y – resprouting
<i>Bryonia oblongifolia</i>	OK, M	OK?	N	<i>Ficus rubiginosa</i>	OK	OK	Y
<i>Briza maxima</i> *	OK	OK	Y	<i>Gahnia clarkei/minus</i>	OK	OK	N
<i>Cakile maritima</i> subsp. <i>maritima</i> *	OK	OK	Y	<i>Geitonoplesium cymosum</i>	OK	OK	Y
<i>Callistemon citrinus</i>	OK	OK	Y	<i>Gleichenia dicarpa</i>	OK	OK	Y
<i>Callitris globoidea</i>	M	OK	Y	<i>Gleichenia microphylla</i>	OK	OK	Y
<i>Canavalia rosea</i>	OK	OK	Y	<i>Glochidion ferdinandii</i>	OK	OK	Y
<i>Canthium coprosmoides</i>	OK	OK	Y	<i>Glycine clandestina</i>	M	SD	Y
<i>Carpobrotus glaucescens</i>	SL, M	OK, SD	N – susceptible if fully exposed	<i>Gonocarpus tucerioides</i>	OK, SD	OK, SD	Y
<i>Cassina</i> sp.	OK	OK	Y	<i>Hardenbergia violacea</i>	OK, M, SL	OK, SD, M	Y
<i>Cassinia australis</i> var. <i>australis</i>	OK	OK	Y	<i>Hibbertia fasciculata</i>	OK	OK	Y
<i>Cassinia aculeata</i>	M	M	Y	<i>Hibbertia linearis</i>	OK	OK	Y
<i>Cassytha pubescens</i>	OK	OK	N	<i>Hibbertia obtusifolia</i>	OK	OK	N

[continued on next page]

Threat Abatement Plan – Invasion of native plant communities by *Chrysanthemoides monilifera*

species name	plant condition ^b			species name	plant condition ^b		
	after 8 weeks	after 6 months	comments ^c		after 8 weeks	after 6 months	comments ^c
<i>Casuarina equisetifolia</i>	SL, M	OK	Y	<i>Hibbertia scandens</i>	OK, SL	OK	N
<i>Casuarina glauca</i>	OK, SL, M	OK, SL, OK	Y	<i>Hibbertia vesita</i>	OK	OK	Y
<i>Cayratia clematidea</i>	OK, M	OK, D	Y	<i>Homoranthus virgatus</i>	OK	OK	Y
<i>Chelilanthus siberi</i>	OK	OK	Y	<i>Hydrocotyle bonariensis*</i>	OK, M	OK, M, SD	N
<i>Cissus antarctica</i>	OK	OK	N	<i>Imperata cylindrica</i>	M	M	Y
<i>Clematis aristata</i>	OK	OK	Y	<i>Pitopsis revolutum</i>	OK	OK	Y
<i>Imperata cylindrica</i> var. <i>major</i>	OK, SL	OK, SL	N	<i>Pitopsis undulatum</i>	OK, SL	OK	Y
<i>Indigofera australis</i>	OK	OK	Y	<i>Planchonella australis</i>	OK	OK	Y
<i>Ipomoea brasiliensis</i>	OK	OK	Y	<i>Platysace lanceolata</i>	OK, SL	OK	Y
<i>Ipomoea cairica*</i>	OK	OK	Y	<i>Polygalifolium</i>	OK	OK	Y
<i>Ipomoea indica*</i>	OK	OK	Y	<i>Polyscias sambucifolius</i>	OK, SL	OK	Y
<i>Isolepis nodosa</i>	OK, SL, M	OK	Y	<i>Pomaderris discolor</i>	OK	OK	Y
<i>Jacksonia scoparia</i>	OK	OK	Y	<i>Protasparagus densiflorus*</i>	OK	OK	Y
<i>Kennedia rubicunda</i>	OK, M, SL	OK, SD	N – susceptible if fully exposed	<i>Pteridium esculentum</i>	OK, SL	OK, SL	N
<i>Lantana camara*</i>	SL, M	OK	Y	<i>Pultenaea retusa</i>	OK	OK	Y
<i>Leptomeria acida</i>	OK	OK	Y	<i>Pultenaea villosa</i>	OK	OK	Y
<i>Leptospermum juniperinum</i>	OK	OK	N	<i>Rapanea variabilis</i>	OK, M, SD	OK, M	Y
<i>Leptospermum laevigatum</i>	OK	OK	Y	<i>Rhagodia candolleana</i>	OK, SL, M	OK	Y
<i>Leptospermum liversedgei</i>	OK	OK	Y	<i>Rhodomythus psidioides</i>	SL	OK	Y
<i>Leptospermum polygalifolium</i>	OK	OK	Y	<i>Ricinocarpos pinifolius</i>	OK	OK	Y
<i>Leucopogon ericoides</i>	OK	OK	N	<i>Ricinus communis</i>	OK	OK	Y
<i>Leucopogon parviflorus</i>	OK	OK	Y	<i>Rubus sp.*</i>	OK, M	OK	Y
<i>Leucopogon sp.</i> (unnamed)	OK	OK	Y	<i>Scaevola calendulaceae</i>	OK, SL, M, SD	OK, SD	N
<i>Leucopogon virgatus</i>	OK, M	OK	N	<i>Scaevola ramosissima</i>	OK	OK	Y
<i>Lomandra longifolia</i>	OK	OK	Y	<i>Schoenus ericetorum</i>	OK, SL	OK, SL	Y
<i>Lomandra multiflora</i>	OK	OK	Y	<i>Scolopia braunii</i>	OK	OK	Y
<i>Lupinus cosentinii*</i>	OK	OK	Y	<i>Senna pendula</i> var. <i>glabrata*</i>	OK	OK	Y
<i>Macaranga tanarius</i>	OK	OK	Y	<i>Senecio linearifolius</i>	SL	OK	Y
<i>Maclura cochinchinensis</i>	OK	OK	Y	<i>Senecio autus</i> subsp. <i>maritima</i>	OK	OK	Y
<i>Macrozamia sp.</i>	OK	OK	Y	<i>Sesuvium portulacastrum</i>	OK, SL	OK	Y
<i>Marsdenia rostrata</i>	OK	OK	Y	<i>Smilax australis</i>	OK, SL	OK, M	Y
<i>Melaleuca armillaris</i>	OK	OK	Y	<i>Smilax glycyphylla</i>	OK	OK	Y
<i>Melaleuca ericifolia</i>	OK	OK	Y	<i>Solanum nigrum</i>	OK	OK	Y
<i>Melaleuca nodosa</i>	OK	OK	Y	<i>Solanum vescum</i>	SL	OK	Y
<i>Melastoma affine</i>	OK	OK	Y	<i>Sonchus oleraceus</i>	OK	OK	Y
<i>Monotoca elliptica</i>	OK	OK	N	<i>Spinifex hirsutus</i>	OK	OK	Y
<i>Monotoca scoparia</i>	OK	OK	Y	<i>Spinifex sericeus</i>	OK	OK	Y
<i>Muchenbeckia gracillima</i>	SL	OK	Y	<i>Sprengelia incarnata</i>	M	M	Y
<i>Myoporum boninense</i>	OK, SD	OK, MD	Y	<i>Stackhousia spathulata</i>	OK, M	OK, M	Y
<i>Myoporum insulare</i>	OK	OK	Y	<i>Stephania japonica</i>	OK, M, SL	OK, D	Y
<i>Myoporum lucidum</i>	OK	OK	Y	<i>Stylidium graminifolium</i>	OK	OK	Y
<i>Nephrolepis cordifolia*</i>	OK	OK	Y	<i>Stryphelia viridis</i> subsp. <i>breviflora</i>	M	OK	Y
<i>Notelaea longifolia</i>	OK, M, SL	OK	Y	<i>Stryphelia viridis</i> subsp. <i>viridis</i>	OK	OK	Y
<i>Opuntia sp.</i>	OK	OK	Y	<i>Syzygium australe</i>	OK	OK	Y
<i>Pandorea pandorana</i>	OK, M	OK, D	Y	<i>Syzygium oleosum</i>	OK, SL	OK, OK, M	Y
<i>Parsonsia straminea</i>	OK	OK	Y	<i>Tetragonia tetragonoides</i>	OK, M, SL	OK	Y
<i>Pelargonium australe</i>	OK, SD	OK, SD	Y	<i>Themeda triandra</i>	OK, M, SD	OK, M, SD	Y
<i>Pennisetum clandestinum</i>	OK	OK	Y	<i>Trachymene anisocarpa</i>	OK	OK	Y
<i>Persoonia lanceolata</i>	OK	OK	N	<i>Tylophora benthamii</i>	OK	OK	Y
<i>Persoonia linearis</i>	OK	OK	Y	<i>Viminaria juncea</i>	SL	SL	Y
<i>Persoonia stradbocensis</i>	SL, M	OK, M, SD	Y	<i>Viola hederacea</i>	OK	OK	Y
<i>Persoonia tenuifolia</i>	M	M	Y	<i>Westringia fruticosa</i>	OK, M	OK, M	Y
<i>Phebalium squameum</i>	OK	OK	Y	<i>Wikstromia indica</i>	SL	M	Y
<i>Phragmites australis</i>	OK, MD	OK, SL	Y	<i>Zoysia macrantha</i>	OK	OK	Y
<i>Pimelea linifolia</i>	OK, M	OK, SD	Y				
<i>Pinus sp.*</i>	OK	OK	Y				

^a Results presented here are for Roundup[®] 360 only. These results should not be used to determine the impacts of other glyphosate based products (e.g. Biactive) or when additives have been used with Roundup[®] 360. Given the paucity of data, the collection of such information is critical to our understanding of herbicide impacts, and thus users are encouraged to collect and report this information to the plan coordinator.

^b A) Codes used to assess plant condition at i) 8 weeks and ii) 6 months after herbicide application. All observations are presented, being:

OK = no effect on foliage; SL = some foliage burn; M = 25% foliage burn; SD = some dead; MD = most dead

B) Data compiled between 1989–2004, from multiple observers. Where multiple plant conditions were observed, each is presented to illustrate the variability of results observed.

^c Comments made by observers on the need for additional observations, being:

Y = more observations required; N = no more observations required.

* Denotes that the species is introduced.

Table A10.4 Herbicide sensitivity to Brush-Off® (Metsulfuron methyl 600g a.i./kg) of native and some introduced plants – a compilation of results from 1992–2004 for the spraying of 30g of Brush-off® in 30 L water ha⁻¹ from a helicopter, during winter (1 June to 31 August) (John Toth unpublished data). **These results are for Brush-off® only**^a.

species name	plant condition ^b			species name	plant condition ^b		
	after 8 weeks	after 6 months	comments ^c		after 8 weeks	after 6 months	comments ^c
<i>Acacia melanoxylon</i>	OK	OK	Y	<i>Juncus kraussii</i>	OK	OK	Y
<i>Acacia sophorae</i>	OK	OK	Y	<i>Kennedia rubicunda</i>	OK	OK	Y
<i>Acacia suaveolens</i>	OK	OK	Y	<i>Leptospermum laevigatum</i>	OK	OK	Y
<i>Acacia ulicifolia</i>	OK	OK	Y	<i>Leptospermum liversedgei</i>	OK	OK	Y
<i>Acmena smithii</i>	OK	OK	Y	<i>Leucopogon ericoides</i>	OK	OK	Y
<i>Actinotus helianthi</i>	OK	OK	Y	<i>Leucopogon lanceolatus</i>	OK	OK	Y
<i>Allocasuarina littoralis</i>	OK	OK	Y	<i>Leucopogon parviflorus</i>	OK	OK	Y
<i>Andropogon virginicus</i> *	SL	OK	Y	<i>Leucopogon virgatus</i>	OK	OK	Y
<i>Aotus ericoides</i>	OK	OK	Y	<i>Lomandra longifolia</i>	OK	OK	Y
<i>Astroloma pinifolium</i>	OK	OK	Y	<i>Maclura cochinchinensis</i>	M	OK	Y
<i>Banksia integrifolia</i>	OK	OK	Y	<i>Melaleuca quinquenervia</i>	OK	OK	Y
<i>Banksia serrata</i>	OK	OK	Y	<i>Monotoca elliptica</i>	OK	OK	Y
<i>Billardiera scandens</i>	OK	OK	Y	<i>Monotoca scoparia</i>	OK	OK	Y
<i>Bossiaea ensata</i>	OK	OK	Y	<i>Muehlenbeckia gracillima</i>	SL	OK	Y
<i>Bossiaea heterophylla</i>	OK	OK	Y	<i>Myoporum boninense</i>	OK	OK	Y
<i>Breymia oblongifolia</i>	OK	OK	Y	<i>Pandorea pandorana</i>	OK	OK	Y
<i>Cakile maritima</i> subsp. <i>maritima</i> *	OK	OK	Y	<i>Persoonia lanceolata</i>	OK	OK	Y
<i>Callistemon citrinus</i>	OK	OK	Y	<i>Persoonia stradbrogensis</i>	SL	SL	Y
<i>Canavalia rosea</i>	SL	OK	Y	<i>Phebalium squameum</i>	OK	OK	Y
<i>Carpobrotus glaucescens</i>	M	OK	Y	<i>Pittosporum undulatum</i>	OK	OK	Y
<i>Cassytia pubescens</i>	OK	OK	Y	<i>Platynerium bifurcatum</i>	OK	OK	Y
<i>Casuarina glauca</i>	OK	OK	Y	<i>Platysace lanceolata</i>	OK	OK	Y
<i>Cayratia clematidea</i>	OK	OK	Y	<i>Polyscias sambucifolius</i>	SL	SL	Y
<i>Conospermum taxifolium</i>	OK	OK	Y	<i>Preridium esculentum</i>	OK	OK	Y
<i>Correa alba</i>	OK	OK	Y	<i>Pyrrhosia rupestris</i>	OK	OK	Y
<i>Crinum pedunculatum</i>	OK	OK	Y	<i>Rhodomyrtus psidioides</i>	SL	OK	Y
<i>Cupaniopsis anarcardioides</i>	OK	OK	Y	<i>Ricinocarpus pinifolius</i>	OK	OK	Y
<i>Cyperus enervis</i>	OK	OK	Y	<i>Rubus parvifolius</i> *	OK	OK	Y
<i>Dianella caerulea</i>	SL	OK	Y	<i>Scaevola calendulaceae</i>	OK	OK	Y
<i>Dilwynia glaberrima</i>	OK	OK	Y	<i>Schoenus ericetorum</i>	OK	OK	Y
<i>Eucalyptus ptilularis</i>	OK	OK	Y	<i>Senecio lautus</i> subsp. <i>maritime</i>	OK	OK	Y
<i>Eucalyptus signata</i>	OK	OK	Y	<i>Sesuvium portulacastrum</i>	M	OK	Y
<i>Ficus Fraseri</i>	M	M	Y	<i>Smilax australis</i>	SL	OK	Y
<i>Gonocarpus teucrioides</i>	SD	OK	Y	<i>Spinifex hirsutus</i>	OK	OK	Y
<i>Hardenbergia violacea</i>	OK	OK	Y	<i>Spinifex sericeus</i>	OK	OK	Y
<i>Hibbertia fasciculata</i>	OK	OK	Y	<i>Stackhousia spathulata</i>	OK	OK	Y
<i>Hibbertia linearis</i>	OK	OK	Y	<i>Stephania japonica</i>	OK	OK	Y
<i>Hibbertia obtusifolia</i>	OK	OK	Y	<i>Styphelia viridis</i> subsp. <i>viridis</i>	OK	OK	Y
<i>Hibbertia scandens</i>	OK	OK	Y	<i>Syzygium australe</i>	OK	OK	Y
<i>Imperata cylindrica</i>	OK	OK	Y	<i>Tylophora benthamii</i>	OK	OK	Y
<i>Ipomoea brasiliensis</i>	OK	OK	Y	<i>Zoysia macrantha</i>	OK	OK	Y
<i>Isolepis nodosa</i>	OK	OK	Y				

^a Results presented here are for Brush-off® only. These results should not be used to determine the impacts when additives have been used with Brush-off®. Given the paucity of data, the collection of such information is critical to our understanding of herbicide impacts, and thus users are encouraged to collect and report this information to the plan coordinator.

^b A) Codes used to assess plant condition at i) 8 weeks and ii) 6 months after herbicide application. All observations are presented, being: **OK** = no effect on foliage; **SL** = some foliage burn; **M** = 25% foliage burn; **SD** = some dead; **MD** = most dead
B) Data compiled between 1989–2004, from multiple observers. Where multiple plant conditions were observed, each is presented to illustrate the variability of results observed.

^c Comments made by observers on the need for additional observations, being:
Y = more observations required; **N** = no more observations required.

* Denotes that the species is introduced.

Appendix 11

Map of bitou bush density in NSW

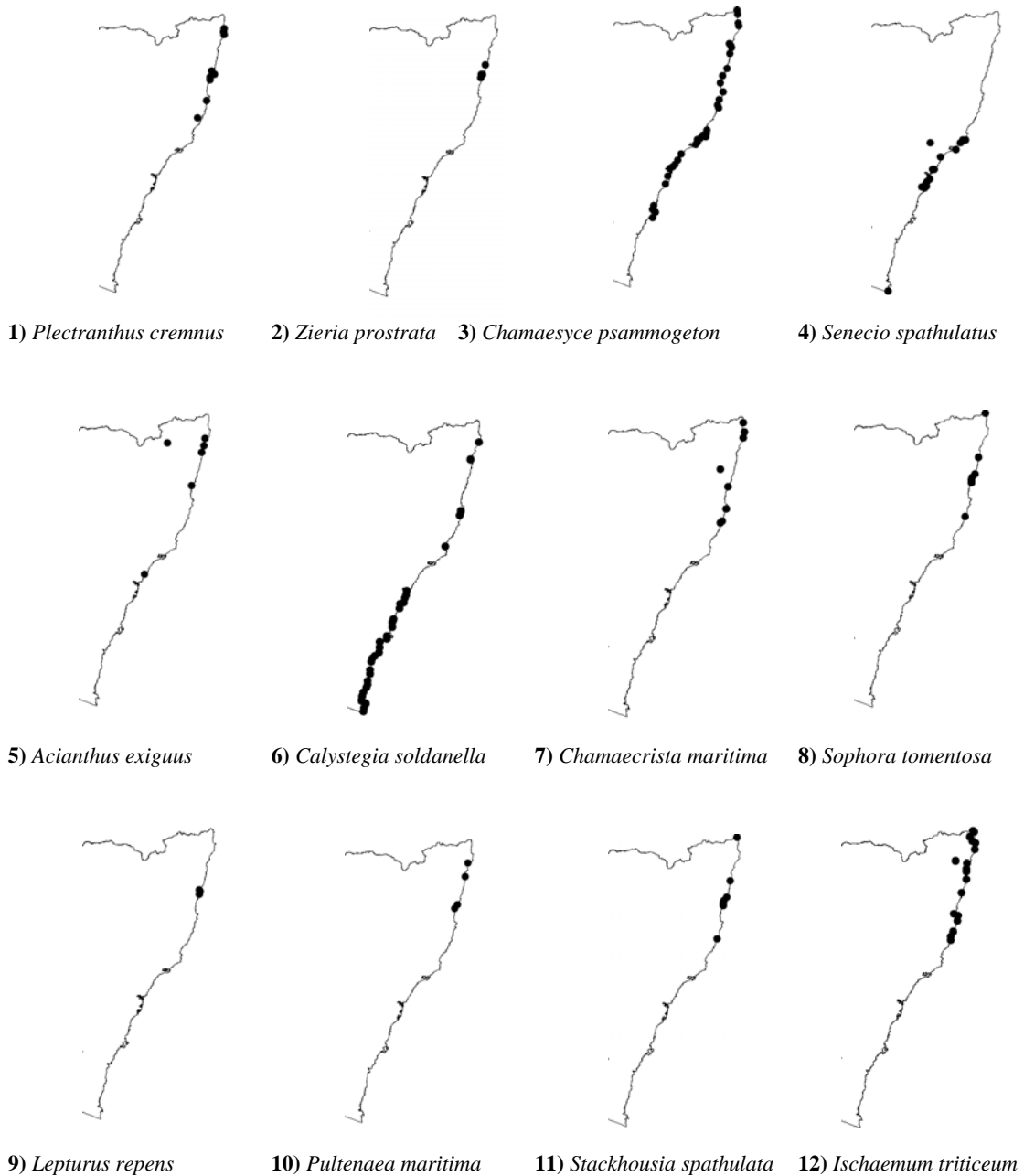


The density of bitou bush in New South Wales, at three scales: high, medium and low (after Thomas 2002). Note: more than one density of bitou bush may be present at any one location.

Appendix 12 Distribution maps of high priority species and ecological communities in NSW

Distribution maps of the 19 highest priority species within New South Wales were created using data derived from DEC Wildlife Atlas (DEC 2006b) and the Australian Virtual Herbarium (AVH 2006). Distribution maps were only created for those ecological communities for which information was available.

A) Distribution maps for the 19 high priority species within New South Wales (by priority rank).



A) Distribution maps for the 19 high priority species within New South Wales (by priority rank), continued.



13) *Vigna marina*

14) *Gleichenia mendellii*

15) *Actites megalocarpa*

16) *Poa poiformis*



17) *Fontainea oraria*

18) *Diuris praecox*

19) *Westringia fruticosa*

B) Distribution maps for the high priority ecological communities within New South Wales, for which spatial data was available (by priority rank). Distributions of the other high priority ecological communities were unavailable at the time of writing.



1) *Littoral Rainforest*

2) *Eastern Suburbs Banksia Scrub*