

TM Greening Western Australia: Urban Bush Management

WEEDS AND THEIR CONTROL DIXON I.R.¹, KEIGHERY G.J.²

1. Kings Park and Botanic Garden, West Perth W.A. 6005

2. CALM Woodvale Research Centre, Ocean Reef Road, Woodvale W.A. 6026

(1995)

INTRODUCTION

A weed is described as a plant growing where it is not wanted, either in a garden, a lawn, a crop or in bushland. After 162 years of European settlement in Western Australia, nearly 900 species of weeds have become naturalized in this state, and of these 458 have been recorded from conservation lands (Keighery, ref. 11). Such weeds are **environmental** weeds; plants which affect the conservation values of land set aside for our **native** flora and fauna.

The Swan Coastal Plain, and adjacent uplands, have a long history of converting bushland into farmland then urban areas. This region contains 2,057 species of flowering plants, of which 547 are naturalized aliens (i.e. not native to the Perth region, even though the species may occur naturally elsewhere in the State.) Of these we have recorded 270 species as growing unaided in conservation areas or remnant bushland sites within the Perth Urban region (Table 1.)

ORIGIN/LIFE FORM

Of these 270 species, 10 are from other parts of Australia, 68 from Southern Africa, 23 from America, 163 from Europe and Western Asia and 6 from Asia.

The commonest life forms are annuals (125), followed by perennial herbs (101 species, including 39 which are bulbous), then shrubs (24), trees (12) and aquatics (8).

Most of these species were originally introduced deliberately into the state, for example, as ornamental plants and pasture crops, but they have escaped from cultivation and become weeds.

SPREAD

Within the Urban Region most weeds spread into bushland as a result of human interference, although a few invade by themselves.

The majority of weeds get into bushland areas by the direct actions of people such as by the dumping of garden refuse in the bush, which is the

640000

most damaging activity that can happen to a reserve. Other weeds enter from man-made disturbance (along tracks, picnic areas, drains, lawns etc.) via machinery (lawn mowers, trucks, graders, car tyres) or on people themselves (socks, shoes, blankets).

Self spreading weeds are usually wind dispersed with very small or light seeds. These include *Ursinia anthemoides* and the Wild Gladiolus (*Gladiolus caryophyllaceus*). However, even these weeds usually require a major disturbance to establish in bushland; either a fire, tracks or wood gathering which are normally caused by people.

The best method to keep weeds out of urban bushland is to stop introducing them to it in the first place. Don't dump garden refuse in bushland, don't develop irrigated lawns in bushland and keep disturbance to a minimum by forming fewer tracks, fire-breaks and roads.

SUGGESTIONS FOR WEED CONTROL

First of all positively identify your weeds, to make sure that you have a weed problem rather than a large population of a desirable native (eg: a native grass). Some weeds are similar to native species.

With small infestations, it is often best to remove the weeds by hand e.g. pulling or digging. However, soil disturbance should be kept to an absolute minimum as this encourages further germination of weed seeds stored in the soil and may also damage the root systems of native plants (Buchanan, ref 7).

Always check to see if there is a biological control available and how effective it is. Can this be a control method, with minor herbicidal use 2 or 3 years later to eliminate remaining plants. Biological control is already being used on the following plants Paterson's Curse, Blackberry, Heliotrope. However, in small areas it will never be a principal control method!

When using herbicides, always try to use the most environmentally friendly, that is those which are not persistent in the soil or are easily leached from the soil into adjacent areas, streams etc. and those which are least toxic to humans, fauna and micro organisms. It is often difficult to obtain such information, but it is available if you enquire to your local Agriculture Protection Board Office or the Public Health Department. These agencies will advise you of the correct and safe usage of these chemicals.

The authors regard the use of herbicides as a necessary measure, since in many cases, it is not possible to control the weeds economically or quickly without them. Most of the recommended herbicides are not specifically registered for use in remnant bushland, however, many are widely used in

agricultural situations e.g. over food crops, before sowing, in pasture or forestry operations, in commercial horticulture parks or home gardens. They are, therefore environmentally friendly if used correctly.

Always read and follow the manufacturers instructions and, wear the recommended protective clothing.

Aim to treat weeds when they are actively growing and not, under stress, such as during drought or in their natural dormancy period. Most weeds are easier to control when they are small and not in flower. However, there are some exceptions (see recommendations in table), particularly with bulbous weeds, which are most vulnerable to herbicides at flowering time because their food reserves are at their lowest levels.

Controlling weeds fairly late in the season, a management decision, may be more economical, in labour, you avoid having to treat later germinants, however, take into account the competition with germinating native species and small herbs etc.

Weed control may have to be supplemented with direct seed sowing or planting of small seedlings, otherwise, broad leaf weeds or resistant grasses colonise the bare areas from which weeds have been removed. This is especially important when using highly selective herbicides such as Fusilade, or when treating large dense patches of weeds.

Be vigilant watch out for 'new weeds' in your bushland and eradicate them before they get out of control. Any new records of weeds not listed here would be gratefully received by the authors (as would successful control methods or case histories of control actions).

WEED SPECIES IN URBAN BUSHLAND

In the following table we have listed all known weeds from the Metropolitan Region, with methods of control. The herbicides listed are best used for severe infestations, as they all cost money to obtain and use correctly.

The weeds are listed as:

Priority 1 MAJOR WEEDS

These are the most serious weeds within the Perth Region often affecting many reserves or vegetation categories in ways likely to permanently degrade them!

Priority 2 NUISANCE WEEDS

Serious weeds that are generally only found in a few locations or vegetation categories, usually in highly disturbed areas.

Priority 3 **MINOR WEEDS**

These are weeds with little known effect, and that are not yet as serious, abundant or competitive as those in priority 2.

The authors caution that in **your** area the categories may be completely different. What we list as a nuisance weed for all of Perth (e.g. Bamboo Grass *Arundo donax* which is a major pest in estuarine reserves) could be a major pest for your area. Similarly minor weeds (e.g. Taro, *Colocasia esculenta*, at Maylands) can be major weeds in local areas. These categories can change with time, as weeds become more established/widespread and adapt to different growing conditions. In using the tables please check each separate category if you do not find your target species in the first checked. The species are arranged alphabetically under scientific name. In the next column common names (if one is available) are given. The next column lists localities where these weeds may be readily found, or which are most affected by the weeds.

The next seven columns, numbered 1-7 indicate those vegetation complexes or areas where the weeds are usually found.

HABITATS/VEGETATION: Where the Weeds are usually found.

* = usually found in this vegetation, however some weeds can be found in other vegetation and may be indicated as such +.

We have included notes on use of herbicides in several of these areas here, as well as, notes on lessening disturbance when weed control is considered.

Column 1. Aquatic Weeds

Seek special advice for control, since herbicides used incorrectly can cause major problems, such as killing non-target species and/or aquatic life. [Note: many of these herbicides spread rapidly in running water, and could enter stream and river systems]. Several aquatic weeds are 'Declared Plants', and should be brought to the attention of the Agriculture Protection Board.

Column 2. Swamps - Lakes - Riverine Edges - Damplands

Take special care in these fragile situations. Avoid herbicide drift and do not use chemicals which might move in the soil and then leach into waterways.

Column 3. Beach

Prone to wind erosion (blowout), so avoid soil disturbance. It may not be possible to control weeds in some areas unless brushing/windbreaks are in place - seek specialist advice.

Column 4. **Islands**

Some areas are prone to erosion/wind damage. Also seek advice regarding nesting birds etc.

Column 5. **Heath (limestone, coastal dunes)**

Some areas are prone to erosion/wind damage.

Column 6. **Roadsides - Firebreaks - Edges**

These highly disturbed areas are often where weeds first take a foot hold because of the lack of competition, extra water (run off, infiltration into bare soil) and higher levels of nutrients.

Column 7. **Woodlands**

Apart from the dumping of garden refuse, regular bushfires are probably the major reason for the large scale spread of weeds in these areas.

The next column are notes on the occurrence and/or effects of these weeds.

Additions to this information would be very welcome.

COLUMNS A-D: CONTROL

- A. Pull, dig or grub out small infestations, keep soil disturbance to the absolute minimum.
- B. Wiping - using a hand sprayer with a plastic sponge over the nozzle, waterproof glove with plastic sponge attached to the palm area replenish by dipping into ready made mixture or weeding wand/wick applicator (rope).

Stem injection - use a small axe to make 4-5cm horizontal cuts at 45° angle, at 8cm intervals to penetrate the sapwood beneath the bark, treat all stems if multi stemmed at breast height for ease of application. Use a special injector calibrated to deliver correct amount or use a syringe.

Cut stump method - cut the stump almost to ground level, when the plant is actively growing, apply the herbicide straight away, using a paint brush.

- C. Spot Spraying - avoid spraying non-target species especially when using a non-selective herbicide like Roundup/Glyphosphate. Special shields can be purchased or made if necessary, for spraying close to non-target species, when applicable.
- D. Blanket Spraying, this usually refers to using - Fusilade at 2 to 4Lt ha. in 300-400Lt water, plus wetter e.g. Agral 60 1 in 1000. Spray when actively growing e.g. early June to no later than mid-August. (or when specified in table). Some other selective herbicides e.g. Assure, Sertin, and Verdict may also be suitable.

HERBICIDES SUGGESTED

1. Roundup/Glyphosate (also sold under other brand names such as Zero) Recommendations are for 360g/L active ingredient (glyphosate). This is a non-selective herbicide (total weedkiller), therefore, care should be taken when applying it. However, it is quickly inactivated in the soil allowing replanting in 1 to 10 days, depending on weeds present (time taken for weeds to be controlled). Roundup/Glyphosate 360 already contain a wetting agent (sticker or spreader), however for hard to kill weeds e.g. with waxy leaves, woody weeds, the addition of Pulse a special wetting agent which enhances uptake and penetration may be recommended. Table abbreviations Rndup= Roundup, Glyph= Glyphosate.

Perennial - life span over more than 2 years (growing seasons), indicated as *.

NOTE: Some species can be classified (see comments and columns) as Annual or Biennial, Biennial or Perennial. When plants are growing away from their natural habitats their life span can change e.g. some annuals in cooler climates can in W.A. become, biennial or short lived perennials. This is why there is often confusion when referring to publications from other countries or when these sources are quoted.

2. Sprayseed 200^R, Tryquat^R, in general terms are non-selective contact herbicides (dessicant) only translocated through the leaf surface and very useful on annual weeds. They are quickly inactivated (bound up), in the soil allowing replanting the following day. Sprayseed 200 contains different concentrations of active ingredients when compared to Tryquat and similar herbicides, therefore adjust the final concentration when mixing as the rates recommended are for Sprayseed 200. Warning sprayseed is **highly toxic** to humans, and is normally available only to farmers/horticulturalists and cannot be recommended for general use. If you need to use this herbicide contact the Health Dept. or the Agriculture Protection Board regarding its safe use. Therefore special precautions should be taken especially when handling the concentrate and keep under lock and key, away from children. Table abbreviations Sprysd= Sprayseed, Try= Tryquat.
3. Ally^R/Brushoff^R, Glean^R, Frenock^R, Garlon^R 480, Velpar^R, Grazon^R. Should only be used in areas with non-target species (with the exception of stem injection and cut stump method) as they can remain viable in the soil for some time, therefore, replanting may not be possible for several weeks or up to 1 year. In certain sites some of these herbicides may move in the soil, also roots from distant plants may take up these herbicides. Table abbreviations Brsh= Brushoff.
4. MCPA, MCPB, 2,-4D and similar hormone like sprays are only recommended for use on a few species and should only be used when absolutely necessary. Their use is also restricted in certain areas, check with Dept. of Agriculture.

The next column gives references to controlling these weeds.

LIFE FORMS

The last three columns detail the life form of these weeds:

Bulbous - plants with bulbs, corms or similar structures, this excludes the rhizomatous, stoloniferous and similar structured plants which are included as perennials.

Annual - completes its life cycle, then dies, in less than one year, i.e. seed germinates and produces seed within 1 year.

Biennial - completes its life cycle in more than 1 year but not more than 2 years, indicated as + in the perennial column.

RECOMMENDED READING
WEED IDENTIFICATION

1. CROP WEEDS by J.L. Wilding, A.G. Barnett and R.L. Amor (1986). Inkata Press, Melbourne. \$45.00.
2. FIELD GUIDE TO WEEDS IN AUSTRALIA by C. Lamp and F. Collett (1989). Inkata Press, Melbourne. \$45.00.
3. FLORA OF THE PERTH REGION, PARTS 1 & 2 by N.G. Marchant and others (1987). W.A. Dept. of Agriculture. \$45.00 per set.
4. GARDEN WEEDS - IDENTIFICATION AND CONTROL by D.J.E. Whibley and T.J. Christensen (1982). Adelaide Botanic Gardens, Handbook No. 3. \$8.95.
5. GRASSES IN SOUTH WESTERN AUSTRALIA by J.G. Paterson (1977). W.A. Dept. of Agriculture, Bulletin No. 4007. \$2.50.
6. IDENTIFICATION OF WEEDS IN CEREAL AND LEGUME CROPS by D.J. Gilbey (1986). W.A. Dept. of Agriculture, Bulletin No. 4107.
7. NOXIOUS WEEDS OF VICTORIA by W.T. Parsons (1973). Inkata Press, Melbourne. \$45.00.
8. PLANTS OF WESTERN NEW SOUTH WALES by G. Cunningham, W. Mulham, P. Milthorpe and J. Leigh (1981). Soil Conservation Service of N.S.W. \$69.95.
9. TASMANIAN WEED HANDBOOK by B.H. Hyde-Wyatt and D.I. Morris (1975). Tasmanian Dept. of Agriculture. \$2.50.
10. THE BUSHLAND PLANTS OF KINGS PARK, WESTERN AUSTRALIA by Eleanor Bennett and Patricia J. Dundas (1988). Pub. Kings Park Board West Perth \$29.95.
11. WEEDS - AN ILLUSTRATED BOTANICAL GUIDE TO THE WEEDS OF AUSTRALIA by B.A. Auld and R.W. Medd (1987). Inkata Press, Melbourne. \$69.95.

APPLICATION, MIXING, CALIBRATION TOXICITY ETC

Pesticides Registered in Western Australia at June 30, 1988. Bull. 4142 West. Aust. Dept. Agriculture/Health Dept. of West. Aust. New edition in press \$8.00.

Recommendations for the control of Declared Plants of Western Australia 3rd Ed. 1989 by R.W. Madin, T.F. Smith. Pub. Agricultural Protection Board W.A.

The Department of Agriculture, Agricultural Protection Board, Health Department, most manufacturers of pesticides and spraying equipment produce basic, sometimes comprehensive, pamphlets on some if not all of these subjects.

PERSONNEL COMMUNICATIONS

The authors wish to thank the following Government Departments manufacturers, suppliers for their advice - Du Pont, Monsanto, I.C.I., Robert Linton Pty. Ltd., Dept. Agriculture: Weed Sciences, Agricultural Protection Board, CALM Bussleton, Metro Region and Roadside Vegetation Committee, Main Roads Dept.

CONTACTS

Agricultural Protection Board, Declared Plants, Local District Officer.
CALM (Typha) Metro. Area, Reserves Officer.
Kings Park and Botanic Garden, Bob Dixon Horticultural Advisory Officer
Ph: 321 5065.
Health Dept. of Western Australia

REFERENCES

1. Control of African Lovegrass A.P.B. Infonote 4/90 Agdex 640.
2. African Lovegrass: an aggressive invader of pasture and bushland.
Dept. of Conservation Forests and Lands, Bairnsdale VIC 3875.
3. Peirce, J. Recommendations for the control of nuisance weeds. A.P.B.
Infonote 27/90 Agdex 640.
4. Dixon, I.R., Dixon K.W., Bennett E.M. (1988) Veldgrass Control in Kings
Park Bushland. Annual Revegetation Newsletter Vol. 1 p. 31-32.
5. Control of Blackberry Infestations. A.P.B. Infonote 22/86 Agdex647.
6. Madin, R.W. Smith, T.F. 1989 Recommendations for the control of
Declared Plants in Western Australia (Third Ed.) A.P.B.
7. Buchanan, Robin A. (1989) Bush Regeneration: Recovering Australian
Landscapes Pub. TAFE Student Learning Publications N.S.W.
8. Cooke, D.A. Robertson, M. (1990) Bridal Creeper, *Myrsiphyllum*
asparagoides, in South Australia. Proceedings of the 9th Australian
Weeds Conference Adelaide, South Australia. Aug 6-10 1990. p. 113-115.
9. Control of Grass Weeds among Native Plants in Bushland or Roadsides
by the use of Selective Herbicides: Suggestions for Local Government
Authorities (in press) Roadside Conservation Committee, Como W.A.
10. Fremlin, R.R.A. Jones, S.M. (1984) Evaluation of Glyphosate to control
regrowth of *Eucalyptus* spp. in Pine Plantations in Western Australia.
Proceedings of the 7th Aust. Weeds Conf. 1984, Vol. 1, p. 239-247.
11. Keighery, G.J. (1992) Environmental Weeds of Western Australia.
Proceedings of the C.O.N.C.O.M. Workshop, 9th Aust. Weeds. Conf. (in
press).

PRIORITY 1

MAJOR WEEDS

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Asphodelus fistulosus	Wild Onion	Rottnest Is.			*	+				Unpalatable, replaces heath. Usually in highly disturbed areas.	*	*	*		Glyphosate 1% plus 0.2% Pulse, spray at flowering time			*	*
Avena barbata	Bearded Oat	Widespread					* +			Mainly in highly disturbed areas.	*	*	*	*	Use 2Lt Fus. ha for blanket spot spraying. Easy to control			*	
Avena fatua	Wild Oat	Widespread					*	+		As above. Competes with natives. Fire hazard.			*	*	As Above			*	
Babiana disticha	Baboon Flower	Marr Woodland Alluvium Soils	*					+		Smother's small herbs. Competes with native bulbous herbs.	*	*	*		No specific information. Suggest Roundup/ Glyphosate or Ally/ Brushoff, Glean at flowering time.		*		
Chenopodium macro- spertum		Perry Lakes Lake Joondalup	*							Occurs around the edges and lake beds as they dry up in summer. Replaces native species.	*	*	*		Glyphosphate 0.5% spot, spraying at flowering time.			*	
Cortaderia seloana	Pampas Grass	Swan River Estuary, Road verges Thompson's Lake.	*					+		Produces large numbers of seed up to 100,000 seed per plume. therefore cut off flowers. Educate local home owners, advise removal of cultivated plants to reduce risk of reinfection. Replaces native species, now found in much drier areas eg Kings Park.	*	*	*		Burn or remove top, treat new growth with Glyph. 360 wick applic. rate 1Lt in 2Lt water; wipe both sides of leaf. Knapsack 200ml in 10Lt water + Pulse. Thoroughly wet foliage, 2 or more applic. may be necessary on large plants. Treat in late spring-summer Dug out plants left on the ground can re root so remove.	3		*	
																7			

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial	
Cynodon dactylon	Couch	Winter wet flats creek-lines, woodland.	*				*	*	*	Competes with native species. Mainly in highly disturbed areas.			*	*	Fus. 4Lt ha when actively growing late spring or autumn. Best after fire spraying young growth otherwise several applic. may be necessary. Glyph. can be used if you can avoid non target species.				*	
Ehrharta calycina	Veld Grass	Widespread					*	*	*	Smothers small plants and competes with other natives. A serious fire hazard.			*	*	Easy to control Fus. 4Lt ha. Spot spray at 2Lt to run off. Heavy infestations may require mop up spray the following year.				*	
Eragrostis curvula	Weeping Love Grass	Widespread especially on rail/road verges.					*	+		As above. Very difficult to control.	*	*	*	*	Best to spray after fire onto fresh young growth in summer months before seed set. Roundup or Glyphosate 360, 1Lt in 100 Lt water & wetter eg Agral 60, X77. Thorough coverage of foliage essential. In areas clear of non target species use mixtures of Roundup/Oust or Frenock. May require mop up spray next year. For Eragrostis curvula burn off tussocks in January Roundup new growth in				1	*
Euphorbia terracina	Geraldton Carnation Weed	Common. Tuart woodland. Coastal. Limestone.				*				Mainly in highly disturbed areas. Usually a short lived perennial.	*	*	*	*	Spray seed 200, 10-15ml in 10Lt water + 0.25% wetter, in early winter.			3	*	*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Ficus carica</i>	Fig	Canning, Stlm River Gin Gin Brook	*							As above. Replaces native <i>Melaleuca</i> species.	*				No specific information. Suggest cut stump method using Roundup or Garlon, Velpar, Brushoff.				*
<i>Freesia aff. leichlinii</i>	Freesia	Common						*		Competes, smothers, small native plants and bulbous herbs. Prolific seeder.	*	*	*	*	Very difficult to control in natural bushland. They spread quickly forming large colonies. No specific info. suggest Roundup/Glyph. or Ally/Brushoff Glean at flowering time.				
<i>Gladiolus caryophyllaceus</i>	Wild Gladiolus	Widespread						*		Spreads quickly by the large number of seed produced.	*	*			No specific info. Suggest Roundup/Glyph. or Ally/ Brushoff. Clean at flowering time. Remove old flower heads to prevent seeding.			*	
<i>Hesperantha falcata</i>		Widespread in winter wet flats.	*					*		Highly invasive competes with native bulbous species.	*	*		*	No specific info. Suggest Roundup/Glyph. or Ally/ Brushoff. Glean at flowering time.			*	
<i>Homeria flaccida</i>	One Leaf Cape Tulip	Widespread						*		Highly invasive especially in disturbed areas. Toxic to stock. Declared plant in some areas contact APB. very difficult to control.	*	*	*	*	Difficult to control not all corns shoot every year, therefore need repeat treatments. If spot spraying use Glyph. high rate or ally. 5g/ ha. Weeding wand Glyph or Ally/ Brushoff. Glean 1g in 1Lt water.			6	*
<i>Hyperthemia hirta</i>	Tambooke Grass	Maldavale, Darlington, Armadae.						*		Highly invasive in disturbed areas. Competes with native plants. Fire hazard.	*	*	*	*	Seedlings 5 leaf stage use over 1Lt ha Fusilade, no info. on mature plants, suggest 8-12Lt ha. Falling				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Lavatera arborea	Tree Mallow	Shoalwater Bay, Green Island.				*				Replaces native Lavatera pleibela	*	*			No specific info. suggest cut stump method, Roundup Glyph. or Brushoff, Velpar Garlon, when actively growing.				*
Leptospermum laevigatum	Victorian Tea Tree	Safety Bay, Darling Scarp.		+		*				Replaces native species. Produces large amounts of seed. Killed by fire.					Paint cut stump when actively growing. Apply Roundup/Glyph. straight after cutting. Remove tops which may have seeds still attached. Check following years for new seedlings. Can with care, use Garlon, Grazon or Velpar.				*
Lupinus cosentinii	Sandplain Lupin	Widespread							*	Mainly in highly disturbed areas. Competes with native plants.					Pull out seedlings. In areas with no native plants spot spray large colonies with Glyph. 2% sol. to run off. Plant natives to quickly fill in these large bare areas.			*	
Myrsiphyllum asparagoides	Bridal Creeper	Kings Park Widespread in limestone heath and woodland.				*			+	Smotherers small plants by climbing or trailing over the ground, Seed spread by birds.	*	*	*		Roundup/Glyph. 360 at 1 in 100 water when actively growing July-Sept. Repeat applications are necessary. Ally/Brushoff can also be used with similar results. As plants are usually under trees shrubs they are difficult to dig out.		8	*	
Myrsiphyllum crispus		Kings Park on limestone				*			+	As Above.	*	*	*		Try the above treatment for wiping use a higher		*		

[illegible]

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
															control using more residual herbicides has been achieved eg Brushoff, Garton. Biological control. Rust disease is having an effect on some populations.	6			
<i>Sparaxis bulbifera</i>		Kings Park. Winter wet flats.	*					+		Mainly in highly disturbed areas.		*	*	*	No specific info. suggest Roundup/Glyph. or Ally/Brushoff, Glean, at flowering time.		*		
<i>Stenotaphrum secundatum</i>	Buffalo Grass	Widespread	*					+		In disturbed areas competes with native plants.	*	*	*	*	Spray when actively growing late spring to autumn at 4lt ha. A follow up application may be necessary.				*
<i>Typha orientalis</i>	Bulrush	Herdsmen Lake, Lake Claremont, Thomsons Lake.	*							Competes with native <i>Typha</i> , <i>T. domingensis</i> and other native plants. Fire hazard.	*	*	*	*	Cut stems below water level in summer, plants then rot. Hard to get at to wipe try a high rate Roundup e.g. 1 to 10 water. Difficult to dig out even small populations and reinfestation can be rapid. Remove flowers, seed source Glyph. 1 in 80 + wetter good coverage essential. When actively growing spring early summer. Better results when not stood in water, water, wait if possible for water level to recede. Also safer.				*
<i>Watsonia bulbiflora</i>	Bugle Lily	Widespread	*					+		Highly invasive especially in disturbed areas. Most <i>Watsonia</i>	*	*	*	*	Glyph. 360 or Roundup wick applicator at 1lt to	3	*		

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
										are spread by seed. However this species is spread by corms in the ground or cormlets formed in the leaf axils and site of the flowers. These cormlets remain dormant for a considerable time, therefore check each year for new germinants. Cut off stems (destroy) to reduce no. of cormlets.					2Lt water. Excellent results have been obtained by wiping one side of the leaf using a sprayer with foam attached at 1 part water to 10 parts Roundup applied in Oct., in some areas as late as Nov., when plants are in full flower. Spot spray Glyph.				
Watsonia leipoldtii	Watsonia	Widespread	*						*	Mainly in disturbed areas.	*	*	*	*	1 in 100.				
Watsonia marginata	Watsonia	Widespread	*						*	Mainly in disturbed areas.	*	*	*	*	Ally/Brushoff and Glean have also been used for successful control in July and Aug. Spot spray 5-10g ha. or use wick appl. 1g in 1Lt water.				
																3			
Watsonia meriana	Watsonia	Widespread							*	As Above.	*	*	*	*	As Above.				
Watsonia versfeldii	Watsonia	Widespread	*						*	As Above.	*	*	*	*	As Above.				
Zantedeschia aethiopica	Arum Lily	Cannington, Forrestfield, Widespread.	*							Replaces native species mainly in highly disturbed sites. Now being found in much drier areas. Note Declared Plants in some areas contact A.P.B.	*	*	*	*	Glyph. 1 in 100 June to Oct. Several applic. may be necessary. Can also use Glean Ally/Brushoff. Difficult to dig out in most sites.				
																6	*		

**PRIORITY TWO
NUISANCE WEEDS**

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Arundo donax	Giant Reed or Bamboo	Swan Estuary, Lake Coolongoolup edges, Darling Scarp creeks.		*						Mainly disturbed areas difficult to control. Serious weed.	*	*	*	*	Cut down or burn, spray regrowth when 0.5-1.0m high, thoroughly wetting foliage use Glyphosate 360, 100ml in 10L water + wetter (dilution 1 percent). Repeat application may be necessary.	3			*
Briza maxima	Blowfly Grass	Widespread					+	*		Easy to control.	*	*	*	*	Serlin or other similar herbicides at 2L/ha.			*	
Briza minor	Shivery Grass	Widespread						*		As Above.	*	*	*	*	As Above.			*	
Carpobrotus edulis	Hottentot Fig	Mainly Tuart Woodland						*		Usually in bare or disturbed areas. Competes with native plants. Very difficult to control with herbicides.	*	*	*	*	No specific information on control using herbicides. Pull up and destroy.				*
Chamaelucium uncinatum	Geraldton Wax	Wireless Hill, Kings Park.						*		Becoming a major problem in some areas where it forms large thickets. Avoid planting in bushland except where it occurs naturally.	*	*	*	*	No specific info. Suggest cut stump method using Glyph. straight after cutting 1 part Glyph/Rindup to 15 parts water.				*
Cyperus congestus	Dense Flat Sedge	Disturbed wetlands.		*				*		Difficult to control, often amongst native sedges, and rushes. Competes with native plants.	*	*	*	*	No specific information. However C. rotundus and other species are known to be controlled by Roundup. Suggest 150ml in 15L water + Pulse, spray to run off when actively growing in summer.				*
Cytisus proliferus	Tree Lucerne	Jarrah Forest					*	+		In disturbed areas. Can soon form large thickets.	*	*	*	*	No specific information. Suggest cut stump method, using Glyph. straight after cutting 1 part Glyph/Rindup to 15 parts water.			*	*
Ferraria crispa	Black Flag	Rottnest Is. Kings Park.				*		+		Becoming more common. Competes with natives. Usually in disturbed areas and heathland, toxic.	*	*	*	*	No specific information. Suggest Rindup/Glyph. or Ally/Brushoff, Glean at flowering time.		*		

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Foeniculum vulgare</i>	Fennel	Kings Park (scarp) Cannington.					*	+		Usually in highly disturbed areas. Also found in heavier soils e.g. Cannington.	*	*	*		No specific information. Suggest Glyph/Rindup at flowering time.				*
<i>Fumaria capreolata</i>	Whiteflower Fumitory	Widespread. Kings Park, Bold Park.				*		+		Large colonies suppress native flora. Mainly in highly disturbed areas.	*	*	*		Knapsack Glyph. 75-100ml in 15L water. Spray anytime when actively growing (winter).			*	
<i>Fumaria muralis</i>	Wall Fumitory	Widespread				*				As Above.	*	*	*		As Above.			*	
<i>Gladiolus angustatus</i>	Long Tubed Painted Lady	Kings Park						*		Now becoming more common and should be controlled. Competes with native plants.	*	*	*		No specific information. Suggest Rindup/Glyph. or Ally/Brachhoff, Glean at flowering time.		*		
<i>Gladiolus undulatus</i>		Cannington						*		Often seen in winter, wet areas, usually in disturbed sites. Appears to spread more rapidly than <i>G. angustatus</i> .	*	*	*		As Above.		*		
<i>Hydrocotyle rannunculoides</i>		Canning River	*							Forms large colonies edging river, floats on surface.	*				Unknown, avoid using herbicides.				*
<i>Isolepis proliera</i>	Budding Club Rush	Disturbed estuarine areas, creeklines.		*						Hybridises with native species. Difficult to control.	*	*	*		Difficult to dig out. No specific information. Suggest slashing spring and treat regrowth with Rindup/Glyph. 1 part to 2 parts water + Pulse in summer. Repeat treatment maybe necessary.				*
<i>Juncus acutus</i>		Lake Cooloongooolup		*						Competes with native plants. Difficult to control.	*	*	*		Difficult to dig out. Slash in winter treat regrowth in summer, using Rindup/Glyph. 1 part to 2 parts water. The addition of Pulse may give a better control. Two treatments may be necessary.				*
<i>Juncus microcephalus</i>		Creeklines		*						Competes with natives.	*	*	*		As Above.				*
<i>Lagrus ovatus</i>	Hares Tail Grass	Widespread						+	*	Competes with native plants.					Fusilade or similar herbicide at 2-4L/ha. Spray in winter.			*	
<i>Oxalis pes-caprae</i>	Sour sob	Widespread						+	*	Competes, smothers native plants forming large colonies. Toxic, found mainly in highly disturbed areas. Control plants in adjacent areas.	*	*	*		Rindup/Glyph. 360 knapsack 75ml in 10L water from late July to early Sept, before the plant starts yellowing		*		

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
										lawns, eg couch Kikuyu, use Ally/Brushoff.					(senescence). Use a stronger solution for wiping. Or Ally/Brush, Glean, do not replant until next season.				
Paspalum dilatatum	Paspalum	Widespread. Often seen on roadverges.	*					+		Competes with natives, mainly in highly disturbed areas. Also found in drier areas eg Kings Park (limestone scarp). Difficult to control in some situations. Control in adjoining lawns.	*	*	*	*	Use Fusilade or similar herbic. 4Lt has on young growth, 3-6 leaves. Two applications may be necessary on old plants. Also controlled by Rindup/Glyph. 360 150ml in 15Lt water applied to plants actively growing in the early head stage.				*
Paspalum distichum	Water Couch	Widespread. Edges creeks, Swamps.	*							A serious weed in moist areas forming large colonies smothering native plants. Often spread from near by lawned areas.	*	*	*	*	Easy to control, but may need 2 applications use 4Lt ha Fusilade or similar herbicide spray spring-autumn when actively growing. must not be under stress. Also controlled by Glyph. 360/Rindup spray Feb-March when actively growing knapsack 200ml-15Lt water.				*
Paspalum urvillei	Vassey Grass	Usually found in road verges.	*					+		Generally only found in disturbed summer moist areas. Competes with native species.	*	*	*	*	No specific information. Suggest Fusilade or similar herbicide at 4Lt ha when actively growing. Rindup/Glyph should also control it.				*
Solanum nigrum	Black Berry Nightshade	Widespread							*	Usually in highly disturbed areas. Toxic. Annual or short lived perennial. Often best to hand weed. Spread by birds.	*	*	*	*	Spray seed 200, 10-20ml in 10Lt water using knapsack. Apply to seedlings. Also try Glyph/Rindup, knapsack 300ml in 15Lt water.			*	*

**PRIORITY THREE
MINOR WEEDS**

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Acacia baileyana</i>	Cootlamundra Wattle	Widespread						*		Mainly in highly disturbed areas. Close to ornamental plantings. Check each year for new seedlings as seed remains in the soil for years.	*	*			Cut stump method. Suggest high rate of Gly/Rindup eg 1 part to 2 parts water, when actively growing. Velpar kills several <i>Acacia</i> species eg <i>A. harpophylla</i> , <i>A. dealbata</i> , <i>A. doratoxylon</i> when applied to the soil. Suggest cut stump method or stem injection using undiluted Velpar. Do not apply to the soil.				*
<i>Acacia dealbata</i>	Silver Wattle	Widespread						+	*	As above	*	*			Garlon 480 also controls several species eg <i>A. aulacocarpa</i> , <i>A. decurrens</i> , <i>A. dealbata</i> , <i>A. nilotica</i> , with basal bark spraying. Suggest cut stump method or stem injection using undiluted Garlon. Do not apply to the soil.				*
<i>Acacia decurrens</i>	Early Black Wattle	Darling Range							*	Usually close to ornamental plantings. Very fast growing crowds out native plants often forming large groups of trees. Potential to spread over a much wider range.	*	*			All of the introduced watties need to be controlled because of their potentially highly invasive nature.				*
<i>Acacia longifolia</i>	Sydney Golden Wattle	Widespread							*	Usually close to ornamental plantings.	*	*			As Above.				*
<i>Acacia podalyriifolia</i>	Queensland Silver Wattle	Widespread							*	As Above.					As Above.				*
<i>Acacia pycnantha</i>	Golden Wattle	Widespread							*	As Above.					As Above.				*
<i>Agave americana</i>	Agave	Rottneist Is. Kings Park				*	*			Spreading from adjacent plantings. or rubbish dumping. Difficult to control using herbicides. Generally best to pull out eg chain and tractor, dig out. Wear protective clothing/ goggles, sap irritates skin. Wash	*				No information.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Agave sisalana	Agave	Rottnest Mt Eliza			*	*				off straight away. As Above.	*				As Above.				*
Agropyron racemosum	Sea Wheat	Yanchep to Burns Beach		*						Only control when/where there is no danger of erosion/blow out by wind.					No specific information. Suggest Fusilade or similar herbicide at 4Lt ha. Failing this wipe or spot spray with Glyp/Rindup.				*
Aira canyophylla	Silvery Hair Grass	Widespread						*		Competes with small herbs.	*		*	*	No specific information. Suggest Fusilade or similar herbicide 2Lt			*	
Alia cupiana	Silvery Hair Grass	Widespread						*		As Above.	*		*	*	As Above.			*	
Allium triquetrum	Three Cornered Galic	Disturbed creeklines.		*						Smotherers herbs. Difficult to control. Repeat applications may be neces.	*	*	*	*	No specific info. Suggest Glyp/Rindup + Pulse when plants in flower. Or Glean Ally/Brshoff.			*	
Amaranthus albus	Tumbleweed	Nth Fremantle					*			In disturbed areas, competes with natives.	*	*	*	*	Glyp/Rindup knapsack 75- 100ml in 15Lt water, when actively growing.			*	
Ambrosia psilostachya	Perennial Ragweed	Widespread					*			An aggressive coloniser of highly disturbed sites.	*	*	*	*	No specific information. Suggest Rindup/Glyp.				*
Ammophila arenaria	Marram Grass	Dunes		*						Planted to stabilise dunes. Only control where native plants are established and no danger of erosion/blow out by wind.	*	*	*	*	No specific info. Suggest high rates of Fusilade or similar herbicide. Or Glyp/Rindup.				*
Anagallis arvensis	Pimpernel	Widespread				*	*	*		Competes with small herbs, mainly a problem in moist badly disturbed areas when the plants become more vigorous. Therefore only worth controlling in these areas.	*	*	*	*	Try Glyp/Rindup. Glean at 15g ha. Ally/Brshoff do control this weed.			*	
Anagallis minor		Claypans/ Granite								Effects unknown. Try to control especially in granite areas.	*	*	*	*	No specific info. Try Rindup/ Glyp.			*	
Apium graveolens	Celery	Lake Joondalup		*						Spreading into fringing sedgeland, competing with native plants. Spread from market gardens. Remove seed heads which produces large no. of seeds. Biennial.	*	*	*	*	No specific info. Try Rindup/ Glyp.			*	*
Arctotis stoechadifolia	White Arctotis	Swanbourne City Beach		*						Competes with natives. Only control where natives are established and there is no danger of erosion by wind	*	*	*	*	No specific info. Try Rindup/ Glyp. + Pulse. Maybe difficult to control because of hairy leaves.				*
Arctotheca calendula	Cape Weed	Widespread		*	*	*	*	*		Mainly in disturbed areas where	*	*	*	*	Glyp/Rindup knapsack 100ml			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Arctotheca populifolia	Dune Arctotheca	As Above		*						extra water/nutrients encourage lush growth. Generally only worth controlling in these areas.					in 15Ll water or stronger solution on large plants.				*
Argemone ochroleuca syn. A. mexicana	Mexican Poppy	Widespread also Garden Island					*			Only control where no danger of blow out.	*	*	*	*	As above, + Pulse.				*
Argyranthemum frutescens	Marguerite Daisy	Widespread				*				In disturbed areas.	*	*	*	*	Declared weed contact A.P.B.	6		*	
Aster subulatus	Bushy Starwort	Winter Wet Swamps. Widespread		*						Disturbed areas, usually from household dumping.	*	*	*	*	No specific info. suggest Rindup/ Glyph. knapsack 150ml in 15Ll water, when actively growing.			*	*
										Usually in disturbed areas. Annual or biennial. Difficult to control as it produces so much seed. Often seen growing in lawns, where it still manages to seed.	*	*	*	*	No specific info. suggest Glyph/ as above.				
Atriplex prostrata	Hastate Orache	Estuarine edges, Saline Lakes		*						Competes with native Atriplex.	*	*	*	*	No specific info. suggest high rates Glyph/Rindup as a spot spray and or cut stump method.				*
Avellina michelii		South Perth (widespread in the south west)						*		Competes with natives. This grass may become more widespread.	*	*	*	*	No specific info. Suggest Fusil: or similar herbicide before flowering. Failing this spot spray with Glyph.			*	
Baeometra uniflora		Bassendean						*		Competes with natives. Toxic to cattle.					No specific info. Suggest Glyph/ Rindup or Ally/Brshoff, Glean at flowering time.		*		
Bellardia trixico	Bellardia	Widespread						*		Effects unknown, semi parasite.	*				No specific info. Application of translocated herbicides may affect host plants, natives?			*	
Brachiaria mutica	Para Grass	Loch McNess		*						Probably spread from ornamental planting.	*	*			Try Fusilade or similar herbic. at 4Ll ha. Glyph/Rindup 200ml in 15Ll water, apply to actively growing plants at early head stage.				*
Brassica tournefortii	Mediterranean Turnip	Widespread				*				Competes with natives.	*	*	*	*	Glyph/Rindup 75-100ml in 15Ll water, knapsack, when actively growing.			*	
Bromus catharticus	Prairie Grass	Widespread						*		Competes with natives.	*	*	*	*	Fusilade or similar herb. at 2Ll ha. when actively growing.			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Bromus diandrus	Great Brome	As Above.				*			*	As Above.	*	*	*	*	As Above.			*	
Bromus hordeaceus	Soft Brome	As Above.							*	As Above.	*	*	*	*	As Above.			*	
Bromus madritensis	Lesser Brome	As Above.							*	As Above.	*	*	*	*	As Above.			*	
Bromus rubens	Red Brome	As Above.							*	As Above.	*	*	*	*	As Above.			*	
Buddleia madagascariensis		Mount Eliza (Kings Park)								Replaces native shrubs, crowds out small plants. Potential to spread to other sites.	*	*			No specific info. Suggest cut stump method using Glyph/Rnd.				*
Cakile maritima	Sea Rocket	Widespread in beach sand and foredunes.		*						Competes with native plants. Only control amongst native plants when erosion by wind will not be a problem.	*	*	*	*	No specific info. Suggest Rndup/Glyph. when actively growing.			*	
Casuarina cunninghamii	River She-Oak	Jane Brook	*							Spread from nearby plantings. Stop planting. This also, in some instances applies to C. glauca.	*	*			No specific info. Suggest cut stump method, try Glyph/Rndup. or Velpar, Garlon, Grazon.			*	
Casuarina glauca		Pelican Point.	*							As Above.	*	*			As Above.				*
Canna x generalis	Canna	Swan River	*							Mainly in highly disturbed areas, from rubbish dumping. Effects on native flora unknown.	*	*	*	*	No specific info. Suggest Glyph/Rndup plus Pulse when actively growing, spring-autumn.				*
Canna x orchicoides	Canna	Southern River	*							As Above.	*	*			As Above.				*
Carduus pycnocephalus	Slender Thistle	Widespread	*							In highly disturbed areas, often road verges. A major problem on granite rock areas. May not be worth controlling in other areas. Reinvansion a problem from adjoining properties.	*	*	*	*	No specific info. Suggest Glyph/Rndup. Or Spysd/Try. when actively growing, before flowering.			*	
Carex diversa	Divided Sedge	Pelican Point	*							Only in disturbed wetlands, forms dense colonies, smothers native sedges.	*	*	*	*	No specific info. Difficult to dig out. Suggest high rates of Glyph/Rndup plus Pulse, when actively growing. A pre-burn or slash to encourage new growth may make control easier.				*
Catapodium rigidum	Rigid Fescue								*	Distribution is becoming more widespread.					No specific info. Suggest Fusil. or similar herbic. at 2 to 4Ll ha. when actively growing. Failing this spot spray with Glyph/Rndup.			*	
Centaurea melitensis	Maltese Cockspur	Rottneist Is. Kings Park. Canning Vale. Widespread.				*			*	Usually disturbed areas, eg Road Verges. Annual or Biennial.	*	*	*	*	Suggest trying Glyph. or Try. Several other herb. eg. 2,4-D, Bromoxyn. 1+MCPA are known to control it.	3		*	+

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Centaureum erythraea</i>	Common Centaury	Widespread near the coast and on some islands.						*		Usually found in damp situations. Annual or Biennial. Competes with native plants.	*	*	*		No specific info. Suggest trying Glyph/Rindup, or Tryquat/Spray seed.			*	+
<i>Cerastium glomeratum</i>	Chickweed	Widespread, common.						*		Usually in disturbed areas.	*	*	*		No specific info. Suggest trying Glyph/Rindup, or Tryquat/Spray seed.			*	
<i>Chasmanthe floribunda</i>	African Corn Flag	Widespread.						*		Only in disturbed sites, may not be worth controlling as generally not a problem.	*	*	*		Glyph/Rindup knapsack 75-100ml in 15L water when actively growing.			*	
<i>Chenopodium album</i>	White Goosefoot or Fat Hen	Widespread			*			+		Usually in disturbed areas. Common in bird colonies on islands. Less common in other vegetation.	*	*	*		No specific info. Suggest Glyph/Rindup 0.5% or stronger at flowering time. Seek advice if applying in or near bird colonies.			*	
<i>Chenopodium ambrosioides</i>	Mexican Tea	Widespread on Coastal Plain					*			In disturbed sites. Competes/smoothers native plants.	*	*	*		No specific info. Suggest Glyph/Rindup 0.5% or stronger, at flowering time. May also be controlled (as some other ssp. are) by Glean, Ally/Brshoff.				*
<i>Chenopodium murale</i>	Nettleleaf Goosefoot or Green Fat Hen.	Widespread.			*			+		As Above.	*	*	*		As Above.			*	
<i>Cicendia filiformis</i>	Slender Cicendia	Ellen Brook, Granite Rocks						+		Rarely seen but has potential to spread, especially in damp sites.	*	*	*		No specific info. Suggest trying Glyph, or Sprayseed/Tryquat, when actively growing.			*	
<i>Cirsium vulgare</i>	Spear Thistle	Widespread	*							In highly disturbed areas. A major problem in granite rock areas. May not be worth controlling in other areas. Frequent reinvasion from surrounding properties. A biennial.	*	*	*		No specific info. Suggest Glyph/Rindup or Sprysd/Try. Spray when actively growing.				+
<i>Citrullus lanatus</i>	Pie Melon or Afghan Melon	Widespread					*			In highly disturbed areas. Pick up fruit (seed) and destroy. Often seen near watercourses.	*	*	*		24D amine (500g/L) rate 20ml in 10L water plus 0.25% wetting agent, when actively growing.		3	*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Colocasia esculenta	Taro	Swan River	*							Spreading from old market Garden.	*	*	*		No specific info. Suggest high rates of Glyph/Rindup plus Pulse when actively growing.				*
Conyza albida	Tall Fleabane	Widespread					+		*	A major problem in disturbed sites. Producing large numbers of seed therefore difficult to control. Decrease in numbers as natives come back, especially after fire. Summer annual, in poor seasons can flower when only a few cm high.	*	*	*		Suggest Glyph/Rindup or Try/Sprysd. Conyza can be controlled by MCPA plus Bromoxynil 50ml in 10L water or by 24D Amine 50ml in 10L water. However it may be safer to use them only in a wick applicator.	3		*	
Conyza bonariensis	Flaxleaf Fleabane	Widespread					+		*	As Above.	*	*	*		As Above.	3		*	
Conyza parva		Not as widespread as the above sp.							*	Found in disturbed areas. Could become a major problem in disturbed bushland. Summer Annual.	*	*	*		As Above.	3		*	
Corrigiola littoralis	Strapwort	Dry lake beds.	*							Competes with natives. Summer annual (rarely biennial).	*	*	*		No specific info. Suggest Rindup/Glyph or Try/Sprysd at flowering time.			*	+
Colula bipinnata	Ferry Colula	Rottnest, Cannington.			*					Found in moist sandy sites.	*	*	*		Suggest trying Glyph/Rindup or Try/Sprysd. Some species can be controlled by 24-D or a mixture of MCPA and Bromoxynil.			*	
Crassula glomerata		Widespread on Coastal sands also on Garden and Cammac Is.				+	*			Would be extremely difficult to control due to their fleshy stems.	*	*	*		No specific info. Suggest Glyph/Rindup.			*	
Crassula natans		Widespread in winter wet areas or growing in water. Competes with native aquatic herbs.	*							As Above. A problem in granite rock pools, makes control more difficult.	*	*	*		No specific info. Hand weeding cutting the roots with a knife. May only be worth doing in rock pools. In areas without free water, as above.			*	
Crepis toetida	Hawksbeard	Byford, Bold Park.				*			*	Becoming more common. Effects on native plants unknown.	*	*	*		No specific info. Suggest trying Glyph/Rindup or Try/Sprysd.			*	
Cucumis myriocarpus	Paddy Melon	Widespread					*		*	Mainly highly disturbed areas. Summer annual. Competes with smother's natives.	*	*	*		Try Glyph/Rindup or Sprysd/Try. 2,4-D and Garton control this weed. Would be best to use a wick applicator or wipe on.	3		*	
Cuscuta epithymum	Dodder	Widespread.						*	*	A parasite, therefore difficult to	*				No specific info. May be best			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
note: several native <i>Cuscuta</i> 's!										control as it parasites native plants. Often forming large colonies growing over the tops of small shrubs.					to pull off the host plants. On <i>Metaleuca</i> spp. 2,4-D has been used with some success, to control other dodders however, this herbicide would damage/kill most native plants.				
<i>Diplotaxis muralis</i>	Wall Rocket	Widespread.				+		*		Occurs on heavy soils as well as limestone and sand dunes. Annual or biennial flowers Jan-Aug.	*	*	*		No specific info. Suggest Rindup/ Glyph when actively growing.			*	+
<i>Dischisma arenarium</i>		Widespread.						*		Usually found near the coast on sandy soils. Effects on native plants unknown.	*	*	*		No specific info. Suggest Glyph/ Rindup when actively growing or Spyrscd/Tryquat.			*	
<i>Ditrichia graveolens</i>	Stinkwort	Widespread					*			Summer annual. Small populations are easy to control by hand pulling. Found in highly disturbed areas.	*	*	*		Hormonal herbicides are the only recommended control eg MCPA 20ml in 10Ll water knap- sack, plus 0.25% wetting agent. 2,4-D amine 10-30ml to 10Ll water plus, 0.25% wetting agent. Note large plants are far more difficult to kill.		3	*	
<i>Echium plantagineum</i>	Patersons Curse	Widespread eg Cannington, Gosnells.						*		In highly disturbed areas usually on heavy soils.	*	*	*		Glyph/Rindup 75-100ml in 15Ll water, knapsack.			*	+
<i>Egeria densa</i>	Leafy Elodea	Canning River, Dog Swamp.	*							Only found in highly disturbed areas. Declared Plant, seek APB advice.				*					*
<i>Ehrharta longiflora</i>	Annual Veldgrass	Widespread, also on Garden Island.				+		*		Easy to control.	*	*	*	*	Fusilade or similar spray at 2Ll ha. before flowering.			*	
<i>Ehrharta brevifolia</i>	Annual Veldgrass.	Widespread.						*		As above.	*	*	*	*	As Above.			*	
<i>Eichhornia crassipes</i>	Water Hyacinth	Tomato Lake, Mongers Lake.	*							Declared Plant, seek APB advise.									*
<i>Emex australis</i>	Doublegee	Widespread.					*			In disturbed areas, on heavy and sandy soils. Seed remains dormant in the soil for several years. There- fore check for new germinants for several seasons.	*	*	*		Glyph/Rindup 75ml in 15Ll water, knapsack, in winter to spring.		6	*	
<i>Epilobium tetragonum</i>	Square Willow Herb	Wanneroo	*							Has potential to spread, especially in moist situations.					No specific info. Suggest Glyph/ Rindup.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Erodium botrys	Long Storksbill	Widespread.							*	Difficult to control as it is so common	*	*	*		No specific info. Suggest Glyph/Rindup or Spysd/Try. Ally/Brush will control some species 5g ha.			*	
Eucalyptus citrodora	Lemon Scented Gum.	Kings Park. Yanchep.							*	Spreading from adjacent plantings. Several other species could invade natural bushland. Do not plant species from other areas in natural bushland.	*	*	*		Treat all species the same. Suggest the following. Glyph/Rindup as stem injection 1 part to 2 parts water. use an axe, cut a notch at 45 degrees at 8cm intervals around the trunk at breast height, inject 1ml of the mixture in each cut. Cut Stump method paint or spray mixture 1 part water to 10 parts Rindup apply within 1 to 2 minutes after cutting. Regrowth from stumps up to 1m high 1 part Rindup to 15 parts water + Pulse 0.2% spray all foliage top and under-surface. Seedlings up to 1m high 1 part Rindup to 50 or up to 100 parts water plus 0.25% Pulse. Based on refinement of trials in Ref. 10 (RRA Fremlin pers. com) Often herbicides such as Velpar, Tordon can also be used for stem injection or cut stump method. Do not apply to the soil as they will kill other plants.				
Eucalyptus cladocalyx	Sugar Gum.								*		*	*	*					*	
Eucalyptus x maculata									*		*	*	*					*	
Eucalyptus polyanthemus.	Red Box.								*		*	*	*					*	
Euphorbia pepius	Petty spurge	Widespread.						*	+	Only tends to be a problem in highly disturbed areas, where it gets extra moisture nutrients.	*	*	*		No specific info. Suggest Spysd/Try 10-15ml in 10L water + 0.25% wetter, knapsack, when actively growing or Rindup/Gly 75-100ml in 15L water.			*	
Galium divaricatum		Eastern side of the coastal plain and Darling Scarp/Range.						*	+	Usually in winter wet depressions, side of creeks etc.					No specific info. Suggest Glyph/Rindup or Spysd when actively growing, before seed set.			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Galium murale	Small Goosegrass	Darling Range, also on Rottn. and Garden Is.			+			*		Prefers moist situations, on lighter soils. Not a grass, as the common name suggests.	*	*	*		As Above.			*	
Genista linifolia	Flaxleaf Broom.	Not very common, east of Perth on road verges.						*		In disturbed areas. Potential to become a major weed.	*	*	*		No specific info. Suggest Glyph. spray or cut stump method 1 part to 15 parts water.				*
Geranium molle	Cranesbill	Widespread.						*		Competes with native plants.	*	*	*		No specific info. Suggest Glyph/Rindup or Sprysd/Try, when actively growing. Ally/Brsh at 5g ha will control some plants from the Geraniaceae family.			*	
Gomphocarpus fruticosus	Swan Plant or Narrowleaf Cottonbush	Widespread.								On disturbed sites. Declared plant in some areas.	*	*	*		Glyph/Rindup 1 in 100, knapsack plus wetting agent. Sept-Dec, before fruit forms.	6			*
Hainardia cylindrica	Barb Grass	Byford	*							Mainly in saline soils.	*	*	*		No specific info. Suggest Fus. or similar herbicide at 2Lt ha. Felling this try spot spraying etc with Rindup/Glyph.	6		*	
Heliphila pusilla		Widespread.						*		Effects on native flora unknown.	*	*	*		No specific info. Suggest Glyph/Rindup 1 to 1.5Lt ha, higher rates for larger plants + 0.25% wetter. Sprysd may also control seedlings.			*	
Hexaglottis lewisae		Gingin, Harvey, Bunbury.						*		Has potential to become a major weed. Prefers heavier soils or low lying winter moist areas.	*	*	*		No specific info. Suggest Glyph/Rindup 1 part to 10 parts water knapsack or 1 part to 2 parts water wick application. Felling this try Ally/Brshoff.		*		
Hibiscus diversifolius		Swan River Estuary.	*							Competes with native plants. Very prickly stems therefore should wear gloves. Maybe best to grub out. Produces large amount of viable seed. Check each year for new geminants. In badly degraded areas with large infestations it may be more cost effective to burn, which kills the parent plants. Then the seed	*	*	*		No specific info. Try Glyph/Rind as a spray on seedlings or cut stump method. Remove and destroy any branches which may be carrying seed.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Holcus lanatus</i>	Yorkshire Fog	Winter wet Sedgeland		*						stored in the soil, will be encouraged to germinate the first season. Effects on natives unknown.					First try high rates eg 4Lt ha. of Fusil. or similar herbicide, before flowering. If successful can use a blanket spray. Glyph/Rindup 100ml in 15Lt water, knapsack, when actively growing at early head stage.				*
<i>Homeria miniata</i>	Two-leaf Cape Tulip.	Widespread							*	Usually in disturbed areas.	*	*	*		Glyph, wick applic. not as effective as on One Leaf Cape Tulip. Use a high rate eg 1 in 1 water. Can also try spot spraying. Glean/Ally have given good results used in a wick appl. 1g in 1Lt water. Glean spot spray 1 in 10 mixture.	6	*		
<i>Hordeum leporinum</i>	Barley Grass	Widespread.							*	Mainly disturbed areas.					Small seedlings are easy to control at very low rates, using Fusilade or similar herb. Suggest 2Lt ha in bushland situations, July-Aug.			*	
<i>Hymenobolus procumbens</i>	Oval Purse	Common e.g. Rottnest Is.			*					Effects on natives, unknown.	*	*	*		No specific info. Suggest Glyph/ Rindup in 75-100ml 15Lt water. knapsack when actively growing.			*	
<i>Hypochaeris glabra</i>	Smooth Cats Ear, Flat Weed.	Common						+	*	Competes with native herbs, espec. in richer soils and disturbed areas. Where their growth is luxuriant, may only be worth controlling in those situations as it is so common. A common weed in lawns, therefore control in adjacent lawned areas. Annual or perennial.	*	*	*		Glyph/Rindup 100ml in 15Lt water, knapsack, or use weeding wand higher rate. Apply when rosettes are fully developd. at the early flower stage.			*	*
<i>Ipomaea indica</i>	Morning Glory	Common e.g. Bayswater		*						Smotherers native plants, herbs, as well as shrubs. Generally found in highly disturbed areas, often spreading from adjacent gardens.	*	*	*		No specific info. Suggest high rate Glyph/Rindup eg 300ml in 15Lt water plus Pulse. Cut down old plants and spray new			*	*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
										once a common garden plant.					regrowth 2 or more applications may be necessary. Other herb, eg M.C.P.B. are known to kill similar plants, therefore they should kill this plant, use with care.				
<i>Ixia maculata</i>	Yellow Ixia	Common e.g. Kings Park							*	Potential to become a major weed. Competes with native herbs.	*	*	*	*	No specific info. Suggest high rates of Gly/Rindup or Ally/Brsh 5g ha, knapsack. Weeding wand Glyph or Ally/Brsh, Glean 1g in 1Lt water. Apply at flowering time.			*	
<i>Ixia polystachya</i>	Variable Ixia	Kings Park							*	As Above.	*	*	*	*	As above.				
<i>Juncus capitatus</i>		Common	*							Difficult to control because of the large numbers of plants.	*	*	*	*	Rindup/Glyph 1 part to 2 parts water at or before flowering time. The addition of Pulse may give better control. Check for several seasons because of stored seed in the soil.			3	*
<i>Lachenalia alioides</i>		Few populations							*	Potential to become a serious weed. In most areas best to dig out.	*	*	*	*	No specific info. Suggest Rindup/Glyph at flowering time. Felling this try Ally/Brsh, Glean.			*	
<i>Lachenalia orchoides</i>		As Above.							*	As above.	*	*	*	*	As Above.			*	
<i>Lachenalia reflexa</i>		As Above.							*	As Above.	*	*	*	*	As Above.			*	
<i>Lactuca saligna</i>	Wild Lettuce	Widespread							*	Found in disturbed areas, espec. along bush tracks. Annual or biennial.	*	*	*	*	No specific info. Suggest Glyph/Rindup at 75-100ml to 15Lt water or spysed/tyquat.			*	+
<i>Lactuca serriola</i>	Prickly lettuce	Widespread							*	In highly disturbed sites. Annual or biennial.	*	*	*	*	As Above.			*	+
<i>Lantana camara</i>	Lantana	Seapages along Swan River, Swamps.	*							Not as highly invasive as in other States. However should be controlled. Biological control has	*	*	*	*	Apply to actively growing plants. Rindup/Glyph 1 to 8 parts water. cover all foliage, knapsack or use			7	*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
		Kings Park.								been tried in the East States but was unsuccessful. May be best to grub out small populations. Check next few years for new germinants.					cut stump method higher rate.				
Lathyrus tingitanius	Perennial Sweet Pea. Tangier Pea.	Widespread						*		Smotherers native plants. Usually in highly disturbed areas.	*	*	*		No specific info. Suggest high rates Glyph/Rndup when actively growing.				*
Lavatera cretica	Cretean Mallow	Also on coastal sands near Perth				*				Competes with natives. Pulling is best in small populations. Check next few years for further germination.					No spec. info. Suggest high rates Glyph/Rndup when actively growing.			*	+
Lavandula stoechas	French Lavender	Few populations e.g. Martin, Canning Mills							*	Mainly found in heavier soils e.g. Darling Scarp. Has potential to become more widespread. May be best to grub out as the populations are small.	*								*
Leonotus leonurus	Liars Ear	Kings Park (scarp) common. Very few other populations.							*	Has potential to spread, from cultivated plants and become a major weed. Competes with native herbs and small shrubs.	*	*	*		No specific info. suggest Glyph/Rndup when actively growing. On large plants could use cut stump method.				*
Leonotus nepetaefolia		Few populations.						*		As Above.	*	*	*		As Above.				*
Limonium campanyonis	Statice	Claremont.				*				Effects unknown, potential to become nuisance weed in this vegetation.	*	*	*		No specific info. Suggest high rates Glyph/Rndup when actively growing.				*
Linum trigynum	French Flax	Widespread, often in damp situations						*		Effects on natives unknown.	*	*	*		No specific info. Suggest Glyph/Rndup 75-100ml to 15Ll water or Spysd/Tryquat.			*	
Lolium perenne	Perennial Rye Grass	Widespread						*		Common in disturbed areas. Some of the selective grass herbicides are far better than others in controlling Annual Ryegrass, it may also be the case for this species.	*	*	*	*	No specific info. Suggest Setrin. Assure and similar herb. at 4Ll ha before flowering.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Lolium rigidum	Annual Ryegrass	Widespread							*	Common especially in disturbed areas. Some of the selective grass herbicides are far better than others in controlling this species.	*	*	*	*	Assure, Setin and similar herb. at 2 to 4Ll ha before flowering.			*	
Lotus angustissimus	Narrowleaf Trefoil	Chittering Valley							*	Effects on natives unknown found mainly in highly disturbed areas, potential to become more widespread.	*	*	*	*	No specific info. Suggest Glyph/Rindup.			*	*
Lupinus angustissimus	Narrowleaf Lupin.	Widespread. Swan Valley, Darling Scarp							*	Competes with natives. Pulling is best in small populations. Check next few years for further germination.	*	*	*	*	Rindup/Glyph 2% solution, spray when actively growing to run off.			*	
Lythrum hyssopifolium	Lesser Loosestrife			*						Mainly found in disturbed sites.	*	*	*	*	No specific info. Suggest Glyph/Rindup or Try/Sprysd when actively growing.			*	
Malva parviflora	Marshmallow	Widespread			*				+	Also found in Perth suburbs mainly in highly disturbed sites. Usually an annual in Kings Park. Competes with herbs and small shrubs. In many cases best to grub out.	*	*	*	*	No specific info. Suggest high rates of Glyph/Rindup when actively growing.			*	
Medicago polymorpha	Burr Medic	Common							*	So common it may not be practical to control it. Tends to be more competitive on heavier soils.	*	*	*	*	No specific info. Suggest Glyph/Rindup 75-100ml to 15Ll water, knapsack or Try/Sprysd: when actively growing.			*	
Melilotus indica	King Island Melilot	Common			*				+	Also common on the Coastal Plain. Difficult to control in many areas purely because of the large numbers present.	*	*	*	*	No specific info. Suggest Glyph/Rindup 75-100ml in 15Ll water, knapsack, when actively growing or Try/Sprysd.			*	+
Mentha x piperita	Eau de Cologne	Yanebup Lake		*						Competes with natives. Very few populations, however potential to spread over a much wider area. Therefore, should be controlled. Discourage planting in gardens.	*	*	*	*	No specific info. Suggest high rates of Glyph/Rindup when actively growing.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
										near, wet/damp sites.	*	*	*	*	As Above.				*
Mentha pulegium	Pennyroyal	Widespread	*							Can be very invasive, sometimes so common it may be difficult to control because of the large numbers present.	*	*	*	*					*
Mesembryanthemum crystallinum	Ice Plant	Fremantle			*					Usually in disturbed sites in beach sand. Only control where there is no danger of erosion, by wind. Annual or biennial may be difficult to control because of its fleshy leaves/stems. Changes soil pH may limit other species.	*				No specific information.			*	+
Misopates orontium	Lesser Snapdragon	Widespread							*	Usually in disturbed sites. Effect on natives unknown.	*	*	*	*	No specific info. Suggest Glyph/Rndup. 75-100ml to 15Ll water, knapsack or Tryquat/Spry seed; when actively growing.			*	
Miscanthus sinensis	Eulalia	Arncliffe						*		Like most grasses potential to spread, should therefore be controlled. Small populations may be best grubbed out. Produces large tussocks, summer flowering, therefore may be difficult to control with herbicides.	*	*	*	*	No specific info. Suggest high rates of Fusilade or similar herb. before flowering, when actively growing. Felling this try Glyph/Rndup, or similar treatments for Love Grass. May be best sprayed in summer.				*
Moenchia erecta	Erect Chickweed	Bold Park				*				Effects on natives unknown. Few known populations. Small pop. may be best hand weeded.	*	*	*	*	No specific info. Suggest Glyph/Rndup. 75-100ml in 15Ll water knapsack, when actively growing or Try/Sprysd.			*	
Monadenia bracteata	South African Orchid	Widespread							*	Competes with native orchids and other small herbs. May be best just to pull out. Spreads rapidly from seed.	*	*	*	*	No information.				*
Monopsis simplex		Widespread							*	Found in winter wet depressions.	*	*	*	*	No specific info. Suggest Rndup/			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
										Effects on natives unknown.					Glyph 75-100ml in 15Ll water, knapsack or Try/Sprysd when actively growing.				
Myriophyllum aquaticum	Parrots Feather	Swan River	*							Noxious weed (Declared plant) A.P.B. will control.									*
Nasturtium officinale	Water Cress	Widespread		*						Usually in highly disturbed wetlands, edges creeks. Often in large numbers and producing large quantities of seed.	*	*	*		No specific info. Suggest Glyph/Rndup 75-100ml in 15Ll water, knapsack, when actively growing or Try/Sprysd. Try to spray when the water level has receded, to avoid the spread of the herbicide, but well before seed set. Erect signs informing the general public to avoid human consumption.				*
Nicotiana glauca	Tree Tobacco	Widespread					*			Usually highly disturbed areas, also a common weed on old building sites. Seed appear to remain viable for a considerable length of time. In most cases best to grub out.	*	*	*		No specific info. Suggest Rndup/Glyph, high rates for spraying seedlings or cut stump method using Glyph/Rndup, failing this try Aly/Brshoff or Garlon. Velpar.				*
Nymphaea mexicana	Yellow Waterlily	Upper Swan River	*							Difficult to dig out. Always seek expert advice when spraying aquatic weeds, because of the potential damage to other plants, marine life etc. May completely cover shallow open water areas.					No specific info. Always try to use the least toxic herbicides e.g. Rndup/Glyph.	6			*
Nymphaea odorata	Fragrant Waterlily	Canning River, Cannington	*							As Above.	*	*	*		As Above.				*
Oenothera drummondii	Beach Evening Primrose	Widespread		*			+	+		Mainly in highly disturbed areas. May only be able to control in sheltered areas or away from dunes where erosion from wind is unlikely.	*	*	*		No specific info. Suggest high rates of Glyph/Rndup, plus Pulse when actively growing.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Oenothera glazioviana	Evening Primrose	Widespread						*		Usually in disturbed sites.	*	*	*		As Above.				+
Oenothera glazioviana	Yellow Serradella	Widespread						*		Effects on natives unknown.	*	*	*		No specific info. Suggest Glyph/Rndup 75-100ml in 15L water when actively growing or Try/Sprysd.			*	
Orobancha minor	Lesser Broomrape	Widespread						*		This is a parasite totally dependant on its host. Effects on natives unknown. Best to pull out. Using translocated herbicides e.g. Rndup may kill the host.	*								
Osteospermum claudistinum	Stinking Roger	Widespread						+	*	Found in a wide range of soils. Effects on natives unknown, however, is a problem in badly degraded granite rock areas.	*	*	*		No specific info. Suggest Rndup/Glyph 75-100ml in 15L water knapsack, or Try/Sprysd.			*	
Oxalis glabra		Widespread						*		Usually on heavier soils although also found in poor sands eg Kings Park. Usually seen in highly disturb. areas. Very difficult to dig out. Effects on natives unknown.	*	*	*		No specific info. Suggest Rndup/Glyph. 75-100ml in 15L water, at or just before flowering. Ally/Brashoff and Glean should also control it.			*	
Oxalis purpurea	Four-O'Clock or Large flower Wood Sorrel	Widespread						*		Very difficult to dig out. Often forms large colonies, mainly in highly disturbed areas.	*	*	*		Rndup/Glyph 3Lt ha plus 0.25-0.5% wetter. Apply 50-80 days after emergence. Gly and Ally (mixture) can also be used.			3*	
Panicum capillare	Witchgrass	Gosnells, Forrestdale						*		Potential to spread rapidly, espec. in low lying, moist areas.	*	*	*		At 5 leaf stage has been contrld. with a boom spray Fusil. at 1Lt ha. However, suggest 2Lt ha, before flowering. Other similar herb. should control it.			*	
Parapholis incurva	Coast Barbrgrass	Widespread				*				Effects on natives unknown. Usually in highly disturbed areas.	*	*	*	*	No specific info. Suggest Fusil. at 2Lt ha, when actively growing. Failing this try Glyph/Rndup.			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Parentucellia latifolia	Common Bartsia	Widespread							*	Effects on natives unknown.	*	*	*		No specific info. Suggest Rindup/ Glyph 75-100ml in 15L water. knapsack when actively growing or Try/Sprysd.			*	
Parentucellia viscosa	Sticky Bartsia	Widespread							*	As Above. Annual or biennial.	*	*	*		As Above.			*	+
Pennisetum purpureum	Elephant Grass	Alfred Cove (banks of Swan River) Maids Vale							*	A major effort should be made to control it as it has potential to spread and compete/smother natives, especially in moist soils. Grub out small populations.	*	*	*		No specific info. Suggest high rates of Fusilade eg 4Ll ha. May be best to cut down or burn first then spray new growth Spring/Summer. Failing this try high rates of Rindup/Glyph.				*
Pennisetum setaceum	Fountain Grass	Common							*	Mainly in disturbed areas. Competes with natives. Summer flowering.	*	*	*		No specific info. Suggest high rates of Fusilade eg 4Ll ha. before flowering when actively growing. Failing this try Glyph/ Rindup.				*
Pennisetum villosum	Feathertop	Widespread						*		Usually in highly disturbed areas. Mainly summer-autumn flowering.	*	*	*	*	Fusilade 1-2Ll ha when actively growing. Suggest higher rates in bushland ie 2-4Ll ha.	3			*
Pentascchistis thunbergii		Common							*	Effects on natives unknown, found mainly in disturbed areas. A grass.	*	*	*	*	As Above.				*
Pterorhagia velutina	Velvet Pink	Widespread							*	More vigorous on disturbed sites. So common difficult to control. Competes with native plants.	*	*	*	*	No specific info. Suggest Glyph/ Rindup. 75-100ml in 15L water or Try/Sprysd.			*	
Phalaris minor	Lesser Canary Grass	Common							*	Competes with native plants, especially in disturbed areas.	*	*	*	*	Fusilade at 3 leaf stage 500ml ha. Suggest 2Ll ha before flowering similar herbicides should also give control.			*	
Phyla nodiflora	Carpet Weed	Dry Lake Beds	*							Competes with natives. May be difficult to control as it roots at the nodes of stems.	*	*	*		No specific info. Suggest Rindup/ Glyph high rates eg 150-200ml in 15L water, knapsack, before				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Physalis peruviana	Cape Gooseberry	Swamps	*							Few populations, potential to become more widespread. Widely cultivated. May be best to grub out.	*	*	*		No information. Suggest high rates of Glyph/Rindup when actively growing.				*
Phytolacca octandra	Ink Weed	Widespread eg Wanneroo	*							In highly disturbed sites. Produces large amounts of seed. Often best to grub out, cut root at least 5cm below ground level.	*	*	*		Glyph/Rindup 1 part to 10 parts water, may need 2 applications on large plants. Spray when actively growing.				*
Pinus pinaster	Pinaster Pine	Widespread				*	+			Mainly near pine plantations. Generally best to grub out.	*	*	*		Stem inject neat Rindup 1 to 1.5ml. Use a cut down small axe 25mm wide at 8cm intervals, around trunk. Small seedlings can be sprayed with Brushoff.				*
Pinus radiata	Radiata Pine	Widespread				*		+		As Above.	*	*	*		As Above.				*
Plantago major	Great Plantain	Swamps eg Cannington	*							Effects on natives unknown. Usually found in highly disturbed areas.	*	*	*		Rindup/Glyph 100ml in 15Lt water. Apply to actively growing plants at the early head stage.				*
Poa annua	Annual Winter Grass	Widespread						*		In highly disturbed areas. Produces copious amounts of seed. Should be controlled in nearby lawns, use Kerb/Poakil.	*	*	*		Most selective grass herbicides do not control it, however, Assure is known to control it at 9Lt ha. However, this should only be tried on experimental basis as the high concentration of solvent may damage native plants. Can use Glyph. where there are no native plants.			*	
Podarylia sericea		Few Populations						*		Effects unknown. Found in disturbed sites. May be best to grub out.	*	*	*		No specific info. Suggest high rate of Glyph/Rindup when actively growing. Cut stump method on large plants.				*
Polygala myrtifolia	Myrtle-leaf	Few				*		+		Also on Kings Park scarp. A	*	*	*		No specific info. Suggest high				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
	Milkwort	populations								popular garden shrub. May be best to grub out.					rates Rndup/Glyph. Cut stump method on large plants.				
Polycarpon tetraphyllum	Four-leaf Alseid	Widespread				*		*		Also common in other areas, eg Kings Park. More vigorous in disturbed areas. So common, may not be practical to control.	*	*	*		No specific info. Suggest Rndup/Glyph 75-100ml in 15Ll water. knapsack or try Sprysd/Try.			*	
Polygonum arenastrum	Sand Wireweed	Widespread				*		*		In highly disturbed areas.	*	*	*		No specific info. Suggest Rndup/Glyph 75-100ml in 15Ll water knapsack or try Try/Sprysd. However, young plants of other species are known to be suscep. to Sprysd/Try.			*	
Polygonum aviculare	Wireweed	Widespread				*		*		As Above.	*	*	*		Young plants are controlled by Sprysd/Try when actively growing. Suggest trying Rndup/Glyph.			*	
Polygonum maritimum	Coast Beardgrass	Rottnest Is.			*			*		Competes with natives. Has potential to spread to coastal areas.	*	*	*		No specific info. Suggest trying Assure or similar herbicide at 2Ll ha before flowering. Failing this try Glyph/Rndup.			*	
Polygonum monspeliensis	Annual Beardgrass	Widespread		*				*		Effects on natives unknown.	*	*	*		No specific information. Suggest trying Assure or similar herbicide at 2Ll ha before flowering. Failing this try Glyph/Rndup.			*	
Potamogeton crispus	Curly Pondweed	Urban Lakes eg Lake Monger	*							Usually in highly disturbed areas. Seek expert advice.									*
Portulacca oleracea	Pigweed or Purslane	Widespread		*						Mainly in highly disturbed sites. Produces copious amounts of seed, therefore difficult to control.	*	*	*		Rndup/Glyph when actively growing 75-100ml in 15Ll water, knapsack.			*	
Pseudognaphalium luteoalbum	Jersey Cudweed	Widespread						*		Effects on natives unknown. Usually an annual, sometimes	*	*	*		No specific info. Suggest Rndup/Glyph 75-100ml in 15Ll water.			*	*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Ranunculus muricatus	Sharp Buttercup or Rough Buttercup	Widespread	*							short lived perennial. Effects on natives unknown. May be best to hand weed.	*	*	*		No specific info. Suggest Rindup/ Glyph 75-100ml in 15Lt water, knapsack.			*	
Romneya coulteri	Californian Tree Poppy	Kings Park (scarp) Mt. Hawthorn				*				In highly disturbed areas. May be difficult to control because its underground rootstocks often form large clumps. Potential to become more widespread.	*	*	*		No specific info. Suggest Rindup/ Glyph when actively growing. the addition of Pulse may give better control. Two applications may be necessary.				*
Romulea flava		Perth, eastern suburbs.						*		Usually in disturbed areas, on heavier soils, rarely seen in poor soils. Potential to become more widespread.	*	*	*		No specific info. Suggest same as for R. rosea Glyph. 20-40ml in 10Lt water + 0.25% wetter in mid winter. Brshoff/Ally and Glean should also control.			*	
Rosa chinensis x moschata 'manetti'	Rose	Waterloo					*			In disturbed areas. Grub out small infestations.	*	*	*		No specific info. However R. rubiginosa is controlled by Rindup/at 1.5-2Lt ha in 100Lt water applied to actively growing plants. Suggest this rate plus Pulse.				*
Rumex acetosella	Sorrel	Widespread	*							Mainly in disturbed areas. Difficult to control especially by digging because of its spreading rhizomes.	*	*	*		Rindup/Glyph 150ml in 15Lt water when most have reached early bud stage. Is controlled by Ally/Brshoff 0.05g in 10Lt water plus 0.25-0.5% wetter.		3		*
Rumex conglomeratus	Clustered Dock	Few siles eg Midland	*							Mainly in disturbed areas.	*	*	*		Suggest trying Rindup/Glyph 150ml in 15Lt water when actively growing. Or Ally/Brshoff as above.				*
Rumex crispus	Curled Dock	Widespread	*							In disturbed areas also found in other areas eg Kings Park scarp.	*	*	*		As Above.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Sagina apetala</i>	Annual Peartwort	Widespread				*				Effects on natives unknown. Also found in other areas eg Kings Park. May not be worth controlling, as its so small, unless in large colonies.	*	*	*		No specific info. Suggest Rindup/Glyph.			*	
<i>Salvinia molesta</i>	Salvinia	Canning River	*							Declared weed. Contact A.P.B.									*
<i>Scabiosa atropurpurea</i>	Purple Pincushion	Widespread					*			Annual or perennial sometimes shrub like proportions. Competes with natives, mainly in disturbed areas.	*	*	*		No specific info. Suggest high rates of Rindup/Glyph when actively growing.			*	*
<i>Senecio vulgaris</i>	Common Groundsel	Few populat. in metro area				*				Potential to become more widespr. Effects on natives unknown. Small populations best hand weeded. Do not confuse with natives species.	*	*	*		No specific info. Suggest Rindup/Glyph 75-100ml in 15L water when actively growing before flowering.			*	
<i>Silene gallica</i>	French Catchfly	Common						*		Effects on natives unknown.	*	*	*		As Above.			*	
<i>Silphium marianum</i>	Variegated Thistle	Gosnells						*		In disturbed areas on heavy soils. Potential to become more widespr. Annual or biennial.	*	*	*		No specific info. Suggest Rindup/Glyph 75-100ml in 15L water, before flowering.			*	*
<i>Sisymbrium info</i>	London Rocket	Very few in Perth metro area. However, widespr. in the wheatbelt.						*		Potential to become more widespr. Annual or biennial. May be best to hand weed.	*	*	*		Some species are controlled by Glyph/Rindup 10-20ml in 10L water plus 0.25% wetter. Apply to small plants. Higher rates may be necessary on large plants.			*	*
<i>Solanum americanum</i>	Glossy Nightshade	Widespread mainly in wetlands.						*		Usually in disturbed areas. Can reach shrub like proportions. Larger plants may be best grubbed out.	*	*	*		No specific info. However some species are controlled by Glyph/Rindup 150-300ml in 15L water when actively growing at the late flowering to berry stage.			*	*
<i>Solanum sodomium</i>	Apple of Sodom	Widespread						*		In highly disturbed areas. Declared Plant. contact A.P.B.	*	*	*						*
<i>Sonchus oleraceus</i>	Common	Common					+	*		In disturbed areas, more vigorous	*	*	*		Gly/Rindup at 75-100ml in 15L			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
	Sowthistle									where there is less competition.					water when actively growing. Preferably before flowering.				
<i>Sparaxis pillansii</i>	Harlequin Flower	Widespread						*		Mainly in highly disturbed areas.	*	*	*		No specific info. Suggest high rates of Glyph/Rindup eg 1 part to 10 parts water, knapsack. Failing this try Ally/Brashoff, Glean.		*		
<i>Spergularia arvensis</i>	Com Spurry	Widespread						*		Effects on natives unknown. Found in disturbed areas. May be best to hand weed.	*	*	*		No info. Suggest Rindup/Glyph 75-100ml in 15Lt water, knapsack, when actively growing.			*	
<i>Spergularia salina</i>	Salt Sand Spurry	Swan River Estuary		*						Annual or biennial. Effects on natives unknown, however, should try to control before it becomes more widespread.	*	*	*		No info. Suggest Rindup/Glyph 75-100ml in 15Lt water, knapsack, when actively growing.			*	*
<i>Spinifex sericeus</i>		City Beach, Port Beach		*						Competes with natives. Usually in disturbed areas. Only control when there is no danger of causing erosion by wind (blowout). Planted originally for dune stabilisation.	*	*	*		No specific info. Suggest trying high rates of Fusilade or similar herbicide. Failing this try Glyph/Rindup, when actively growing.				*
<i>Stachys arvensis</i>	Stagger Weed	Common						*		Mainly in disturbed areas. Effects on natives unknown.	*	*	*		No specific info. Suggest Rindup/Glyph 75-100ml in 15Lt water, knapsack, when actively growing.			*	
<i>Stellaria media</i>	Chickweed	Common						*		Usually in highly disturbed areas.	*	*	*		Glyph/Rindup 75-100ml in 15Lt water, when actively growing.			*	
<i>Tetragonia decumbens</i>		Widespread		*						As Above. Only try to control in areas where there is no danger of erosion by wind (blowout). May be best to use a herbicide as the dead plant helps to reduce erosion. Do not confuse with native species.	*	*	*		No specific info. Suggest high rates of Glyph/Rindup when actively growing.				*
<i>Trachyantha divaricata</i>		Widespread		*						In disturbed areas. Only control in areas where this is no danger of	*	*	*		As Above.				*

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
<i>Trifolium angustifolium</i>	Narrow Leaf Clover	Widespread							*	Mainly in highly disturbed areas. Clovers are usually so abundant it is often only practical to control them in lightly infested areas.	*	*	*		Some species are known to be controlled by Glyph/Rindup 75-100ml in 15Ll water. knapsack when actively growing. Therefore this is the suggested treatment for all species.			*	
<i>Trifolium arvense</i>	Hare's Foot Clover	As Above.							*	As Above.	*	*	*		As Above.			*	
<i>Trifolium campestre</i>	Hop Clover	As Above.							*	As Above.	*	*	*		As Above.			*	
<i>Trifolium cernuum</i>	Drooping Flower Clover	As Above.							*	As Above.	*	*	*		As Above.			*	
<i>Trifolium glomeratum</i>	Ball Clover or Cluster Clover	As Above							*	As Above.	*	*	*		As Above.			*	
<i>Trifolium subterraneum</i>	Subterranean Clover	As Above							*	As Above.	*	*	*		As Above.			*	
<i>Trisetaria cristata</i>	Annual Cats Tail	Common				+	*			Mainly in disturbed areas.	*	*	*		No specific information. Suggest Fusilade or similar herbicide at 2-4Ll ha, when actively growing before flowering			*	
<i>Trifolium lineata</i>		Widespread							*	Mainly in disturbed areas.	*	*	*		No specific info. Suggest high rates of Glyph/Rindup eg 1 part to 10 parts water. knapsack. Failing this try Ally/Brshoff, Glean.		*		
<i>Urospermum picroides</i>	False Hawkbit								*	As Above.	*	*	*		No specific info. Suggest Rindup/ Glyph 75-100ml to 15Ll water. knapsack. Spray when actively growing, preferably before flowering.			*	
<i>Ursinia anthemoides</i>	Ursinia	Common							*	Usually in disturbed areas. So common may not be practical to control in most instances.	*	*	*		No specific info. Suggest Glyph/ Rindup at 75-100ml in 15Ll water knapsack, preferable before			*	

BOTANICAL NAME	COMMON NAME	LOCALITIES	1	2	3	4	5	6	7	COMMENTS	A	B	C	D	SUGGESTIONS	References	Bulbous	Annual	Perennial
Urtica urens	Stinging Nettle or Small Nettle	Rottneest			*					Also found in some Perth suburbs, potential to become more widespread. Wear gloves when hand weeding.	*	*	*		As Above.			*	
Vellerothyon dealbatum	White Cudweed	Widespread							*	Annual or short lived perennial. Usually found in damp situations. Effects on natives unknown.	*	*	*		As Above.			*	*
Verbascum virgatum	Twiggy Mullerin	Common						+	*	In disturbed areas. Competes with native herbs and small shrubs.	*	*	*		As Above.				
Vicia sativa	Common Vetch	Common							*	Smotherers small native plants. Usually in highly disturbed areas.	*	*	*		No specific info. Suggest Rindup/ Glyph 75-100ml in 15Ll water, knapsack, when actively growing.			*	
Vicia hirsuta	Hairy Vetch	Common							*	As Above.	*	*	*		As Above.			*	
Villarsia spiralis	Ribbon Weed	Canning River	*							No similar native species. Could become more widespread and compete with native species.					Seek expert advice.				*
Vulpia bromoides	Squirrels Tail Fescue	Common							*	Likely to become more of a problem when other grass weeds are controlled as it is resistant to Fusilade and similar herbicides.	*	*	*		Glyph/Rindup at 75-100ml in 15Ll water, knapsack, when actively growing.			*	
Vulpia myuros	Rat's Tail Fescue	Common							*	As Above.	*	*	*		As Above.			*	
Wahlenbergia capensis	Cape Bluebell	Common							*	Effects on natives unknown. So common may not be practical to control.	*	*	*		No specific info. Suggest Glyph/ Rindup at 75-100ml in 15Ll water, knapsack, when actively growing.			*	
Wigandia urens		Very few populations e.g. Kings Park scarp							*	In disturbed areas. Should be eradicated as it has potential to spread. Hairs on the leaf can cause severe rash, therefore wear protective clothing. May be best to grub out.	*	*	*		No specific info. Suggest high rates Rindup/Glyph when actively growing or cut stump method using Glyph. on large shrubs.				*