Impact Assessment Record

Scientific Name: *Gazania rigens* (L.) Gaertn. Common name: Gazania

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	As a groundcover to 30cm tall (Faithfull, 2006), unlikely to restrict human access at all.	**L**	**MH**
2. Reduce tourism?	As a groundcover to 30cm tall (Faithfull, 2006), unlikely to be noticed by the average visitor.	**L**	**MH**
3. Injurious to people?	Gazania species in general noted as a harbour for White Italian Snail, that can contain a parasite that is harmful to human health (Enviroweeds, 2002). If the snails are eaten, humans can become infected with a flatworm that causes gastroenteritis, but the parasite cannot be contracted unless the snails are eaten (Horstman, 2002). No further injury to people has been found documented and this disease is not directly related to Gazanias.	**L**	**MH**
4. Damage to cultural sites?	As a creeping groundcover to 30cm tall (Faithfull, 2006), unlikely to cause structural or visual damage.	**L**	**MH**
Abiotic			
5. Impact flow?	A strand plant [occurs up to the edge of stabilised dunes or inland vegetation] (Ross, 1972), only described as naturalised in coastal areas and along roadsides (Groves et al, 2005; Faithfull, 2006), usually in sandy soils (Webb et al, 1988). Nor does it tolerate wet soil (MBG, 2006), and requires good drainage (MSWN, 2005). Unlikely to occur instream or to impact flow.	**L**	**MH**
6. Impact water quality?	A strand plant [occurs up to the edge of stabilised dunes or inland vegetation] (Ross, 1972), only described as naturalised in coastal areas and along roadsides (Groves et al, 2005; Faithfull, 2006); overly moist soils can lead to root and stem rot (MBG, 2006). Unlikely to occur near fresh waterways.	**L**	**MH**
7. Increase soil erosion?	Perennial with branching stems that root at the nodes (Jeanes, 2002). "Common sand coloniser along the beach" (Hilliard, 1977). Listed as suitable for erosion control (Frost, 1998). Likely to reduce erosion.	**L**	**MH**
8. Reduce biomass?	Tends to grow in highly disturbed places where there is little or no permanent vegetation (Ross, 1972; Groves et al, 205; Faithfull, 2006; Webb et al, 1988). Annual or short-lived perennial (Tippette, 2002).Likely to increase biomass.	**L**	**MH**
9. Change fire regime?	Listed as a fire resistant landscaping plant (Frost, 1998), however, tends to grow in highly disturbed places where there is little or no permanent vegetation (Ross, 1972; Groves et al, 205; Faithfull, 2006; Webb et al, 1988), and fire would not be expected as a regular occurrence, so unlikely to impact on fire.	**L**	**MH**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Coastal Headland Scrub (V); CMA=Glenelg-Hopkins; Bioreg= Bridgewater; CLIMATE potential=VH. See Q. 11. Major displacement of some dominant ground layer species.	**MH**	**MH**
(b) medium value EVC	EVC= Coastal Alkaline Scrub (D); CMA=West Gippsland; Bioreg= Gippsland Plain; CLIMATE potential=VH. See Q. 11. Major displacement of some dominant ground layer species.	**MH**	**MH**

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QUESTION	COMMENTS	RATING	CONFIDENCE
(c) low value EVC	EVC= Coast Banksia Woodland (LC); CMA=East Gippsland; Bioreg= East Gippsland Lowlands; CLIMATE potential=H. See Q. 11. Likely to be capable of major displacement of some dominant ground layer species, however, the climate match is not as high, so in this EVC, more likely to be a minor displacement.	**ML**	**MH**
11. Impact on structure?	Grow to about 30cm (Faithfull, 2006). Forms extensive mats (Hilliard, 1977) and "completely covers the ground on which it grows" (Hesp & McLachlan, 2000). Significant environmental weed in Tasmania (Groves et al, 2005). "Naturalised and known to be a minor problem [in natural ecosystems] warranting control at 4 or more locations" within Australia (Groves et al, 2003). Gazania species in general are described as able to displace native vegetation and directly threaten a nationally threatened daisy on Eyre Peninsula" (DeLaine & Stokes, 2006). Considered an environmental weed in South Australia and New South Wales and a significant environmental weed in Tasmania (Randall, 2001). Patches of *Gazania* are "usually devoid of other species" (Cordingley & Petherick, 2005). This species has the potential to have a major effect on ground layer vegetation (<60% of layers).	**MH**	**MH**
12. Effect on threatened flora?	Despite evidence that Gazania species in general threaten a nationally threatened daisy on the Eyre Peninsula (DeLaine & Stokes, 2006), no evidence was found that *G. rigens* affects threatened flora in Victoria. However, this species is known to invade coastal areas (Groves et al, 2005; Faithfull, 2006) and is capable of forming extensive mats (Hilliard, 1977). It has the potential to have a major affect in coastal areas	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	No evidence was found that *G. rigens* affects threatened fauna in Victoria. However, this species is known to invade coastal areas (Groves et al, 2005; Faithfull, 2006) and is capable of forming extensive mats (Hilliard, 1977). It has the potential to have a major affect in coastal areas, which may have flow on effects for threatened fauna.	**MH**	**L**
14. Effect on non-threatened fauna?	However, this species is known to invade coastal areas (Groves et al, 2005; Faithfull, 2006) and is capable of forming extensive mats (Hilliard, 1977) which may displace food plants for some fauna species.	**ML**	**M**
15. Benefits fauna?	*G. rigens* is eaten (heavily damaged) by rabbits (Metzger & Weisberg, 2001). May provide food for some fauna species, but not enough information is available to determine this.	**M**	**L**
16. Injurious to fauna?	Taxonomic descriptions of *G. rigens* do not indicate that it has either spines or burrs (Webb et al, 1988).-Whilst is is eaten (heavily damaged) by rabbits (Metzger & Weisberg, 2001), there is not enough information to determine whether native fauna eat it, or if it is toxic.	**M**	**L**
Pest Animal			
17. Food source to pests?	*G. rigens* is eaten (heavily damaged) by rabbits (Metzger & Weisberg, 2001). A food source for a major pest.	**H**	**M**
18. Provides harbour?	A creeping groundcover, growing to 30cm high (Faithfull, 2006). Not recorded as harbouring pest species, but it may be capable of harbouring minor pest species such as rodents.	**ML**	**M**

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QUESTION	COMMENTS	RATING	CONFIDENCE
Agriculture			
19. Impact yield?	"Naturalised and may be a minor problem [in agricultural ecosystems] but not considered important enough to warrant control at any location" within Victoria (Groves et al, 2003). Gazanias are recorded as "a pretty bad weed on some South Australia farms" (Enviroweeds, 2002), however, this is likely to relate to *G. linearis*, as *G. rigens* is only found in coastal habitats in South Australia (D. Cooke, pers. Comm.).	**L**	**MH**
20. Impact quality?	Appears to be confined to coastal dunes (Groves et al, 2005; Faithfull, 2006; D. Cooke, pers. Comm.) and roadsides (Webb et al, 1988). Not a weed of agriculture.	**L**	**MH**
21. Affect land value?	Appears to be confined to coastal dunes (Groves et al, 2005; Faithfull, 2006; D. Cooke, pers. Comm.) and roadsides (Webb et al, 1988). Not a weed of agriculture.	**L**	**MH**
22. Change land use?	Appears to be confined to coastal dunes (Groves et al, 2005; Faithfull, 2006; D. Cooke, pers. Comm.) and roadsides (Webb et al, 1988). Not a weed of agriculture.	**L**	**MH**
23. Increase harvest costs?	Appears to be confined to coastal dunes (Groves et al, 2005; Faithfull, 2006; D. Cooke, pers. Comm.) and roadsides (Webb et al, 1988). Not a weed of agriculture.	**L**	**MH**
24. Disease host/vector?	Gazania species in general noted as a harbour for White Italian Snail, a crop and pasture contaminant (Enviroweeds, 2002), however, this species appears to be confined to coastal dunes (Groves et al, 2005; Faithfull, 2006; D. Cooke, pers. Comm.) and roadsides (Webb et al, 1988). Not a weed of agriculture.	**L**	**MH**