Impact Assessment Record

Scientific name: *Cortaderia selloana* (Shult. & Schult. F.) Asch. & Graebn. Common name: Pampas Grass

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	Each tussock can grow to 6m and several meters across, has serrated leaves and can invade riparian vegetation (Blood 2001). Dense infestations can block access to forestry plantations (Bossard, Randell & Hoshovsky 2000). Growth of pampas grass along tracks can block access (Atkinson 1997). Therefore growth of this species can result in tracks becoming impassable.	**H**	**MH**
2. Reduce tourism?	Reported to impact upon the aesthetics and recreational value of invaded conservation areas in California (Bossard, Randell & Hoshovsky 2000).	**H**	**MH**
3. Injurious to people?	The leaves are serrated and can cut the skin or cause irritation (Blood 2001).	**MH**	**MH**
4. Damage to cultural sites?	Reported to reduce the aesthetics in some areas of California (Bossard, Randell & Hoshovsky 2000).	**ML**	**MH**
Abiotic			
5. Impact flow?	Not reported to occur in flowing water.	**L**	**M**
6. Impact water quality?	Does occur in riparian vegetation and wetlands, no specific data reported on impact on water quality.	**M**	**L**
7. Increase soil erosion?	Used historically to stabilise soil, its root system can extend radially 4m and 3.5m deep (Blood 2001). Therefore there is a low probability that large scale soil movement would occur in association with this species.	**L**	**MH**
8. Reduce biomass?	Pampas is a large tussock forming grass that can grow to 6m, highly invasive after disturbance, dense infestations can seriously impede overstorey regeneration (Muyt 2001). Therefore while the pampas does contribute extra biomass, it can prevent regeneration after a disturbance event and cause an overall decrease in biomass.	**MH**	**M**
9. Change fire regime?	Can increase fire potential, by accumulating dry matter (Bossard, Randell & Hoshovsky 2000). Able to regrow after fire (Blood 2001). Invasion by the similar and closely related *C. jubata* has been shown to increase fire frequency (Lambrinos 2000). Unknown to what extent invasion by pampas can increase fire frequency or if it alters fire intensity.	**M**	**M**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Creekline Grassy Woodland (E); CMA= Glenelg Hopkins ; Bioreg= Dundas Tablelands; VH CLIMATE potential. Able to exclude most other ground flora species (Muyt 2001). Therefore major displacement within layer.	**MH**	**MH**

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(b) medium value EVC	EVC= Plains Sedgy Woodland (D); CMA= Glenelg Hopkins ; Bioreg= Dundas Tablelands; VH CLIMATE potential. Able to exclude most other ground flora species (Muyt 2001). Therefore major displacement within layer.	**MH**	**MH**
(c) low value EVC	EVC= Wet Heathland (LC); CMA= Glenelg Hopkins ; Bioreg= Glenelg Plain; VH CLIMATE potential. Able to exclude most other ground flora species (Muyt 2001). Therefore major displacement within layer.	**MH**	**MH**
11. Impact on structure?	Reported to completely alter the structure of invaded communities (Blood 2001). Can exclude most other ground flora, and seriously impede overtory regeneration (Muyt 2001).	**H**	**MH**
12. Effect on threatened flora?	No specific evidence	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	No specific evidence	**MH**	**L**
14. Effect on non-threatened fauna?	Reported to completely alter the structure of invaded communities (Blood 2001). Change in habitat structure and floristic composition, could impact upon food sources and available shelter and flowing on affect the composition of the fauna community. The level of impact has not however been quantified for pampas grass.	**M**	**L**
15. Benefits fauna?	Used as nesting sites by long-nosed bandicoot (Chambers & Dickman 2002).	**ML**	**H**
16. Injurious to fauna?	The leaves are serrated and can cut our skin and cause irritation (Blood 2001). Unknown how dangerous this would be to fauna species.	**M**	**L**
Pest Animal			
17. Food source to pests?	Goats will graze the species but it is not preferred (Lambert *et al* 1989; Pande, Kemp & Hodgson 2002). Therefore the species provides minimal food to pest species.	**L**	**MH**
18. Provides harbor?	Provides nest sites for European wasps and shelter for other pest animals (Blood 2001). Used as habitat by long nosed bandicoot (Chambers & Dickman 2002). Therefore it may also provide appropriate habitat for other small mammal species such as rabbits or foxes, however this is not confirmed.	**M**	**M**
Agriculture			
19. Impact yield?	Competes with forestry species, slowing growth and reducing establishment (Bossard, Randell & Hoshovsky 2000). After three years of growth, fertilised trees competing with pampas were approximately 100cm shorter than the control at 450cm, were only just more than half the diameter of approximately 80mm of the control and were less	**H**	**H**

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	than a quarter of the volume. Competition with pampas also resulted in a 9% mortality after 3 years compared with 0 for the control (Richardson *et al* 1996). Competition with pampas therefore causes a significant reduction in yield.		
20. Impact quality?	Unknown; it may have some impact in relation products of forestry.	**M**	**L**
21. Affect land value?	Unknown; it may have some impact in relation to areas of forestry.	**M**	**L**
22. Change land use?	Unknown; it may have some impact in relation to areas of forestry.	**M**	**L**
23. Increase harvest costs?	Invading areas of forestry pampas can prevent access and increases the fire hazard (Bossard, Randell & Hoshovsky 2000). In New Zealand the need to manage this species has increased costs by 144% (Blood 2001).	**H**	**MH**
24. Disease host/vector?	There is no evidence of this reported.	**L**	**M**