

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE						
1.CBD/SADGROVES SOUTH	FORESHORE	3- HIGH RISK, City activities, shopping, population density - HIGH littering	2- MEDIUM RISK, relatively small area for weeds to settle with major impact (cliffs).	4- VERY HIGH RISK through large developments Building activities	4 - VERY HIGH RISK from natural events, storms & wave action & man made foreshore infrastructure, walk ways	5 - EXTREME RISK, sea level rises & increase in severity & frequency of storms	2 - MEDIUM RISK, no heavy industry, pollutants restricted to commerce & residential households	3 - HIGH RISK, poor WO due to historical site use, current development & uncontrolled stormwater - potential contamination beach	Not applicable: native vegetation would be an asset rather than an impediment to the values of the foreshore.	1-LOW RISK, pests which could damage the foreshore & cliffs such as rabbits have not been identified at the foreshore	NOT APPLICABLE: very little fire hazards	3-HIGH RISK, significant development & incl. private ownership - restriction public access & construction on dunes, cliffs,	NOT APPLICABLE - Endangered fauna/flora and their management/ protection measures would provide negative impacts on foreshore.	2- MEDIUM RISK, heritage protection could in future impact/ restrict foreshore management and access.
	WILDLIFE CORRIDORS	2 MEDIUM RISK - , only small wildlife corridor in existence, litter unlikely to destroy value	5-EXTREME RISK, weed invasion can damage & out compete native species damaging habitat value	2-MEDIUM RISK, soils covering vegetation & erosion near stormwater outfalls leads to cliff slumps, erosion	3-HIGH RISK, erosion can loose habitat corridors primarily located on the cliffs.	5-EXTREME RISK, climate changes, sea level rises may change habitats irreversibly.	2-MEDIUM RISK, historic site use (i.e. petrol storage, wharfs) impacts soils & water which in turn impact vegetation growth.	3- HIGH RISK, historic land use leads to water/ groundwater contamination require further assessment	0- no RISK, beneficial	3-HIGH RISK, high-density urban area can contribute to spreading of introduced pests (fauna & flora)	5-EXTREME RISK, periodic wildfires damage vegetation	4-VERY HIGH RISK, significant pressure from new or development on remnant vegetation & habitats	0- NO RISK, beneficial	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	FLORA & FAUNA	2 MEDIUM RISK only small wildlife corridor in existence, litter unlikely to destroy value	5-EXTREME RISK, weed invasion can damage & out compete native species damaging habitat value	2-MEDIUM RISK, soils covering vegetation & erosion near stormwater outfalls leads to cliff slumps, erosion	3-HIGH RISK, erosion can loose habitat corridors primarily located on the cliffs.	5-EXTREME RISK, climate changes, sea level rises may change habitats irreversibly.	2-MEDIUM RISK, historic site use (i.e. petrol storage, wharfs) impacts soils & water which in turn impact vegetation growth.	3- HIGH RISK, historic land use leads to water/ groundwater contamination require further assessment	1-LOW RISKS, but large native trees can damage building	Not applicable	2-MEDIUM RISK, vandalism,	3-HIGH RISK, further assessment required	0- NO RISK,	0- NO RISK
	SACRED SITES	1-LOW RISK, TB assessed	TB assessed by indigenous communities (Donna)	TB assessed by indigenous communities (Donna)	TB assessed by indigenous communities (Donna)	TB assessed by indigenous communities (Donna)	TB assessed by indigenous communities (Donna)	TB assessed by indigenous communities (Donna)	TBA	TBA	TBA	TBA	TBA	TBA
	NATIVE VEGETATION COMMUNITIES /HABITAT	2-MEDIUM RISK, small area,	5-EXTREME RISK, small area left, significant impact expected from weeds	2-MEDIUM RISK, soils covering vegetation & erosion near stormwater outfalls leads to cliff slumps,	3-HIGH RISK, erosion can loose habitat corridors primarily located on the cliffs.	5-EXTREME RISK, climate changes, sea level rises may change habitats irreversibly.	3- HIGH RISK , historic use - further assessment required	3- HIGH RISK, historic land use leads to water/ groundwater contamination require further assessment	NOT APPLICABLE	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests (fauna & flora)	5-EXTREME, periodic wildfires damage vegetation	4-VERY HIGH RISK, significant pressure from new or re-development on remnant vegetation & habitats, some zoned Ports	0- NO RISK	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation & habitats for fire, erosion & weed management purposes
	HARBOUR - AQUATIC ENVIRONMENT	4- VERY HIGH RISK affects marine life, litter builds-up.	1-LOW RISK, aquatic weeds not identified at this stage & land weeds no impact	3-HIGH RISK, due to development activities in progress	1-LOW RISK, no significant aquatic habitats identified in that area	5-EXTREME RISK, climate changes, sea level rises may change habitats irreversibly.	3- HIGH RISK , historic use - further assessment required	3- HIGH RISK, historic land use leads to water/ groundwater contamination require further assessment	0- NO RISK, beneficial	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests (fauna & flora)	3-HIGH RISK, periodic wildfires damage vegetation. Fire assessment required.	3-HIGH RISK, fauna and flora survey required to determine species present	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	NT HERITAGE REGISTER: Administrators Office, Boab Tree Cavenagh Str, Brown's Mart, Christ Church Cathedral, Darwin Cenotaph, Red Cross Shop, Commonwealth Bank, Methodist Manse, Former Reserve Bank Building, Frog Hollow, Lyons Cottage, Government House, Naval Oil Tunnels, Old Admiralty House, State Square Banyon Tree, Steam Pump House, Stella Maris Hostel, 17 Shepherd Str., Town hall Ruins, Tree of Knowledge, Westpac Bank Mall	1-LOW RISK, not likely to damage buildings or individual trees	1-LOW RISK, not likely to damage buildings or individual trees	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected, generally located well away from erosion prone areas	3-HIGH RISK, climate change and sea level rises may inundate some sites. Increased cyclonic activities may lead to damage/destruction	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	0- NO RISK, beneficial	4- VERY HIGH RISK, High-density urban area & international vessels visits (Stokes Hill, Duck Pond) can contribute to spreading of introduced pests (fauna & flora)	NOT APPLICABLE	4-VERY HIGH RISK, period of intense development of Harbour, more intense use of Harbour	0- NO RISK	2- MEDIUM RISK, Heritage protection could in future impact/ restrict access for recreational and environmental management activities; in particular if a Heritage listed site is contributing to pollution load due to historic land use.
RECREATION	4- VERY HIGH RISK, affects recreation activities, possible injuries	2 - MEDIUM RISK, detract from recreation, safety & accessibility	1-LOW RISK, little impact expected	4- VERY HIGH RISK, Bicentennial Park lost bikeway to erosion 05/06	2- MEDIUM RISK, but largely unknown as the full effects of climate change are not understood.	3- HIGH RISK , historic use - further assessment required	2-MEDIUM RISK, water quality monitoring required in high use areas.	0- NO RISK, management practices prevent the establishment of potential invasive species	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests (fauna & flora)	0-NO RISK	3-HIGH RISK, increased activities and increasing intense use has potential impact of enjoyment	0- NO RISK	1-LOW RISK, unless recreational access is restricted sometime in future.	

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EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE									
1.CBD/SADGROVES SOUTH	TREES OF SIGNIFICANCE	1-LOW RISK, not likely to damage trees	2 - MEDIUM RISK, weed , climbing plants or fire from weed invasion damage tree	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	1- LOW RISK, significant tree audit required	1-LOW RISK, little impact expected	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISKS	1-LOW RISK, (vandalism, lightning strike)	3 - HIGH RISK due to development pressures and no legal protection	0- NO RISK	0- NO RISK	
	PARKS AND OPEN SPACE	5- EXTREME RISK, affects recreation activities, possible injuries, detract amenity	2-MEDIUM RISK, if current management regime	1-LOW RISK, little impact expected	2-MEDIUM RISK, collapse Bicentennial Parl early 06	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected. Treated water used for irrigation.	0- no RISK, management practices prevent the establishment of potential invasive species	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests (fauna & flora)	1-LOW RISK, (vandalism/lightning strikes likely causes of fires)	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	0- no RISK	1-LOW RISK, unless environmental management activities are restricted in future (fire, water, weed mgt)	
2.LARRAKEYAH/ CULLEN BAY	FORESHORE	3-HIGH RISK, popular public area, incl fishing results littering	4 –VERY HIGH RISK, due weeds impact on the small remnant vegetation areas left.	3-HIGH RISK, GPTs for sediments not in place.	4- VERY HIGH to 5 – EXTREME RISK, very much affected by coastal erosion.	4-VERY HIGH to 5- EXTREME RISK through sea level rises, global warming effects	3- HIGH RISK , historic boat maintenance Navy & Recreational vessels use - further assessment required	4- VERY HIGH RISK, historic land use, population density CBD, untreated Sewage outfall	Not applicable: native vegetation would be an asset rather than an impediment to the values of the foreshore.	1-LOW RISK, pests which could damage the foreshore & cliffs such as rabbits have not been identified at the foreshore.	1-LOW RISK, (vandalism/lightning strikes likely causes of fires)	3-high, significant development & incl. private ownership - restriction public access & construction on dunes, cliffs,	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict foreshore management and access.	
	NATIVE VEGETATION COMMUNITIES /HABITAT	2-MEDIUM RISK, very little remnant vegetation left, buildings to foreshore	5- EXTREME, unmanaged weed infestation may lead to the total loss of native vegetation areas.	3-HIGHRISK, GPTs for sediments not in place.	3-HIGH RISK, most native vegetation located in foreshore areas.	5-EXTREME RISK, climate changes, sea level rises may change habitats irreversibly.	3- HIGH RISK , historic boat maintenance Navy & Recreational vessels use - further assessment required	3- HIGH RISK, good WQ essential for Mangrove habitats, historic land use & stormwater system may impact quality	NOT APPLICABLE.	3-HIGHRISK, High-density urban area can contribute to spreading of introduced pests (fauna & flora)	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGHRISK, for upper Bicentennial Park periodic wildfires damage vegetation. Fire assessment required.	3-HIGHRISK, VERY small remnant vegetation habitats left in this highly urbanised area.	0- no RISK, beneficial	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	FLORA & FAUNA	4 –VERY HIGH RISK, native fauna largely unknown, VERY little remnant vegetation threatened by litter from densely populated CBD	4 –VERY HIGH RISK, due weeds impact on the small remnant vegetation areas left. Mangrove areas are of particular importance to fauna & should be managed weed free	3-HIGH RISK, uncontrolled sediment discharges from stormwater can smother Mangroves & groundcovers.	3-HIGH RISK, the small remnant vegetation areas left. Mangrove areas are of particular importance to fauna.	5-EXTREME RISK, climate changes, sea level rises may change habitats irreversibly.	2-MEDIUM RISK, no known threatened species & very little terrestrial industry (other than historic)	3- HIGH RISK, good WQ essential for Mangrove habitats, historic land use & stormwater system may impact quality	NOT APPLICABLE.	4-VERY HIGH RISK, pests species, including weeds & invasive exotic plants, cane toads, wild cats/dogs have serious impact on native fauna and flora.	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGHRISK, for upper Bicentennial Park periodic wildfires damage vegetation. Fire assessment required.	3-HIGH RISK, fauna and flora survey required to determine species present	0- no RISK, beneficial	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna patterns)	
	DOCTORS GULLY AQUATIC RESERVE	4- VERY HIGH RISK, popular tourist spot, fish feeding, no GPT: pollution from stormwater	1-LOW RISK terrestrial weeds unlikely to pose a threat to Doctors Gully aquatic environment. Aquatic weeds unknown. Aquatic: TB investigated further.	4 –VERY HIGH RISK, sediment discharges from CBD,	4 –VERY HIGH RISK little controlled public access an issue, erosion from uncontrolled stormwater.	5- EXTREME RISK through sea level rises, global warming effects	2-MEDIUM RISK, no known threatened species & very little terrestrial industry (other than historic)	4- VERY HIGH RISK, fish feeding add nutrients	NOT APPLICABLE.	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests (fauna & flora)	1-LOW RISK, no significant fuel loads in this area	2-MEDIUM RISK, inappropriate future tourist development could impact directly on the aquatic/ foreshore values of Doctors Gully.	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	Not Applicable	
	TREES OF SIGNIFICANCE	1-LOW RISK, not likely to damage trees	1-LOW RISK, not likely to damage trees	3-HIGH RISK, the Ficus at Doctors Gully is located on erosion affected escarpment & is at some RISK	3-HIGH RISK, the Ficus at Doctors Gully is located on erosion affected escarpment & is at some RISK. Other Trees of Significance must be audited to ascertain RISK level.	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK	1-LOW RISK, (vandalism, lightning strike)	3 - HIGH RISK due to development pressures and no legal protection.	NOT APPLICABLE	0- NO RISK	
CULLEN BAY MARINA	4- VERY HIGH RISK, popular tourist spot, litter from boats	1-LOW RISK for terrestrial, manicured parklands prevail.	3-HIGH RISK, uncontrolled sediment discharges from	2-MEDIUM RISK, foreshore erosion within the Marina through wave action	4-VERY HIGH RISK, low lying area, sea level rises unknown at	3- HIGH RISK, restaurant district, boat maintenance, Recreational	4- VERY HIGH RISK, boat moorings & maintenance	NOT APPLICABLE.	4-VERY HIGH RISK, particularly from aquatic pests introduced through	1-LOW RISK, no significant fuel loads in this area	1-LOW RISK, man made, highly developed (intense residential land use)	NOT APPLICABLE	NOT APPLICABLE		

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		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
2.LARRAKEYAH/ CULLEN BAY			Aquatic: unknown TB investigated further	stormwater. New development still contributes to sediment erosion loads.		this stage	vessels use - further assessment required.	activities in marina & stormwater discharges from dense residential /commercial development back directly on Marina		boat traffic		area		
	PARKS AND OPEN SPACE	3- HIGH RISK, affects recreation activities, possible injuries	2-MEDIUM RISK, if current management regime in retained	1- LOW RISK, parks largely unaffected by sedimentation from stormwater	2-MEDIUM RISK, collapse Bicentennial Parl early 06	1-LOW RISK, little impact expected	1-LOW RISK, little impact expected	1-LOW RISK, Parks irrigated with treated water, quality of surface water during wet may cause some problems in specific locations.	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests (introduced & exotic fauna & flora)	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for upper Bicentennial Park periodic wildfires damage vegetation. Fire assessment required.	4 – VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	1-LOW RISK, unless environmental management activities are restricted in future (fire, water, weed mgt)
	NT HERITAGE REGISTER: Peel's Well at Doctors Gully	2- MEDIUM RISK, popular tourist spot, fish feeding, no GPT: pollution from stormwater	1-LOW RISK, terrestrial weeds unlikely to pose a threat to Peel's Well aquatic environment. Aquatic weeds unknown.	1-LOW RISK, impacts not expected	4 –VERY HIGH RISK little controlled public access an issue, erosion from sea could lead to loss.	5- EXTREME RISK through sea level rises, global warming effects	2-MEDIUM RISK, no known threatened species & very little terrestrial industry (other than historic)	4- VERY HIGH RISK, fish feeding add nutrients. No Water Quality monitoring at this high use site.	NOT APPLICABLE.	4-VERY HIGH RISK, particularly from aquatic pests introduced through boat traffic	1-LOW RISK, no significant fuel loads in this area	1-LOW RISK, man made, highly developed (intense residential land use) area	NOT APPLICABLE	NOT APPLICABLE
3. MINDIL BEACH/BULLOCKY POINT	FORESHORE (listed on national estate)	4- VERY HIGH RISK, popular tourist spot, Market, camping	4- VERY HIGH RISK, high traffic, access disturbances & stormwater discharges from large catchment bring weeds to the area.	4- VERY HIGH RISK , Through significant development & Building activities	4- VERY HIGH to 5 – EXTREME RISK, very much affected by coastal erosion.	4-VERY HIGH to 5- EXTREME RISK through sea level rises, global warming effects.	2-MEDIUM RISK overall, but 3-HIGH RISK in Stuart Park area due to historic use of sites	3- HIGH RISK to 4- VERY HIGH RISK from Market activities & Stuart Park's light industrial areas.	NOT APPLICABLE: native vegetation would be an asset rather than an impediment to the values of the foreshore.	2-MEDIUM RISK, predominately beach front areas which could be damaged by pest species both fauna & flora (i.e. weeds, wild cats/dogs)	3-HIGHRISK, Known weed infestations at Bullocky Point cliffs and Mindil foreshore could lead to hot fires.	5-EXTREME RISK, significant development & incl. private ownership - restriction public access & construction on dunes, cliffs. Development proposed at Little Mindil has the potential to prevent public assess to foreshore and impede environmental management in the area.	0- NO RISK, beneficial	2- MEDIUM RISK, heritage protection could in future impact/ restrict foreshore management and access.
	BOTANIC GARDENS	2- MEDIUM RISK, well managed but little bin infrastructure provided to the many visitors	2- MEDIUM RISK well managed but many exotic species which have the potential to be distributed to other native habitat areas.	2-MEDIUM RISK, catchment stormwater largely diverted away from the site.	NOT APPLICABLE does not include a foreshore area.	2- MEDIUM RISK, some fauna and flora species are under threat (may disappear) from higher temperatures but others will benefit. More frequent & stronger cyclones may also impact on fauna & flora.	2-MEDIUM RISK, mostly from pollution originating from Service Stations and workshops.	3-HIGH RISK, mostly from pollution originating from Service Stations and workshops. Fertiliser, herbicide & pesticide use as well as storm water discharges impact on Water Quality in the area.	NOT APPLICABLE highly managed	2-MEDIUM RISK, good overall pest management but adjacent high density urban area can contribute to spreading of introduced pests	1-LOW RISK, for majority of the Botanic Gardens (vandalism, lightning strike) but 2- MEDIUM RISK of fires in non-irrigated, open woodland areas.	0-NO RISK	0- NO RISK, beneficial	NOT APPLICABLE
	TREES OF SIGNIFICANCE	1-LOW RISK, litter not likely to damage trees	1- LOW RISK, significant tree audit required	1- LOW RISK, significant tree audit required	3- HIGH RISK for the Beach & escarpment Tamarinds & <i>Allosyncarpia ternata</i> located in eroding areas. Significant tree audit required	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1- LOW RISK, identified trees are not in areas affected by light industrial activities. significant tree audit required	1-LOW RISK, little impact expected. Treated water used for irrigation.	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistle toe infestation or borer	1-LOW RISK, (vandalism, lightning strike)	4-VERY HIGH RISK, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK
	PARKS AND OPEN SPACE	3-HIGH RISK, bin infrastructure in place but not at all locations (Little Mindil) Littering problem due to	3-HIGH RISK, well managed but multiple ownership leads to little weed mgt coordination. RISK remains from	3-HIGH RISK, large soil erosion areas at upper Gardens through uncontrolled stormwater	4- VERY HIGH to 5 – EXTREME RISK, very much affected by coastal erosion & uncontrolled stormwater	3-HIGH RISK, through sea level rises, global warming effects (cyclones, higher temperatures,	2-MEDIUM RISK, mostly from pollution originating from Service Stations and workshops.	3-HIGH RISK, mostly from pollution originating from Service Stations and workshops.	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, high-density urban area can contribute to spreading of introduced pests (introduced & exotic	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for remnant vegetation	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on	1-LOW RISK largely based on competition between recreational uses or environmental and	1-LOW RISK, unless environmental management activities are restricted in future

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		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE			
3. MINDIL BEACH/BULLOCKY POINT		HIGH use, popular recreational areas (Mindil, Museum, Football ovals etc)	HIGH traffic, access disturbances & stormwater discharges from large catchment bring weeds to the area.	discharges from CBD/ Smith Street system in particular.	discharges from suburbs.	rainfall intensities/ draughts)		Fertiliser, herbicide & pesticide use as well as storm water discharges impact on Water Quality in the area.		fauna & flora)	at escarpment parks and adjacent to the Darwin high School.	open space issues. Briefing required on new legislation & Planning Scheme	heritage/cultural management requirements	(fire, water, weed mgt)
	NATIVE VEGETATION COMMUNITIES /HABITAT	3- HIGH RISK, litter significant from itinerants and recreational activities.	4- VERY HIGH RISK, high traffic, access disturbances & stormwater discharges from large catchment bring weeds to the area.	4- VERY HIGH, significant sediment accumulation from stormwater discharges	4- VERY HIGH to 5 – EXTREME RISK, very much affected by coastal erosion. Remnant vegetation habitats are largely confined to foreshore areas.	4-VERY HIGH RISK, through sea level rises, global warming effects (cyclones, higher temperatures, rainfall intensities/ draughts)	2-MEDIUM RISK, mostly from pollution originating from Service Stations and workshops.	3-HIGH RISK, mostly from pollution originating from Service Stations and workshops. Fertiliser, herbicide & pesticide use as well as storm water discharges impact on Water Quality in the area	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, high density urban area can contribute to spreading of introduced pests into very small remnant vegetation habitats.	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for remnant vegetation at escarpment parks and adjacent to the Darwin High School.	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	0- NO RISK, beneficial	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	NT HERITAGE REGISTER: Darwin Botanic Gardens and Naval Victualling Yards HERITAGE BUILDINGS: Burnett & Mines House	1-LOW RISK, litter not likely to be a risk but eyesore at Naval Victualling Yards. See Botanic Gardens for Risk assessment	1-LOW RISK, weeds not likely to be a risk at Naval Victualling Yards managed sites. See Botanic Gardens for Risk assessment	1-LOW RISK, sediment and soil erosion unlikely to damage Naval Victualling Yards. See Botanic Gardens for Risk assessment	2- MEDIUM RISK, heritage buildings, including Burnett & Mines House is located well away from erosion prone areas. Naval Victualling Yards Could be impacted by foreshore erosion. See Botanic Gardens for Risk assessment	3-HIGH RISK, Cyclone damage and sea level rises. See Botanic Gardens for Risk assessment	1-LOW RISK, industrial/ commercial pollution not likely to affect buildings See Botanic Gardens for Risk assessment	1-LOW RISK, poor water quality is unlikely to impact on heritage buildings or Naval Yards unless pH is of a very acidic nature. Review Water Quality monitoring results for the area. See Botanic Gardens for Risk assessment	1-LOW RISKS, invasive/aggressive native vines/trees need to be managed to prevent damage to buildings	NOT APPLICABLE	2-MEDIUM RISK, vandalism	3-HIGH RISK, further assessment required	NOT APPLICABLE	0- no RISK
	FAUNA & FLORA (RARE PLANT <i>CRATEVA RELIGIOSA</i>)	2-MEDIUM RISK, litter not likely to damage vegetation but may lead to wildfires which do.	5- EXTREME RISK, fire and competition from weeds pose a serious threat to rare plants in particular	4- VERY HIGH RISK, significant sediment accumulation from stormwater discharges	4- VERY HIGH RISK, very much affected by coastal erosion. Significant habitats are largely confined to foreshore areas.	4-VERY HIGH RISK, through sea level rises, global warming effects (cyclones, higher temperatures, rainfall intensities/ draughts)	2-MEDIUM RISK, mostly from pollution originating from Service Stations and workshops	3-HIGH RISK, mostly from pollution originating from Service Stations and workshops. Fertiliser, herbicide & pesticide use as well as storm water discharges impact on Water Quality in the area	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGHRISK, High-density urban area can contribute to spreading of introduced pests into very small remnant vegetation habitats	3-HIGHRISK through wildfires, fires by illegal camping & vandalism	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	0- NO RISK, beneficial	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	SACRED SITE	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
4.VESTEYS BEACH/FANNIE BAY	FORESHORE(listed on National Estate)	3-HIGH RISK, very popular tourist & recreational area	4- VERY HIGH RISK, high traffic, access disturbances & stormwater discharges from large catchment bring weeds to the area.	3-HIGH RISK, sediment loads from stormwater system have potential for near shore impacts.	4- VERY HIGH RISK, Through significant development & Building activities. (Foreshore walkway)	4-VERY HIGH to 5- EXTREME RISK through sea level rises, global warming effects.	2-MEDIUM RISK, mostly from pollution originating from Service Stations, sailing Club, workshops.	2-MEDIUM RISK, mostly from pollution originating from Service Stations, sailing Club, workshops.	0- no RISK	3-HIGHRISK, High-density urban area can contribute to spreading of introduced pests into very small remnant vegetation habitats	1-LOW RISK ask pollution starves water of oxygen	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme. Significant development & incl. private ownership - may restriction public access & construction on dunes, cliffs.	1-LOW RISK largely based on competition between recreational uses or heritage/cultural management requirements	1-LOW RISK, unless environmental management activities are restricted in future (fire, water, weed mgt)
	PALMERSTON CEMETERY	1-LOW RISK, access controlled area, little visitation. managed	1-LOW RISK modified mowed grass & rocky areas little risk of significant weed infestations.	0 - no impact expected	NOT APPLICABLE	0- not impact expected	0- not impact expected	0- not impact expected	1-LOW RISKS, invasive/aggressive native vines/trees	2-MEDIUM, managed but High-density urban area can contribute to spreading of introduced pests.	1-LOW RISK, vandalism, arson	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE, heritage protected
	TREES OF SIGNIFICANCE	1-LOW RISK, little potential for impact	1- LOW RISK, significant tree	NOT APPLICABLE	NOT APPLICABLE	3-HIGHRISK, climate change	1-LOW RISK, little impact expected.	1-LOW RISK, little impact expected.	1-LOW RISKS, invasive/aggressive	1-LOW RISK confined primarily to	1-LOW RISK, vandalism, lightning	4-VERY HIGH RISK, no formal	NOT APPLICABLE	0-NO RISK

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE									
4.VESTEYS BEACH/FANNIE BAY		on Tree.	audit required			(cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	Tree located near Bowls Club little industry activity.	Treated water used for irrigation.	native vines/trees	mistletoe infestation or borer	strike	legal protection for significant trees			
	NATIVE VEGETATION COMMUNITIES /HABITAT	3-HIGH RISK, litter not likely to damage vegetation but may lead to wildfires which do.	3-HIGH RISK, weed mapping required	3-HIGH RISK, sedimentation impacts on wetlands & small remnant native habitats the issue	4-VERY HIGH RISK, very little natural habitat left in the area. Potential erosion may loose this area	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of the vegetation, particularly the trees.	2-MEDIUM RISK, mostly from pollution originating from Service Stations, sailing Club, workshops.	2-MEDIUM RISK, mostly from pollution originating from Service Stations, sailing Club, workshops.	0- NO RISK, beneficial	3-HIGH RISK, High-density urban area can contribute to spreading of introduced pests into very small remnant vegetation habitats	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for remnant vegetation	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	REGISTER OF NATIONAL ESTATE : FORESHORE	3-HIGH RISK, the foreshore is a very popular tourist & recreational area	4- VERY HIGH RISK, high traffic, access disturbances & stormwater discharges from large catchment bring weeds to the area.	3-HIGH RISK, sedimentation impacts on foreshore & small remnant native habitats the issue	4-VERY HIGH RISK, very little natural habitat left in the area. Potential erosion may loose this area	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the integrity of buildings & foreshore.	2-MEDIUM RISK, mostly from pollution originating from Service Stations, sailing Club, workshops	2-MEDIUM RISK, mostly from pollution originating from Service Stations, sailing Club, workshops	0- NO RISK	3-HIGH RISK, High-density urban area can contribute to spreading of introduced pests into very small remnant vegetation habitats	1-LOW RISK ask pollution starves water of oxygen	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	PARKS AND OPEN SPACE	3-HIGH RISK, very popular tourist & locals, bird watchers recreational area	3-HIGH RISK, weed mapping required. Grass areas Parks managed but large bushland at Bullocky Point at RISK.	3-HIGH RISK, sedimentation impacts on coastal wetlands	3-HIGH RISK, erosion prone foreshore close to parkland (Sailing Club)	4-VERY HIGH RISK, through sea level rises, global warming effects (cyclones, higher temperatures, rainfall intensities/ draughts)	3-HIGH RISK, Parks catchment for stormwater. Mostly from pollution originating from stormwater discharges from Service Stations, sailing Club, workshops.	3-HIGH RISK, Parks catchment for stormwater. Mostly from pollution originating from stormwater discharges from Service Stations, sailing Club, workshops.	0- NO RISK	3-HIGH RISK, High-density urban area can contribute to spreading of introduced pests into Parks and the very small remnant vegetation habitats	1-LOW RISK overall due to lack of substantial native vegetation, and managed parks however 3-HIGH RISK, for remnant vegetation	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	1-LOW RISK, unless environmental management activities are restricted in future (fire, water, weed mgt)	
5.DINAH BEACH/STUART PARK	FORESHORE	4-VERY HIGH RISK, industrial litter/rubbish incl. Batteries, paint drums, Oils	2-MEDIUM RISK, overall risk from weed seed road verges.	5-EXTREME RISK, largely modified area & light industry nearby. Potential commercial development at Duck Pond will increase sedimentation	2-MEDIUM RISK, however the planned and already completed man made seawalls & other infrastructure can lead to serious foreshore erosion elsewhere.	4-VERY HIGH to 5-EXTREME RISK through sea level rises, global warming effects.	4-VERY HIGH to 5-EXTREME, through historic land use, tank farms, shipyards etc.	4-VERY HIGH to 5-EXTREME, through historic land use, tank farms, shipyards etc.	0- NO RISK	3-HIGH RISK, affected by cats, dogs, cane toad, weeds.	1-LOW RISK ask pollution starves water of oxygen	5-EXTREME RISK, subject to intense re-development with little identification of future open spaces/mangroves to be preserved	1-LOW RISK largely based on competition between recreational uses or environmental and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	DUKE STREET RAINFOREST	3-HIGH RISK, close proximity to commercial outlets.	4- VERY HIGH RISK, small remnant rainforest area, weed infestation could lead to fire, managed area (landcare)	1-LOW RISK, stabilised, managed site at top of catchment. Litter impact from urban stormwater expected.	NOT APPLICABLE	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these rainforest trees.	2-MEDIUM RISK, stormwater run-off from Stuart Highway.	2-MEDIUM RISK, stormwater run-off from Stuart Highway	1-LOW RISKS, invasive/aggressive native vines/trees	4-VERY HIGH RISK, to 3-HIGH RISK, affected by cats, dogs, cane toad, weeds, stormwater inputs incl aquarium pests.	5-EXTREME RISK, weed invasion could lead to high intensity fires damaging sensitive rainforest vegetation irreparably.	4-VERY HIGH extensive high density re-development has the potential for significant impact on the Duke Street Rainforest	NOT APPLICABLE	NOT APPLICABLE	
	PARKS AND OPEN SPACE	2-MEDIUM RISK, Parks maintained grassland. Little recreation activities.	2-MEDIUM RISK, actively weed managed parklands	2-MEDIUM RISK, LOW lying parks act as sediment traps for urban/ light industry stormwater discharges	NOT APPLICABLE	1-LOW RISK, small, maintained park area little used.	2-MEDIUM RISK, stormwater run-off from Stuart Highway	2-MEDIUM RISK, stormwater run-off from Stuart Highway	0- NO RISK, BENEFICIAL	3-HIGH RISK, High-density urban area can contribute to spreading of introduced pests such as weeds cats, dogs	1-LOW RISK overall due to lack of substantial native vegetation, in managed parks, however 3-HIGH RISK, for remnant vegetation	5-EXTREME RISK, subject to intense re-development with little identification of future open spaces/mangroves to be preserved	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	TREES OF SIGNIFICANCE	1-LOW RISK, little potential for impact on Tree. Audit required.	1-LOW RISK, small risk from strangler species (mistletoe etc)	1-LOW RISK pending Audit outcomes	1-LOW RISK pending Audit outcomes	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1-LOW RISK pending Audit outcomes	1-LOW RISK pending Audit outcomes	0- NO RISK	1 LOW RISK	1-LOW RISK vandalism and lightning strikes	4-VERY HIGH RISK, no formal legal protection for significant trees	NOT APPLICABLE	NOT APPLICABLE	
	NATIVE VEGETATION COMMUNITIES /HABITAT	2-MEDIUM RISK, Mangroves primarily at risk from	3-HIGH RISK, small remnant vegetation habitats at RISK	2-MEDIUM RISK, LOW lying parks act as sediment traps	2-MEDIUM RISK, Mangrove areas primarily	3-HIGH RISK, climate change (cyclones/higher	4-VERY HIGH to 5-EXTREME, through historic land use,	4-VERY HIGH to 5-EXTREME, through historic land use,	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, affected by cats, dogs, cane toad,	1-LOW RISK, vandalism, lightning strike	4-VERY HIGH RISK no formal legal protection for	1-LOW RISK largely based on competition	1-LOW RISK, unless public access or	

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EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE									
5. DINAH BEACH/STUART PARK		windblown, stormwater/recreational fishing litter/ rubbish	from weed invasion.	for urban/ light industry stormwater discharges		temperatures/erosion) sea level rises in LOW lying areas.	tank farms, shipyards etc	tank farms, shipyards etc		weeds, stormwater inputs incl aquarium pests.		significant trees	between recreational uses or environmental and heritage/cultural management requirements	environmental management activities are restricted in future (fire, water, weed mgt)	
	FLORA & FAUNA	2-MEDIUM RISK, Mangroves primarily at risk from windblown, stormwater/recreational fishing litter/ rubbish	3-HIGH RISK, small remnant vegetation habitats at RISK from weed invasion.	2-MEDIUM RISK, low lying parks act as sediment traps for urban/ light industry stormwater discharges	2-MEDIUM RISK, Mangrove areas primarily	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	3-HIGH RISK, stormwater pollution & historic land use	3-HIGH RISK, stormwater pollution & historic land use	0- NO RISK, beneficial	3-HIGH RISK, affected by cats, dogs, cane toad, weeds	1-LOW RISK overall due to lack of substantial native vegetation habitats, however 3-HIGH RISK, for remnant vegetation habitats and native fauna	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	NOT APPLICABLE	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna patterns)	
	CHINESE CEMETERY	1-LOW RISK, managed area	1-LOW RISK, managed area	1-LOW RISK, managed area	1-LOW RISK, managed area	1-LOW RISK, managed area	1-LOW RISK, managed area	1-LOW RISK, managed area	1-LOW RISK, managed area	0- NO RISK, beneficial	NOT APPLICABLE	NOT APPLICABLE	1-LOW RISK, no development pressure at this time	NOT APPLICABLE	NOT APPLICABLE
	ONE MILE DAM	5-EXTREME RISK, all stormwater passes through one-mile dam, no maintenance.	5-EXTREME RISK, all stormwater passes through one-mile dam which is heavily weed infested & largely unmanaged.	5-EXTREME RISK, all stormwater passes through one-mile dam infested & largely unmanaged.	NOT APPLICABLE	1-LOW RISK, little impact expected from rising sea levels or cyclonic activities.	5-EXTREME RISK, largely used as stormwater detention pond by surrounding industry (historic & present)	5-EXTREME RISK, largely used as stormwater detention pond by surrounding industry (historic & present)	0- NO RISK, beneficial	4-VERY HIGH RISK, to 3-HIGH RISK, affected by cats, dogs, cane toad, weeds, stormwater inputs incl aquarium pests.	4-VERY HIGH RISK, for fire damage due to heavy weed infestation	4-VERY HIGH extensive high density re-development has the potential for significant impact	NOT APPLICABLE	NOT APPLICABLE	
6. SADGROVES CREEK/ BAYVIEW SOUTH	FORESHORE	2-MEDIUM RISK, Litter carried by stormwater from urban areas. The urban area is small relative to the mangrove area. Potential for litter accumulation on mangrove fringe	1-LOW RISK. The salt tolerant plant pond apple (<i>Annona glabra</i>) is a weed of national significance, though not declared in the NT. This weed is present in the mangroves of Rapid Creek and being eradicated. There is a low risk that the plant will be spread from this infestation.	2-MEDIUM RISK The amount of sediment (kg/ha) from urban areas is high. Because the urban catchment is small, the risk of impact is mitigated. Possible sedimentation of tidal creeks due to past reclamation of upper reaches of these creeks.	3-HIGH RISK. A large part of the foreshore is protected by man-made Marina structures and remnant Mangroves along the mouth of Sadgroves Creek. However, new and re-development activities such as reclamation of mangroves present a high risk in the short and medium term.	4-VERY HIGH to 5-EXTREME RISK through sea level rises, global warming effects	4-VERY HIGH RISK, through light industry and marina land use and stormwater discharge,	4-VERY HIGH RISK, through light industry urban and marina land use and disturbed Acid Sulfate Soils etc	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, affected by cats, dogs, weeds	1-LOW RISK ask pollution starves water of oxygen	5-EXTREME extensive high density re-development has the potential for significant impact. Some mangrove areas in private ownership and no indication of preservation of open space and foreshore public access.	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	PLACE OF CULTURAL SIGNIFICANCE: O'Farrell's Rock	1-LOW RISK, little impact expected on this small but significant archaeological site.	2-MEDIUM, known weed invasion, weed seeds spreading to nearby urban areas	2- MEDIUM RISK largely unmanaged area; frequent fires expose soil to erosion, particularly during the wet season.	1-LOW RISK, well away from the immediate erosion prone area.	1-LOW RISK, Potential impacts restricted to cyclonic activities and severe sea level rises	1-LOW RISK, little impact expected	2-MEDIUM RISK, disturbance of Acid Sulfate Soils during development presents the greatest RISK.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	1-LOW RISK, no development pressure at this time	NOT APPLICABLE	NOT APPLICABLE	
	PARKS & OPEN SPACE	1- LOW RISK Managed areas.	2-MEDIUM, known weed invasion. Parks managed	1-LOW RISK, highly managed grass areas.	1-LOW RISK, well away from the immediate erosion prone area.	1-LOW RISK, Potential impacts restricted to cyclonic activities and severe sea level rises	1-LOW RISK, managed area	1-LOW RISK, managed area	0- no RISK, beneficial	3-HIGH RISK, affected by cats, dogs, weeds	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for small areas of remnant vegetation	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	FAUNA AND FLORA	2- MEDIUM RISK Litter carried by stormwater from urban, light industrial areas to mangroves and Harbour	2-MEDIUM, known weed invasion, weed seeds spreading to nearby urban areas	2-MEDIUM RISK, Sedimentation from urban/light industry stormwater run-off present a RISK to Mangroves and remnant coastal monsoon rainforest habitat pockets	3-HIGHRISK New and re-development activities such as reclamation of mangroves present a HIGHRISK for remnant flora and fauna habitats.	4-VERY high, global warming effects have the potential to impact severely on flora and fauna species. Effects largely unknown	4-VERY high, through light industry urban and marina land use, etc	4-VERY high, through light industry urban and marina land use and disturbed Acid Sulfate Soils etc	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, affected by cats, dogs, weeds	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for small remnant vegetation habitats and native fauna with little alternate habitat choices.	5-EXTREME extensive high density re-development has the potential for significant impact. Some mangrove areas in private ownership and no indication of	NOT APPLICABLE	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna	

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Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
6. SADGROVES CREEK/ BAYVIEW SOUTH	NATIVE VEGETATION COMMUNITIES /HABITAT	2- MEDIUM RISK Litter carried by stormwater from urban, light industrial areas to mangroves and Harbour.	4- VERY HIGH RISK Identified high weed area by Rangers, Weed experts. EMU 7, 8 and 9 area priorities for integrated and co-ordinated weed management in 2006. A weed management plan is being prepared in a partnership approach between Greening Australia, National Park Rangers, NT Government Weed Officers, Crown land officers and DCC.	2-MEDIUM RISK, Sedimentation from urban/light industry stormwater run-off present a risk to Mangroves and remnant coastal monsoon rainforest pockets	3-HIGHRISK New and re-development activities such as reclamation of mangroves present a high risk for small remnant native vegetation communities.	3-HIGHRISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of the vegetation, particularly the monsoon rainforest trees.	4-VERY HIGH RISK, through light industry urban and marina land use, etc	4-VERY HIGH RISK, through light industry urban and disturbed Acid Sulfate Soils etc	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK, affected by cats, dogs, weeds	1-LOW RISK overall due to lack of substantial native vegetation, however 3-HIGH RISK, for small remnant vegetation habitats	5-EXTREME extensive high density re-development has the potential for significant impact. Some mangrove areas in private ownership and no indication of preservation of open space and foreshore public access.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	REGISTER OF NATIONAL ESTATE: Francis Bay explosives complex, Railway House	1-LOW RISK, little impact from litter expected	2-MEDIUM RISK, known weed invasion nearby present fire RISK	1-LOW RISK, little impact from sediment erosion expected.	1-LOW RISK, located well away from erosion prone areas.	1-LOW RISK, Potential impacts restricted to cyclonic activities and severe sea level rises	2-MEDIUM RISK, managed area but explosive area could present a risk in itself	2-MEDIUM RISK, managed area but explosive area could present a risk in itself to water quality.	1-LOW RISK, dense reestablishment of native vegetation could increase fire risk.	NOT APPLICABLE	1-LOW RISK through vandalism and lightning strike	1-LOW RISK, no development pressure at this time	NOT APPLICABLE	NOT APPLICABLE
	MANGAL TRADITIONAL FOOD SOURCE	2- MEDIUM RISK from litter but some RISK from light industry rubbish.	2-MEDIUM RISK, aquatic weeds largely unknown, boating traffic at Bayview Marina has the potential to introduce weeds from elsewhere.	3-HIGH RISK, sediments/soils from urban/light industrial stormwater run-off and Bayview Marina boat maintenance activities could result in bioaccumulation of contaminants	3- HIGH RISK, foreshore and mangrove reclamation through new development present a RISK for Mangal.	1-LOW RISK, Potential impacts restricted to global warming and associated habitat changes. LOW RISK expected but largely unknown.	4-VERY HIGH RISK, through light industry urban and marina land use, etc	4-VERY HIGH RISK, through light industry urban and marina land use, etc	0- NO RISK, beneficial	3-HIGH RISK, affected by introduced pests from shipping.	1-LOW RISK ask pollution starves water of oxygen	3-HIGH RISK impacts expected from Increased coastal development and associated land reclamation	NOT APPLICABLE	NOT APPLICABLE
7. SADGROVES CREEK/ WINNELLIE WEST	MANGROVE COMMUNITIES	2-MEDIUM RISK, litter carried by stormwater from urban areas. the urban area is small relative to the mangrove area. potential for litter accumulation on mangrove fringe.	1-LOW RISK. the salt tolerant plant pond apple (<i>annona glabra</i>) is a weed of national significance, though not declared in the nt. this weed is present in the mangroves of rapid creek and being eradicated. there is a low risk that the plant will be spread from this infestation.	2-MEDIUM RISK the amount of sediment (kg/ha) from urban areas is high. because the urban catchment is small, the risk of impact is mitigated. possible sedimentation of tidal creeks due to past reclamation of upper reaches of these creeks.	1-LOW RISK. a large part of the foreshore is contained in Charles Darwin national park with low risk of anthropogenic erosion. sedimentation of the tidal creek however has probably occurred with the reclamation mangroves.	3-HIGH RISK. AT risk of impact from cyclonic damage due to the increased frequency of cyclones. rises in sea level will also impact may alter the mangrove area and community composition.	3-HIGH RISK. stormwater from the industrial and urban areas carry pollutants. the mangroves sediments are the most likely point of pollutant deposition. mediated by large mangrove area relative to the urban catchment.	3-HIGH RISK. stormwater pollution from the industrial & urban areas. pollution deposition in the mangrove sediments are the most likely. mediated by large mangrove area relative to the urban catchment. impacts from increased freshwater may result in mangrove composition changes.	0- NO RISK	2- MEDIUM RISK affected by introduced pests from shipping.	1-LOW RISK ask pollution starves water of oxygen	4-VERY HIGH Development, including land filling has and continues to be a serious risk to Mangroves.	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	CHARLES DARWIN NATIONAL PARK	2-MEDIUM RISK. Litter from urban & industrial areas migrates through stormwater and wind into the National Park. No GPTs in this area.	2-MEDIUM to 3-HIGH RISK Managed parkland, though a large area which cannot be surveyed for weeds. Closeness to weed infestations in urban area puts the park at risk.	2- MEDIUM RISK restricted to bush paths and tracks. Requires management.	1-LOW RISK. Foreshore protected by mangroves.	3- HIGH RISK. At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	3- HIGH RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3- HIGH RISK. Stormwater pollution from the industrial & urban areas. Pollution deposition in the mangrove sediments are the most likely. Mediated by large mangrove area relative to the urban catchment. Impacts from increased	1-LOW RISK from invasive species (monoculture)	2- MEDIUM RISK At RISK from feral animals, notably cats and the cane toad	4 - VERY HIGHRISK Increased frequency of fires, particularly in weed infested woodland.	1-LOW RISK Mangroves in Charles Darwin National Park protected under a conservation order. Possible areas without conservation protection NEED TO CHECK	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)

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EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE				
7. SADGROVES CREEK/ WINNELLIE WEST	FLORA & FAUNA	2- MEDIUM RISK Litter carried by stormwater from urban areas to mangroves and Harbour. Mitigated by small urban area.	2- MEDIUM RISK risk of weed infestation replacing native plants. Maybe mitigated by frequent fires in Charles Darwin National Park.	4- VERY HIGH RISK, Significant sedimentation from new suburb (Bayview) and Winnellie Industry area. Disturbance of Acid Sulfate Soils also an issue.	2- MEDIUM RISK. low impact due to stable mangrove communities at the National Park but erosion control necessary at Bayview and Winnellie.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	3- HIGH RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3- HIGH RISK Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment. The impact of increased freshwater to the mangroves may result in a change in the composition of the mangroves.	1-LOW RISK from invasive species (monoculture)	2 - MEDIUM RISK At risk from weeds and feral animals.	4- VERY HIGH RISK Increased fire frequency can impact flora and fauna.	3- HIGH RISK A small area of mangroves may be at risk from reclamation because not zoned "conservation".	0-RISK Overpopulation of the water rat which may have an impact is unlikely.	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to wildlife corridors. (inhibiting fire & weed management activities or fencing impedes use fauna patterns)	
	RESISTER OF NATIONAL ESTATE: Darwin Pine Creek Railway	1-LOW RISK, little impact expected on this small railway line.	1-LOW RISK, little impact expected on this small railway line.	1-LOW RISK, little impact expected on this small railway line.	NOT APPLICABLE	1-LOW RISK, little impact expected on this small railway line.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Evaluation required.	NOT APPLICABLE	3-HIGH RISK, particularly through heavy weed infestation	1-LOW RISK, development not likely but possible in future	NOT APPLICABLE	NOT APPLICABLE
	TREES OF SIGNIFICANCE:	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, vandalism, lightning strike	4-VERY high, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK
	NATIVE VEGETATION COMMUNITIES /HABITAT	2- MEDIUM RISK Litter carried by stormwater from urban, light industrial areas to mangroves and Harbour.	4- VERY HIGH RISK, Identified HIGH weed area by Rangers, Weed experts. EMU 7, 8 and 9 area priorities for integrated and co-ordinated weed management in 2006. A weed management plan is being prepared in a partnership approach between Greening Australia, National Park Rangers, NT Government Weed Officers, Crown land officers and DCC.	4- VERY HIGH RISK, Significant sedimentation from new suburb (Bayview) and Winnellie Industry area. Disturbance of Acid Sulfate Soils also an issue.	2- MEDIUM RISK. LOW impact due to stable mangrove communities at the National Park but erosion control necessary at Bayview and Winnellie.	3- HIGH RISK At RISK of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	3- HIGH RISK Stormwater from the industrial and urban areas carries pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3- HIGH RISK Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment. The impact of increased freshwater to the mangroves may result in a change in the composition of the mangroves.	1-LOW RISKS, invasive/aggressive native vines/trees	2 - MEDIUM RISK At RISK from weeds and feral animals.	4- VERY HIGH RISK Increased fire frequency can impact flora and fauna.	3- HIGH RISK A small area of mangroves may be at RISK from reclamation because not zoned "conservation".	0-RISK Overpopulation of the water rat which may have an impact is unlikely.	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	PARKS & OPEN SPACE	1- LOW RISK Managed areas.	2- MEDIUM to 3-HIGH RISK Managed parkland, though a large area which cannot be surveyed for weeds. Closeness to weed infestations in urban area puts the park at RISK.	1- LOW RISK Managed areas.	1- LOW RISK Located away from foreshore	1- LOW RISK Located away from foreshore	2- MEDIUM RISK, industrial pollution in stormwater has the potential to cause contamination & has a negative impact on vegetation	2- MEDIUM RISK, industrial pollution in stormwater has the potential to cause contamination & has a negative impact on vegetation	0- NO RISK, managed	1-LOW RISK, Highly managed	1-LOW RISK, Highly managed	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
ESTUARINE AND MARINE HABITATS	2 - MEDIUM RISK Litter carried by stormwater from urban areas. The urban area is small	1- LOW RISK. The salt tolerant plant pond apple (<i>Annona glabra</i>) is a weed of national	2- MEDIUM RISK The amount of sediment (kg/ha) from urban areas is high. Because the	1- LOW RISK A large part of the foreshore is contained in Charles Darwin	3- HIGH RISK. At RISK of impact from cyclonic damage due to the increased frequency	3- HIGH RISK Stormwater from the industrial and urban areas carries pollutants. The	3- HIGH RISK Stormwater from the industrial and urban areas carries pollutants. The	0- NO RISK	4- VERY HIGH RISK RISK from ships and yachts introducing pests, and inappropriate	1-LOW RISK ask pollution starves water of oxygen	3- HIGH RISK At risk from urban and foreshore development replacing habitats.	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management		

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE				
7. SADGROVES CREEK/ WINNELLIE WEST		relative to the mangrove area. Potential for litter accumulation on mangrove fringe.	significance, though not declared in the NT. This weed is present in the mangrove of Rapid Creek and being eradicated. There is a low risk that the plant will be spread from this infestation.	urban catchment is small, the risk of impact is mitigated. Possible sedimentation of tidal creeks due to past reclamation of upper reaches of these creeks.	National Park with low risk of anthropogenic erosion. Sedimentation of the tidal creek however has probably occurred with the reclamation mangroves.	of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment. The impact of increased freshwater to the mangroves may result in a change in the composition of the mangroves.		disposal of marine aquarium contents,		risk to water quality.		activities are restricted in future (fire, water, weed mgt)	
	NT THREATENED SPECIES: <i>Nervila plaicata</i> , <i>Cycas armstrongii</i>	NOT APPLICABLE	1- LOW RISK Risk of weed displacement.	1- LOW RISK, threatened species protected by vegetation buffers from sediments.	1- LOW RISK, threatened species sited away from foreshore & protected by Mangrove	3- HIGHRISK. At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	NOT APPLICABLE	NOT APPLICABLE	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete <i>Nervila plaicata</i> , <i>Cycas armstrongii</i>	NOT APPLICABLE	4- VERY HIGHRISK Increased frequency and intensity of fires in Charles Darwin National Park	1- LOW RISK of development in Charles Darwin National Park where <i>Cycas armstrongii</i> grows.	NOT APPLICABLE	NOT APPLICABLE	
	VULNERABLE SPECIES: False Water Rat	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	0- NO RISK	4-VERY HIGH RISK from Feral cats, cane toads.	2-MEDIUM RISK, Wildfires are common from weed infestation and arson.	2-MEDIUM RISK, National Park offers protection but nearby suburbs do not	NOT APPLICABLE	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	MANGAL TRADITIONAL FOOD SOURCE	1- LOW RISK, litter would be deposited in the National Park before it could impact on aquatic fauna of the Mangrove foreshore	1- LOW RISK, land based weeds identified but little knowledge of aquatic weeds exists.	3-HIGHRISK to 4- VERY HIGH RISK, ongoing industrial development and land reclamation at East Arm are areal threat to the integrity of the estuary in this area. Annual burning regime & uncontrolled recreational vehicle use contribute to sediment load.	1-LOW RISK, little impact expected on Mangal populations.	1- LOW RISK But increasing water temperatures may present a problem. Real impact unknown	2-MEDIUM RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mangroves snails maybe at RISK of metal accumulation however harvesting of mangal foods LOW compared to other mangroves.	2 - MEDIUM RISK Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mangroves snails maybe at RISK of metal accumulation however harvesting of mangal foods LOW compared to others.	0- NO RISK	4 - VERY HIGH RISK Introduced species, pathogens.	1-LOW RISK ask pollution starves water of oxygen	1-LOW RISK in conservation zone but 2-MEDIUM RISK, Increased development leading to sedimentation of habitat.	NOT APPLICABLE	NOT APPLICABLE	
FORESHORE	2-MEDIUM RISK Mitigated by small urban area.	2-MEDIUM RISK, Litter carried by stormwater from urban areas. The urban area is small relative to the mangrove area. Potential for litter accumulation on mangrove fringe.	1-LOW RISK. The salt tolerant plant pond apple (<i>Annona glabra</i>) is a weed of national significance, though not declared in the NT. This weed is present in the mangroves of Rapid Creek and being eradicated. There is a low risk that the plant will be spread from this infestation.	2-MEDIUM RISK The amount of sediment (kg/ha) from urban areas is high. Because the urban catchment is small, the risk of impact is mitigated. Possible sedimentation of tidal creeks due to past reclamation of upper reaches of these creeks.	1-LOW RISK. A large part of the foreshore is contained in Charles Darwin National Park with low risk of anthropogenic erosion. Sedimentation of the tidal creek however has probably occurred with the reclamation mangroves.	3-HIGH RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3-HIGH RISK. Stormwater pollution from the industrial & urban areas. Pollution deposition in the mangrove sediments are the most likely. Mediated by large mangrove area relative to the urban catchment. Impacts from increased freshwater may result in mangrove composition changes.	0- NO RISK	4- VERY HIGH Mangroves and estuarine habitats at risk from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents,	4- VERY HIGH Increased frequency and intensity of fires in Charles Darwin National Park	2 - MEDIUM RISK Most of foreshore developed, except for Charles Darwin NP.	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)		
8. REICHARDT CREEK/ WINNELLIE EAST	CHARLES DARWIN NATIONAL PARK	2-MEDIUM RISK. Litter from Winnellie	2-MEDIUM to 3- HIGH RISK	2- MEDIUM RISK restricted to bush	1-LOW RISK. Foreshore protected	3- HIGH RISK. At RISK of impact	3- HIGH RISK. Stormwater from the	3- HIGH RISK. Stormwater pollution	1-LOW RISKS, invasive/aggressive	2- MEDIUM RISK At risk from feral	4 - VERY HIGHRISK	1-LOW RISK Mangroves in	NOT APPLICABLE	1-LOW RISK, unless public	

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5- EXTREME RISK ON VALUE			
8. REICHARDT CREEK/ WINNELLIE EAST		& Coonawarra industrial areas migrates through stormwater and wind into the National Park. No GPTs in this area.	Managed parkland, though a large area which cannot be surveyed for weeds. Closeness to weed infestations in industrial area puts the park at risk.	paths and tracks. Requires management.	by mangroves.	from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	industrial areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment.	from the industrial areas. Pollution deposition in the mangrove sediments are the most likely. Mediated by large mangrove area relative to the urban catchment. Impacts from increased freshwater may result in mangrove composition changes.	native vines/trees which may out compete more sensitive native plants	animals, notably cats and the cane toad	Increased frequency of fires, particularly in weed infested woodland.	Charles Darwin National Park protected under a conservation order. Possible areas without conservation protection NEED TO CHECK		access or environmental management activities are restricted in future (fire, water, weed mgt)
	FLORA & FAUNA	2- MEDIUM RISK Litter carried by stormwater from industrial areas to mangroves and Harbour. Mitigated by small catchment area.	4- VERY HIGH RISK, Identified high weed area by Rangers, Weed experts. EMU 7, 8 and 9 area priorities for integrated and co-ordinated weed management in 2006. A weed management Plan is being prepared in a partnership approach between Greening Australia, National Park Rangers, NT Government Weed Officers, Crown land officers and DCC.	1-LOW RISK low impact on flora and fauna	1- LOW RISK. low impact due to stable mangrove communities.	3-HIGH RISK At RISK of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	3- HIGH RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment.	3- HIGH RISK Stormwater from the industrial areas carries pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment. The impact of increased freshwater to the mangroves may result in a change in the composition of the mangroves.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	2 - MEDIUM RISK At risk from weeds and feral animals.	4- VERY HIGHRISK Increased fire frequency can impact flora and fauna.	3- HIGHRISK A small area of mangroves may be at RISK from reclamation because not zoned "conservation".	0-RISK Overpopulation of the water rat which may have an impact is unlikely.	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	MANGAL TRADITIONAL FOOD SOURCE	3-HIGHRISK, illegal dumping area. Industrial litter & rubbish from East Arm has the potential to be hazardous (batteries etc) and visitor rubbishing from Hidden Valley during events common.	1-LOW RISK, no aquatic weed species known to date	3-HIGHRISK to 4- VERY HIGH RISK, ongoing industrial development and land reclamation at East Arm are areal threat to the integrity of the estuary in this area. Annual burning regime & uncontrolled recreational vehicle use contribute to sediment load.	1-LOW RISK, little impact expected on Mangal populations.	1- LOW RISK But increasing water temperatures may present a problem. Real impact unknown	4-VERY HIGH RISK Significant pollution RISK to the Mangal population from industrial surface run-off and land reclamation activities at East Arm.	4-VERY HIGH RISK Increased industrial pollution of aquatic habitat has serious impact potential on the Mangal population.	0- NO RISK	4 - VERY HIGHRISK Introduced species, pathogens, ballast water and aquarium species	1-LOW RISK ask pollution starves water of oxygen	1-LOW RISK in conservation zone but 2-MEDIUM RISK, Increased development leading to sedimentation of habitat.	NOT APPLICABLE	NOT APPLICABLE
	NATIVE VEGETATION COMMUNITIES/ HABITATS	2- MEDIUM RISK Litter carried by stormwater from urban areas to mangroves and Harbour.	2- MEDIUM RISK of weed infestation replacing native plants. Maybe mitigated by frequent fires in Charles Darwin NP.	1- LOW RISK. impact on flora and fauna expected	1- LOW RISK. LOW impact due to stable mangrove communities.	3- HIGH RISK At RISK of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	3- HIGH RISK Stormwater from the industrial and urban areas carries pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3- HIGH RISK Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment. The impact of increased freshwater to the mangroves may result in a change in the composition of the mangroves.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	2 - MEDIUM RISK At RISK from weeds and feral animals.	4- VERY HIGHRISK Increased fire frequency can impact flora and fauna.	3- HIGHRISK A small area of mangroves may be at RISK from reclamation because not zoned "conservation".	0-RISK Overpopulation of the water rat which may have an impact is unlikely.	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
8. REICHARDT CREEK/ WINNELLIE EAST	MANGROVE COMMUNITIES	2-MEDIUM RISK, Litter carried by stormwater from urban areas. The urban area is small relative to the mangrove area. Potential for litter accumulation on mangrove fringe.	1-LOW RISK. The salt tolerant plant pond apple (<i>Annona glabra</i>) is a weed of national significance, though not declared in the NT. This weed is present in the mangroves of Rapid Creek and being eradicated. There is a low risk that the plant will be spread from this infestation.	2-MEDIUM RISK The amount of sediment (kg/ha) from urban areas is high. Because the urban catchment is small, the risk of impact is mitigated. Possible sedimentation of tidal creeks due to past reclamation of upper reaches of these creeks.	1-LOW RISK. A large part of the foreshore is contained in Charles Darwin National Park with low risk of anthropogenic erosion. Sedimentation of the tidal creek however has probably occurred with the reclamation mangroves.	3-HIGH RISK. At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	3-HIGH RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3-HIGH RISK. Stormwater pollution from the industrial & urban areas. Pollution deposition in the mangrove sediments are the most likely. Mediated by large mangrove area relative to the urban catchment. Impacts from increased freshwater may result in mangrove composition changes.	0- NO RISK	1- LOW RISK	1-LOW RISK ask pollution starves water of oxygen	4-VERY HIGH Development, including land filling has and continues to be a serious risk to Mangroves.	NOT APPLICABLE	1-LOW RISK primarily of over collection of native foods or access restrictions for environmental management
	NT THREATENED SPECIES: <i>CYCAS ARMSTONGII</i>	NOT APPLICABLE	1- LOW RISK risk of weed displacement.	1- LOW RISK	1- LOW RISK	3- HIGH RISK. At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	NOT APPLICABLE	1-LOW RISK pending Audit outcomes	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete <i>CYCAS ARMSTONGII</i>	NOT APPLICABLE	4- VERY HIGH RISK Increased frequency and intensity of fires in Charles Darwin National Park	1- LOW RISK of development in Charles Darwin National Park where <i>Cycas armstrongii</i> grows.	NOT APPLICABLE	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities)
	ESTUARINE AND MARINE HABITATS	2-MEDIUM RISK, Litter carried by stormwater from urban areas. The urban area is small relative to the mangrove area. Potential for litter accumulation on mangrove fringe.	1-LOW RISK. The salt tolerant plant pond apple (<i>Annona glabra</i>) is a weed of national significance, though not declared in the NT. This weed is present in the mangroves of Rapid Creek and being eradicated. There is a low risk that the plant will be spread from this infestation.	2-MEDIUM RISK The amount of sediment (kg/ha) from urban areas is high. Because the urban catchment is small, the risk of impact is mitigated. Possible sedimentation of tidal creeks due to past reclamation of upper reaches of these creeks.	1-LOW RISK. A large part of the foreshore is contained in Charles Darwin National Park with low risk of anthropogenic erosion. Sedimentation of the tidal creek however has probably occurred with the reclamation mangroves.	3-HIGH RISK. At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	3-HIGH RISK. Stormwater from the industrial and urban areas carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	3-HIGH RISK. Stormwater pollution from the industrial & urban areas. Pollution deposition in the mangrove sediments are the most likely. Mediated by large mangrove area relative to the urban catchment. Impacts from increased freshwater may result in mangrove composition changes.	0- NO RISK	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents,	1-LOW RISK ask pollution starves water of oxygen	3- HIGHRISK At risk from urban and foreshore development replacing habitats. risk to water quality.	NOT APPLICABLE	1-LOW RISK primarily of over collection of native foods or access restrictions for environmental management
	VULNERABLE SPECIES: FALSE WATER RAT	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	Further investigation required	0- NO RISK	4-VERY HIGH RISK Feral cats, cane toads.	2-MEDIUM RISK, Wildfires are common from weed infestation and arson.	2-MEDIUM RISK, National Park offers protection but nearby suburbs do not	NOT APPLICABLE
9. BLEESERS CREEK/ BERRIMAH	ESTUARINE AND MARINE HABITATS	3-HIGH RISK, illegal dumping area. Industrial litter & rubbish from East Arm has the potential to be hazardous (batteries etc) and visitor rubbishing from Hidden Valley during events common.	4- VERY HIGH RISK, Identified high weed area by Rangers, Weed experts. EMU 7, 8 and 9 area priorities for integrated and co-ordinated weed management in 2006. A weed management Plan is being prepared in a partnership approach between Greening Australia,	3-HIGH RISK to 4-VERY HIGH RISK, ongoing industrial development and land reclamation at East Arm are areal threat to the integrity of the estuary in this area. Annual burning regime & uncontrolled recreational vehicle use contribute to sediment load.	3-HIGH RISK, substantial mangrove cover still existing stabilises erosion but intense industrial development, particular at East Arm contributes to foreshore erosion	3-HIGH RISK. At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	4- VERY HIGH RISK. Stormwater from the heavy industry at East Arm carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment.	4- VERY HIGH RISK. Stormwater from the heavy industry at East Arm carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the urban catchment	0- NO RISK	4-VERY HIGH, managed but affected by cats, dogs, cane toad, weeds	1-LOW RISK ask pollution starves water of oxygen	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme. Significant reclamation activities expected at East Arm and Berrimah.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	1-LOW RISK primarily of over collection of native foods or access restrictions for environmental management

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
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EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
9. BLEESERS CREEK/ BERRIMAH	FLORA & FAUNA	3-HIGH RISK, illegal dumping area. Industrial litter & rubbish from East Arm has the potential to be hazardous (batteries etc) and visitor rubbishing from Hidden Valley during events common.	3-HIGH RISK, particular from Gamba grass infestation which is largely unmanaged and widespread in this area.	3-HIGH RISK to 4-VERY HIGH RISK, ongoing industrial development and land reclamation at East Arm are areal threat to the integrity of the estuary in this area. Annual burning regime & uncontrolled recreational vehicle use contribute to sediment load.	3-HIGH RISK, substantial mangrove woodland and mangrove habitats still exist & stabilise erosion but intense industrial development, particular at East Arm and Berrimah threaten the integrity of habitats and are a high risk for fauna.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	4- VERY HIGH RISK. Stormwater from the heavy industry at East Arm and Berrimah carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment at this stage. Ongoing development will increase risk.	4- VERY HIGH RISK. Groundwater and Surface water pollution from the heavy industry at East Arm Trade Development Zone and Berrimah Industry. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment at this stage. Ongoing development will increase risk.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	2-MEDIUM RISK, Wildfires are common from weed infestation and arson.	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	MANGAL TRADITIONAL FOOD SOURCE	3-HIGHRISK, illegal dumping area. Industrial litter & rubbish from East Arm has the potential to be hazardous (batteries etc) and visitor rubbishing from Hidden Valley during events common.	1-LOW RISK, no aquatic weed species known to date	3-HIGHRISK to 4-VERY HIGH RISK, ongoing industrial development and land reclamation at East Arm are areal threat to the integrity of the estuary in this area. Annual burning regime & uncontrolled recreational vehicle use contribute to sediment load.	1-LOW RISK, little impact expected on Mangal populations.	1- LOW RISK But increasing water temperatures may present a problem. Real impact unknown	4-VERY HIGH RISK Significant pollution from the heavy industry at East Arm and Berrimah carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment at this stage. Ongoing development will increase risk.	4-VERY HIGH RISK Increased industrial pollution of aquatic habitat has serious impact potential on the Mangal population.	0- NO RISK	4 - VERY HIGHRISK Introduced species, pathogens, ballast water and aquarium species	1-LOW RISK ask pollution starves water of oxygen	4 - VERY HIGH RISK, private ownership of Mangrove s development on foreshores, reclamation activities	NOT APPLICABLE	NOT APPLICABLE
	NATIVE VEGETATION COMMUNITIES/ HABITATS	3-HIGH RISK, illegal dumping area. Industrial litter & rubbish from East Arm has the potential to be hazardous (batteries etc) and visitor rubbishing from Hidden Valley during events common.	3-HIGH RISK, particular from Gamba grass infestation which is largely unmanaged and widespread in this area.	3-HIGH RISK to 4-VERY HIGH RISK, ongoing industrial development and land reclamation at East Arm are areal threat to the integrity of the estuary in this area. Annual burning regime & uncontrolled recreational vehicle use contribute to sediment load.	3-HIGH RISK, substantial mangrove cover still existing stabilises erosion but intense industrial development, particular at East Arm contributes to foreshore erosion	3-HIGH RISK. At RISK of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition.	4- VERY HIGH RISK. Stormwater from the heavy industry at East Arm and Berrimah carry pollutants. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment at this stage. Ongoing development will increase risk.	4- VERY HIGH RISK. Groundwater and Surface water pollution from the heavy industry at East Arm Trade Development Zone and Berrimah Industry. The mangroves sediments are the most likely point of pollutant deposition. Mediated by large mangrove area relative to the industrial catchment at this stage. Ongoing development will increase risk.	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests	3-HIGH RISK, affected by cats, dogs, cane toad, weeds.	2-MEDIUM RISK, Wildfires are common from weed infestation and arson.	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme Significant land reclamation presents significant risks	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
9. BLEESERS CREEK/ BERRIMAH	TREE OF SIGNIFICANCE: <i>Pandanus pacifica</i>	1-LOW RISK from littering	1- LOW RISK, but the large weed infestation may contribute to frequent wildfires which have the potential to damage <i>Pandanus pacifica</i>	1- LOW RISK	NOT APPLICABLE - located in upper catchment	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1- LOW RISK located in upper catchment, above industry	1- LOW RISK located in upper catchment	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, vandalism, lightning strike	4-VERY high, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
9. BLEESERS CREEK/ BERRIMAH	WW2 HERITAGE SITE: RAAF Base Berrimah Farm Operations Room,	0- NO RISK	0- NO RISK	0- NO RISK	0- NO RISK	0- NO RISK	0- NO RISK	0- NO RISK	0-NO RISK	NOT APPLICABLE	1-LOW RISK, vandalism, lightning strikes	1-LOW RISK, no development proposed at this time	NOT APPLICABLE	NOT APPLICABLE
10. EAST PT/DUDLEY PT	VEGETATION COMMUNITIES/ HABITAT	2- MEDIUM RISK Popular recreational area that sees high use by both visitors and locals	3- HIGH RISK numerous weed species are present in the area. Some management is undertaken	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban areas.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	1-LOW RISK, no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential.	2-MEDIUM RISK, no urban development at this site; however leakage of the sewerage discharge pipe and intense recreational use have negative impact potential. Lack of freshwater in this area may impact on remnant native vegetation communities if Council's watering regimes are changed or abandoned	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds.	4 - VERY HIGH RISK due to the make up of the vegetation (monsoon vine forest not tolerant to fire)	0 - NO RISK as it is a declared conservation reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	FLORA & FAUNA	2- MEDIUM RISK Popular recreational area that sees high use by both visitors and locals.	3- HIGH RISK numerous weed species are present in the area. Increase fire intensity and displacement of native veg. Some management is undertaken	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban areas.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still are in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	1-LOW RISK to no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential	2-MEDIUM RISK, no urban development at this site; however leakage of the sewerage discharge pipe and intense recreational use have negative impact potential. Lack of freshwater in this area may impact on Wallaby and Northern Quoll populations if Council's watering regimes are changed or abandoned	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests.	4- VERY HIGH RISK introducing weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK as fire can destroy the habitat and the fauna that live in the forest	0 - NO RISK as it is a declared conservation reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns) There is also a risk from traditional hunting of the fauna and gathering of traditional food
	EAST POINT RESERVE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem not easily managed.	2-MEDIUM RISK high use areas are well managed and regularly maintained. Less frequented areas have a variety of weed species that need to be controlled effectively to manage spread.	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban areas.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	1-LOW RISK to no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential	2-MEDIUM RISK, no urban development at this site; however leakage of the sewerage discharge pipe and intense recreational use have impact potential. Lack of freshwater in this area may impact on Wallaby and Northern Quoll populations if Council's watering regimes are changed or abandoned	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests.	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK as fire can destroy the habitat and the fauna that live in the forest	0 - NO RISK as it is a declared conservation reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1 - LOW to 2 - MEDIUM RISK from traditional burning practice and competing interests for the areas use. Heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	FORESHORE REGISTERED ON NATIONAL ESTATE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem	2-MEDIUM RISK Foreshore areas receive regular maintenance and are well managed	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community	1-LOW RISK no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential on the foreshore.	2-MEDIUM RISK, no urban development at this site; however the sewage outfall and inappropriate access by recreational users have impact potential.	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests.	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents	2-MEDIUM RISK, camping activities cause fires annually Ash pollution of waters.	0 - NO RISK as it is a declared conservation reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK primarily of over collection of native foods or access restrictions for environmental management

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Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE	5 - EXTREME RISK ON VALUE								
10. EAST PT/DUDLEY PT	WW2 HERITAGE SITES	not easily managed. 2-MEDIUM RISK itinerants frequent these areas	1- LOW RISK	disturbed or urban areas. NOT APPLICABLE	3-HIGH RISK Some WW2 buildings located very close to cliffs and maybe impacted as erosion progresses.	3-HIGH RISK Some WW2 buildings located very close to cliffs and maybe impacted as erosion progresses & sea level rise.	0- NO RISK	0- NO RISK	NOT APPLICABLE	NOT APPLICABLE	1 - LOW RISK as all are concrete	0 - NO RISK as it is a declared conservation reserve	1-LOW RISK largely based on competition between recreational uses and heritage/cultural management requirements	NOT APPLICABLE
11. LUDMILLA CREEK/FANNIE BAY NORTH	FLORA AND FAUNA	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem not easily managed.	3- HIGH RISK numerous weed species are present in the area. Increase fire intensity and displacement of native veg. Some management is undertaken	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban areas.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still are in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	1-LOW RISK to no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential	2-MEDIUM RISK, no urban development at this site; however leakage of the sewerage discharge pipe and intense recreational use have negative impact potential. Lack of freshwater in this area may impact on Wallaby and Northern Quoll populations if Council's watering regimes are changed or abandoned	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	4-VERY HISH RISK, reclamation of Mangrove areas for development already in progress at Shipyard. Private Ownership of foreshore and creek.	NOT APPLICABLE	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	VEGETATION COMMUNITY/ HABITAT	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem not easily managed.	3-HIGH RISK, particular from Gamba grass infestation which is largely unmanaged and widespread in this area.	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban areas.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	1-LOW RISK, no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential.	2-MEDIUM RISK, no urban development at this site; however leakage of the sewerage discharge pipe and intense recreational use have negative impact potential. Lack of freshwater in this area may impact on remnant native vegetation communities if Council's watering regimes are changed or abandoned	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	3-HIGH RISK, Wildfires are common from weed infestation and arson.	4-VERY HISH RISK, reclamation of Mangrove areas for development already in progress at Shipyard. Private Ownership of foreshore and remnant native vegetation and Mangrove areas. No protection...	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	LAKE ALEXANDER	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem not easily managed.	2-MEDIUM RISK Lake Alexander areas receive regular maintenance and are well managed, however winds & stormwater run-off lead to weed seed distribution.	2-MEDIUM RISK Well vegetated, however sheet flow run-off brings sediments from burned areas during dry-season. Water pumping to the lake inputs aquatic sediments.	NOT APPLICABLE, Lake Alexander is located well back from the erosion prone foreshore	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	2=MEDIUM RISK, Sewage discharge system leakage, running adjacent to Lake Alexander has the potential to discharge pollutants.	4=VERY HIGH RISK, Sewage discharge system leakage, running adjacent to Lake Alexander and discharges of only primary treated off East Point have the potential to affect environmental quality in this area.	0-NO RISK	4- VERY HIGH RISK, Jellyfish infestation and aquatic pests, introduced through water pumping are of concern.	1-LOW RISK well watered and managed parklands adjacent to Lake Alexander afford protection.	0 - NO RISK as it is a declare a conservation reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	NOT APPLICABLE, man-made Lake
	FORESHORE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem not easily managed.	2-MEDIUM RISK Foreshore areas receive regular maintenance & weed management and are well managed. However winds & stormwater run-off lead to weed seed distribution.	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	1-LOW RISK no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential on the foreshore.	2-MEDIUM RISK, no urban development at this site; however the sewage outfall and inappropriate access by recreational users have impact potential.	0-NO RISK	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents	2-MEDIUM RISK primarily through ash pollution	4-VERY HISH RISK, reclamation of Mangrove areas for development already in progress at Shipyard. Private Ownership of foreshore and remnant native vegetation and Mangrove areas. No	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1=LOW RISK, potential conflict between various users and restrictions to protect one value may impact on effective management of another.

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE	5 - EXTREME RISK ON VALUE								
11. LUDMILLA CREEK/FANNIE BAY NORTH				areas.								protection. other than East Point Reserve.		
	NT HERITAGE SITES: Fannie Bay Goal & Quantas/Guinea Airway Hanger	1- LOW RISK Highly managed	NOT APPLICABLE	1- LOW RISK Highly managed	NOT APPLICABLE	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	1- LOW RISK Highly managed	1- LOW RISK Little impact expected	1-LOW RISKS, invasive/aggressive native vines/trees	NOT APPLICABLE	1=LOW RISK vandalism	1=LOW RISK Level of protection not clear as other previously listed sites have been demolished	NOT APPLICABLE	NOT APPLICABLE
	TREES OF SIGNIFICANCE	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, vandalism, lightning strike	4-VERY HIGH, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK
	PARKS & OPEN SPACE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and frequent functions present a problem not easily managed.	2- MEDIUM RISK numerous weed species are present in the area. Increase fire intensity and displacement of native veg. Some management is undertaken	1-LOW RISK, parks are well vegetated, suburbs are established and there is little impact from new development expected.	3-HIGH RISK to 4-VERY HIGH RISK, substantial foreshore erosion has occurred during the past decade. Largely unmanaged	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	1-LOW RISK little industrial activities at this site. Low-lying areas maybe affected by stormwater run-off from commercial premises such as Service Stations.	2- MEDIUM RISK, irrigation of primary treated effluent and the potential for sewage system leakage are areas of concern	0-NO RISK, managed	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	3 - HIGH RISK Managed parks but park reserves with bushland are affected by high intensity fires due to weed invasion. arson, vandalism	4 - VERY HIGH RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
EAST POINT RESERVE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and litter from stormwater present a problem not easily managed.	2- MEDIUM RISK numerous weed species are present in the area. Increase fire intensity and displacement of native veg. Some management is undertaken	1- LOW RISK Little impact from erosion and sediment on vegetation communities the area is well vegetated and receives almost no runoff from disturbed or urban areas.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and community composition	1-LOW RISK to no industrial activities at this site, however adjacent operations such as the shipyard and other maritime traffic have impact potential	2-MEDIUM RISK, no urban development at this site; however leakage of the sewerage discharge pipe and intense recreational use have impact potential. Lack of freshwater in this area may impact on Wallaby and Northern Quoll populations if Council's watering regimes are changed or abandoned	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	0 - NO RISK as it is a declared conservation reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact restrict access to native vegetation habitats for fire & weed management purposes. Competing user groups, not all compatible, may also lead to impacts	
12. LUDMILLA/ COCONUT GROVE SOUTH	FORESHORE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and litter from stormwater present a problem not easily managed.	3- HIGH RISK numerous weed species are present in the area. Some management is undertaken	2-MEDIUM RISK, well established urban area but no GPTs installed along the foreshore to capture sedimentation from major roads and development sites.	3-HIGH to 4-VERY HIGH RISK substantial foreshore erosion has occurred during the past decade. Largely unmanaged	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3 - HIGH RISK, Impacts likely from commercial, recreational, re-development and sewage treatment activities in the area with limited pollution control management.	2- MEDIUM RISK, irrigation of primary treated effluent from the Ludmilla Treatment Plant and the potential for sewage system leakage are areas of concern	0-NO RISK	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents	1- LOW RISK from ash pollution	4-VERY HIGH RISK, multiple ownerships, crown land, Indigenous and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	VEGETATION COMMUNITY/ HABITAT	3- HIGH RISK intense recreational use, itinerants and litter from stormwater present a problem not easily managed.	3- HIGH RISK numerous weed species are present in the area. Some management is undertaken	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3 - HIGH RISK, Impacts likely from commercial, re-development and sewage treatment activities in the area with limited pollution control management	2- MEDIUM RISK, irrigation of primary treated effluent from the Ludmilla Treatment Plant and the potential for sewage system leakage are areas of concern	1-LOW RISK, invasive/aggressive native vines (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	4-VERY HIGH RISK, multiple ownerships, crown land, Indigenous and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE				
12. LUDMILLA/ COCONUT GROVE SOUTH	LUDMILLA CREEK	3- HIGH RISK intense recreational use, itinerants and litter from stormwater present a problem not easily managed.	3- HIGH RISK numerous weed species are present in the area. Some management is undertaken	3- High RISK, sedimentation from urban stormwater run-off, annual controlled burns and wildfires along Dick Ward Dive have impact potential.	1-LOW RISK, erosion confined to creek mouth which is protected by mangroves	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	3 - HIGH RISK, Impacts likely from commercial, recreational, re-development and sewage treatment activities in the area with limited pollution control management	3 - HIGH RISK, irrigation of primary treated effluent from the Ludmilla Treatment Plant, the potential for sewage system and urban stormwater run-off may impact on Ludmilla Creek.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities	4-VERY HIGH RISK, multiple ownerships, crown land, Indigenous and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	2 SITES REGISTERED ON THE NATIONAL ESTATE : Foreshore and RAAF precinct, CEO residence, 2 buildings: tropical housing type II, 1 house: tropical housing type III. And Water Tower 129	1- LOW RISK Managed sites, little impact expected	1- LOW RISK Little impact expected	1- LOW RISK Little impact expected	1- LOW RISK Little impact expected, located well away from erosion prone areas.	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	1- LOW RISK Little impact expected	1- LOW RISK Little impact expected	1- LOW RISK Little impact expected	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH Mangroves and upper reaches woodland habitats at risk from ships and yachts introducing pests, dogs, cats cane toads and inappropriate disposal of aquarium contents	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	4-VERY HIGH RISK, multiple ownerships, crown land, Indigenous and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK I for foreshore largely based on competition between native habitat and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	FAUNA & FLORA	3- HIGH RISK intense recreational use, itinerants and frequent functions present a problem not easily managed.	3- HIGH RISK numerous weed species are present in the area. Some management is undertaken	2-MEDIUM RISK, well established urban area but no GPTs installed along the foreshore to capture sedimentation from major roads and development sites.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3 - HIGH RISK, Impacts likely from commercial, recreational, re-development and sewage treatment activities in the area with limited pollution control management	3 - HIGH RISK, irrigation of primary treated effluent from the Ludmilla Treatment Plant, the potential for sewage system and urban stormwater run-off may impact on Ludmilla Creek.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities	4-VERY HIGH RISK, multiple ownerships, crown land, Indigenous and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)	
	PARKS & OPEN SPACE	3- HIGH RISK Area is well maintained with numerous waste bins high usage however intense recreational use, itinerants and litter from stormwater present a problem not easily managed.	2- MEDIUM RISK numerous weed species are present in the area. Increase fire intensity and displacement of native veg. Some management is undertaken		3-HIGH RISK to foreshore parks as substantial erosion has occurred and still is in progress in these areas.	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.		1- LOW RISK Little impact expected. Treated water used for irrigation of Parks	1-LOW RISK, invasive/aggressive native vines and flammable (i.e. trees may impact on fire sensitive habitats, incl. the monsoon forests	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	3 - HIGH RISK Managed parks but park reserves with bushland are affected by high intensity fires due to weed invasion. arson, vandalism	2-MEDIUM RISK, changes in Planning Act and Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation and Planning Scheme.	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	ABORIGINAL HERITAGE	TBA	TBA	TBA	TBA	TBA	3 - HIGH RISK, Impacts likely from commercial, recreational, re-development and sewage treatment activities in the area with limited pollution control management	TBA	Investigation required	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	2- MEDIUM RISK , managed area but risk to bushlands through wildfires and arson	3=HIGH RISK Level of protection not clear as other previously listed sites have been demolished	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2-MEDIUM RISK, competing user interests and insufficient management and protection may be an issue	
TREES OF SIGNIFICANCE	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, (vandalism, lightning strike)	4-VERY HIGH RISK, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK	
13. NIGHTCLIFF/ COCONUT GROVE NORTH	FORESHORE	4 - VERY HIGH RISK to 5 - EXTREME RISK Popular recreation and tourist areas, frequent events. Litter problem despite intense management	3 - HIGH RISK, Several weed species known to occur. Various ownership leads to uncoordinated weed management. Stormwater discharges from suburbs spread seeds	4 - VERY HIGH RISK	4 - VERY HIGH RISK, very erosion prone area. Cliffs subject to collapse from wave action	4 - VERY HIGH RISK sea level rises and associated inundation could submersion/loss of beach and foreshore parks	3 - HIGH to 4 - VERY HIGH RISK, Light industrial area in Coconut Grove with limited pollution control management	4 - VERY HIGH RISK, water pollution from light industrial area in Coconut Grove with limited pollution control management and urban stormwater have the potential for significant	0-NO RISK	3 – HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents	4 - VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	4 - VERY HIGH RISK, multiple ownerships, crown land, Council and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5- EXTREME RISK ON VALUE			
13. NIGHTCLIFF/ COCONUT GROVE NORTH	FAUNA & FLORA	3 - HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite intense management	2 - MEDIUM RISK to 3- HIGH RISK numerous weed species are present in the area. Some management is undertaken	3-HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities.	3 - HIGH RISK, highly erosion prone foreshore, active annual erosion recorded.	4 - VERY HIGH RISK, At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3 - HIGH RISK, Light industrial area in Coconut Grove with limited pollution control management	impact. 4 - VERY HIGH RISK, water pollution from light industrial area in Coconut Grove with limited pollution control management and urban stormwater have the potential for significant impact.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	4 - VERY HIGH RISK, multiple ownerships, crown land, Council and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	TREES OF SIGNIFICANCE	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	3-HIGHRISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, vandalism, lightning strike	4-VERY HIGH, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK
	3 SITES REGISTERED ON NATIONAL HERITAGE REGISTER: Kaiplinger Residence, World War II dump Nightcliff, Troppo House	1-LOW RISK Managed sites,	1- LOW RISK Managed sites, weed problems not expected to impact on heritage values of building	1-LOW RISK , no impact on sites expected from current activities	3- HIGH RISK, foreshore erosion could lead to loss of sites	3- HIGH RISK, sea level rises and associated inundation could submersion/loss of sites	1-LOW RISK, no impact on registered sites expected	3-HIGH RISK , World war II dump has the potential to contaminated ground and surface water	0-NO RISK, managed	0-NO RISK, managed	1-LOW RISK, vandalism, lightning strike	3=HIGH RISK Level of protection not clear as other previously listed sites have been demolished	NOT APPLICABLE	NOT APPLICABLE
	PARKS & OPEN SPACE	4 - VERY HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite intense management	3 - HIGH RISK, Several weed species known to occur. Various ownership leads to uncoordinated weed management. Stormwater discharges from suburbs spread seeds	3 - HIGH RISK Well vegetated but frequent fires and light industry areas lead to sedimentation from light industry areas.	4 - VERY HIGH RISK, Extensive progressing foreshore erosion with significant contribution from controlled and uncontrolled stormwater discharge or run-off	4 - VERY HIGH RISK sea level rises and associated inundation could submersion/loss of beach and foreshore parks	3 - HIGH to 4 - VERY HIGH RISK Light industrial area in Coconut Grove with limited pollution control management	4 - VERY HIGH RISK Light industrial area in Coconut Grove with limited pollution control management. Stormwater pollution from substantial urban/light industry catchment.	0-NO RISK, managed	3 – HIGH RISK, weed invasion through wind & stormwater run-of spreading seeds from suburbs and unmanaged bushland	3 – HIGH RISK managed area but risk to bushlands through wildfires and arson. High intensity fires due to weed invasion.	2 - MEDIUM RISK, changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	ABORIGINAL HERITAGE	3 - HIGH RISK, heritage sites largely unidentified. Impacts may occur from re-development, tourism and recreation activities	4 - VERY HIGH RISK, heritage sites largely unidentified. Little weed management despite known weed infestation.	3 - HIGH RISK, Sedimentation on heritage sites from frequent wildfires, burn-offs and urban/light industry stormwater discharges	4 - VERY HIGH RISK, all foreshore heritage sites could be lost to ongoing foreshore erosion.	4 - VERY HIGH RISK, sea level rises and associated inundation could submersion/loss of beach and foreshore parks	3 - HIGH to 4 - VERY HIGH RISK, heritage sites largely unidentified. Impacts may occur from re-development, tourism and recreation activities	4 - VERY HIGH RISK, Light industrial area in Coconut Grove with limited pollution control management. Stormwater pollution from substantial urban/light industry catchment.	Investigation required	4 - VERY HIGH RISK introduced species particularly cats, dogs cane toads and weeds	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	3 – HIGH RISK Level of protection not clear as other previously listed sites have been demolished	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	2-MEDIUM RISK, competing user interests and insufficient management and protection may be an issue
	ICHTHYOSAUR FOSSILS	Investigation required	Investigation required	Investigation required	Investigation required	3-HIGH RISK climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	Investigation required	Investigation required	NOT APPLICATION	Investigation required	1-LOW RISK, through vandalism, lightning strike	3=HIGH RISK Level of protection not clear as other previously listed sites have been demolished	1-LOW RISK largely based on competition between native habitat and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future
14. RAPID CREEK NTH/ CASUARINA RESERVE SOUTH	FORESHORE	4 - VERY HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite intense management	3 - HIGH RISK Several weed species known to occur. Various ownerships lead to uncoordinated weed management. Stormwater discharges from suburbs spread seeds	4 - VERY HIGH RISK well established urban area but no GPTs installed along the foreshore to capture sedimentation from major roads and development sites.	4 - VERY HIGH RISK	4 - VERY HIGH RISK sea level rises and associated inundation could submersion/loss of beach and foreshore parks	3 - HIGH RISK, Markets and other commercial activities as well as recreation and tourism have impact potential.	4 - VERY HIGH RISK, Popular recreation and tourist areas, uncontrolled stormwater discharges from commerce; urban areas present a significant risk.	0-NO RISK	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism in this area.	3 - HIGH RISK, Conservation Reserve north of Rapid Creek protected, south of Rapid Creek Managed by Council. Significant new development near the Creek and in the upper catchment has impact on values and public access.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE									
14. RAPID CREEK NTH/ CASUARINA RESERVE SOUTH	TREE OF SIGNIFICANCE	1-LOW RISK from littering	1-LOW RISK from weeds	1- LOW RISK from sediments	1- LOW RISK, located away from foreshore erosion prone areas	3-HIGH RISK, climate change (cyclones/higher temperatures/erosion) may impact on the lifespan of these trees.	1- LOW RISK Investigation required	1- LOW RISK Investigation required	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, (vandalism, lightning strike)	4-VERY HIGH RISK, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK	
	2 REGISTERED NATIONAL HERITAGE SITES: Casuarina Coastal Reserve and Foreshore	3 - HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite management	4 - VERY HIGH RISK Several weed species known to occur. Various ownerships lead to uncoordinated weed management. Stormwater discharges from suburbs spread seeds	2-MEDIUM RISK, well established urban area but no GPTs installed along the foreshore to capture sedimentation from major roads and development sites.	4-VERY HIGH RISK, active, ongoing erosion from wave action, development and the stormwater system.	3-HIGH RISK climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	3 - HIGH RISK, Markets and other commercial activities as well as recreation and tourism have impact potential.	4 - VERY HIGH RISK, Popular recreation and tourist areas, uncontrolled stormwater discharges from commerce; urban areas present a significant risk.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	3 - HIGH RISK, Conservation Reserve north of Rapid Creek protected, south of Rapid Creek Managed by Council. Significant new development adjacent to the Creek and in the upper catchment has significant impact on values and public access	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	FLORA & FAUNA	3 - HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite management	4 - VERY HIGH RISK Several weed species known to occur. Various ownerships lead to uncoordinated weed management. Stormwater discharges from suburbs spread seeds	3 - HIGH RISK well established urban area but no GPTs installed to prevent sediment build-up in remaining natural vegetation habitats	4 - VERY HIGH RISK, Extensive progressing foreshore erosion with significant contribution from controlled and uncontrolled stormwater discharge or run-off	4 - VERY HIGH RISK climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	2 - MEDIUM RISK recreation and tourism have impact potential.	4 - VERY HIGH RISK, Popular recreation and tourist areas, uncontrolled stormwater discharges from commerce; urban areas present a significant risk.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH at risk from introducing pests, incl weeds	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	3 - HIGH RISK, Conservation Reserve north of Rapid Creek protected, south of Rapid Creek Managed by Council. Significant new development adjacent to the Creek and in the upper catchment has significant impact on values and public access	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)	
	ICHTHYOSAUR AND WOOD FOSSILS	Investigation required	Investigation required	Investigation required	Investigation required	3-HIGH RISK climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	Investigation required	Investigation required	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	3=HIGH RISK Level of protection not clear as other previously listed sites have been demolished	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	NATIVE VEGETATION COMMUNITY/ HABITAT	3 - HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite management	4 - VERY HIGH RISK Several weed species known to occur. Various ownerships lead to uncoordinated weed management. Stormwater discharges from suburbs spread seeds	4 - VERY HIGH RISK, from drainage system and Rapid Creek as well as frequent fires led to sedimentation build-up. No GPTs in this area.	4 - VERY HIGH RISK, Extensive progressing foreshore erosion with significant contribution from controlled and uncontrolled stormwater discharge or run-off	4 - VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential. industrial activities from the Airport and Defence facilities have some impact in the Rapid Creek catchment.	4 - VERY HIGH RISK, recreation and tourism have impact potential. industrial activities from the Airport and Defence facilities have some impact in the Rapid Creek catchment and the diverse remnant vegetation communities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH RISK, weed invasion through wind & stormwater run-of spreading seeds from suburbs and unmanaged bushland	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	3 - HIGH RISK, Conservation Reserve north of Rapid Creek protected, south of Rapid Creek Managed by Council. Significant new development adjacent to the Creek and in the upper catchment has significant impact on values and public access	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
PARKS & OPEN SPACE	3 - HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite intense management K	3 - HIGH RISK, managed but large remnant vegetation along Rapid Creek and the Casuarina Coastal Reserve are subject to weed infestation.	3 - HIGH RISK,	3 - HIGH RISK, Extensive progressing erosion at foreshore parklands with significant contribution from stormwater discharge or run-off	4 - VERY HIGH RISK climate change (cyclones/higher temperatures/erosion) sea level rises in low lying areas.	2 - MEDIUM RISK, very popular are recreation and tourism have impact potential.	3 - HIGH RISK, recreation and tourism have impact potential. industrial activities from the Airport and Defence facilities have some impact on Parks in the Rapid Creek catchment.	0-NO RISK, managed	3 – HIGH RISK, weed invasion through wind & stormwater run-of spreading seeds from suburbs and unmanaged bushland	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism. Most parkland include native bush affected by weeds.	2 - MEDIUM RISK from changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)		

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE									
14. RAPID CREEK NTH/ CASUARINA RESERVE SOUTH	CASUARINA COASTAL RESERVE	4 - VERY HIGH RISK Popular recreation and tourist areas, frequent events. Litter problem despite intense management	4 - VERY HIGH RISK Several weed species known to occur. Infrequent weed management. Stormwater discharges from suburbs spread seeds	4 - VERY HIGH RISK, from drainage system and Rapid Creek as well as frequent fires led to sedimentation build-up. No GPTs in this area.	4 - VERY HIGH RISK, Extensive progressing foreshore erosion with significant contribution from controlled and uncontrolled stormwater discharge or run-off	4 - VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential. industrial activities from the Airport and Defence facilities have some impact in the Rapid Creek catchment.	4 - VERY HIGH RISK, high recreational use and tourism have impact potential. Some industrial activities from the Airport and Defence facilities likely.	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK from ships and yachts introducing pests, and inappropriate disposal of marine aquarium contents, dogs, cats.	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	2 - MEDIUM RISK from tourist developments and near shore urban high-density developments.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
	REGISTERED INDIGENOUS PLACES OF SIGNIFICANCE: 2	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	1-LOW RISKS, invasive/aggressive native vines/trees	3 – HIGH RISK, weed invasion through wind & stormwater run-of spreading seeds from suburbs and unmanaged bushland	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism.	3 – HIGH RISK, development risk largely unknown.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2-MEDIUM RISK, competing user interests and insufficient management and protection may be an issue
15. CASUARINA/ NAKARA	TREE OF SIGNIFICANCE: <i>Fiscus elastica</i>	1-LOW RISK from littering	1-LOW RISK from weeds	1- LOW RISK from sediments	NOT APPLICABLE, no foreshore in this area	4- VERY HIGH increased cyclones and climate change may affect this species	3-HIGH RISK from airport & defence activities through stormwater run-off	1- LOW RISK	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, (vandalism, lightning strike)	4-VERY HIGH RISK, no formal legal protection for significant trees	Not Applicable	0-NO RISK	
	NATIONAL HERITAGE REGISTER: Casuarina Home Improvement Roof Structure and Holy Spirit Primary School	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Not Applicable does not include a foreshore area.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	1-LOW RISKS, invasive/aggressive native vines/trees	3 – HIGH RISK	3- HIGH RISK through arson, vandalism	3-HIGH RISK, listing affords some protection but other sites have been demolished despite that protection... Listing noted in 2004 but not listed in 2006. Investigation required.	NOT APPLICABLE	NOT APPLICABLE	
	PARKS & OPEN SPACE	2-MEDIUM RISK, Parks maintained grassland. 4-VERY HIGH RISK if current management is not maintained	2-MEDIUM RISK, actively weed managed parklands. 4-VERY HIGH RISK if current management is not maintained	2-MEDIUM RISK, LOW lying parks act as sediment traps for urban stormwater discharges	Not Applicable does not include a foreshore area.	1-LOW RISK, small, maintained park area little used.	2-MEDIUM RISK, stormwater run-off from Trower Road, Vanderlin Drive and commercial shopping district	2-MEDIUM RISK, stormwater run-off from Trower Road, Vanderlin Drive and commercial shopping district	0-NO RISK, managed	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	3 - HIGH RISK Managed parks but park reserves with bushland are affected by high intensity fires due to weed invasion. arson, vandalism	4 - VERY HIGH RISK from changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	
16. MID RAPID CREEK/ WATER GARDENS	TREES OF SIGNIFICANCE: <i>Figures virens</i>	1-LOW RISK from littering	1-LOW RISK from weeds	1- LOW RISK from sediments	NOT APPLICABLE, no foreshore in this area	4- VERY HIGH increased cyclones and climate change may affect this species	1-LOW RISK to be investigated	1-LOW RISK, to be investigated	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, (vandalism, lightning strike)	4-VERY HIGH RISK, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK	
	NATIVE VEGETATION/ HABITATS	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed due to various ownerships/ landholders	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities through stormwater run-off	NOT APPLICABLE, no foreshore in this area	4- VERY HIGH RISK increased cyclones and climate change may affect many species	2-MEDIUM to 3- HIGH RISK from airport & defence activities through stormwater run-off	4- VERY HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	2 - MEDIUM RISK to 3 – HIGH RISK	5 - EXTREME RISK to 4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	4-VERY HIGH RISK, multiple ownerships, crown land, DCC managed and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	DARWIN GENERAL CEMETERY	1-LOW RISK from littering	1-LOW RISK	1-LOW RISK	NOT APPLICABLE, no foreshore in this area	1-LOW RISK	1-LOW RISK	1-LOW RISK	1-LOW RISK, irrigation used but site use may impact on groundwater	1-LOW RISKS, invasive/aggressive native vines/trees	2 - MEDIUM RISK to 3 - HIGH RISK	1 - LOW RISK, highly managed area, access restricted.	NOT APPLICABLE	NOT APPLICABLE	
	RAPID CREEK	4-VERY HIGH RISK, popular area and significant stormwater	4-VERY HIGH RISK, known weed infestation only part of weeds managed	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities	NOT APPLICABLE, no foreshore in this area	4- VERY HIGH RISK increased cyclones and climate change may	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities	5- EXTREME RISK from airport & defence activities through stormwater	1-LOW RISKS, invasive/aggressive native vines/trees which may out	4 - VERY HIGH to 5- EXTREME RISK introducing pests, weeds, cats, dogs,	5 - EXTREME RISK High intensity fires due to weed invasion. arson,	4 - VERY HIGH to 5- EXTREME RISK RISK, multiple ownerships, crown	1-LOW RISK largely based on competition between rare	1-LOW RISK, unless public access or environmental	

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE			
16. MID RAPID CREEK/ WATER GARDENS		drainage from a large urban catchment. Currently no GPTs	due to various ownerships/ landholders	through stormwater run-off		affect many species	through stormwater run-off	run-off	compete more sensitive native plants	cane toads and inappropriate disposal of aquarium contents	vandalism	land, DCC managed and private ownerships. Exact level of protection into the future unclear.	species, recreational uses and heritage/cultural management requirements	management activities are restricted in future (fire, water, weed mgt)
	FLORA & FAUNA	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed due to various ownerships/ landholders	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities through stormwater run-off	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK increased cyclones, sea level rises and climate change may affect many species.	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities through stormwater run-off	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities through stormwater run-off	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	5 - EXTREME RISK High intensity fires due to weed invasion. arson, vandalism	4 - VERY HIGH to 5- EXTREME RISK RISK, multiple ownerships, crown land, DCC managed and private ownerships. Exact level of protection into the future unclear. New development not excluded.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	PARKS & OPEN SPACE	2-MEDIUM RISK, Parks maintained grassland. 4-VERY HIGH RISK if current management is not maintained	2-MEDIUM RISK, actively weed managed parklands. 4-VERY HIGH RISK if current management is not maintained	2-MEDIUM RISK, low lying parks act as sediment traps for urban stormwater discharges	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK increased cyclones and climate change, sea level rises lead to increased salinity	2-MEDIUM to 3- HIGH RISK from airport & defence activities through stormwater run-off	4-VERY HIGH RISK from airport & defence activities through stormwater run-off	0-NO RISK, managed	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	3 - HIGH RISK, parks are managed but bushlands are at risk from fires through camping, vandalism, particularly in bushland reserves.	4 - VERY HIGH to 5 - EXTREME RISK from changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
17. RAPID CREEK SOUTH/MARRARA	NATIVE VEGETATION COMMUNITY/ HABITAT	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed due to various ownerships/ landholders	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities through stormwater run-off	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2-MEDIUM to 3- HIGH RISK from airport & defence activities through stormwater run-off	4-VERY HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK Mangroves, monsoon rainforest, estuarine or woodland habitats at risk from cats, dogs, cats' dogs, weeds and other introducing pests.	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	4-VERY HIGH TO 5-EXTREME RISK multiple ownerships, Defence, Federal Airports, crown land NT, DCC managed and private ownerships. Substantial development in progress at Defence, Airport and NT Government land (Marrara Oval). Exact level of protection into the future unclear. Significant native vegetation communities exist in rural blocks without protection.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	FLORA & FAUNA	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed due to various ownerships/ landholders	4- VERY HIGH to 5- EXTREME RISK from airport & defence activities through stormwater run-off	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2-MEDIUM to 3- HIGH RISK from airport & defence activities through stormwater run-off	4-VERY HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK Mangroves, monsoon rainforest, estuarine or woodland habitats at risk from cats, dogs, cats' dogs, weeds and other introducing pests.	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	4-VERY HIGH TO 5-EXTREME RISK multiple ownerships, Defence, Federal Airports, crown land NT, DCC managed and private ownerships. Substantial development in progress at Defence, Airport and NT Government land (Marrara Oval). Exact level of protection into the future unclear. Significant native vegetation communities exist in rural blocks without protection.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE			
17. RAPID CREEK SOUTH/MARRARA	THREATENED SPECIES: Bladderwort plant, Black footed tree rat	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed. Invasive weed species have potential to displays threatened species	1-LOW RISK, little impact expected	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage (frequency & intensity well as climatic changes may impact on these threatened species.	2-MEDIUM to 3-HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISK, little impact expected	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism	4-VERY HIGH TO 5-EXTREME RISK multiple ownerships, Defence, Federal Airports, crown land NT, DCC managed and private ownerships. Substantial development in progress at Defence, Airport and NT Government land (Marrara Oval). Exact level of protection into the future unclear. Significant native vegetation communities exist in rural blocks without protection.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	MARRARA SWAMP	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed due to various ownerships/ landholders	4- VERY HIGH TO 5-EXTREME RISK from airport & defence activities through stormwater run-off	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2-MEDIUM to 3-HIGH RISK from airport & defence activities through stormwater run-off	4-VERY HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK High intensity fires due to weed invasion. arson, vandalism during dry season.	4-VERY HIGH TO 5-EXTREME RISK multiple ownerships, Defence, Federal Airports, crown land NT and private ownerships. Substantial development in progress at Defence, Airport and NT Government land... Exact level of protection into the future unclear. Significant impact from drainage works and development expected. No legal protection for Marrara Swamp exists.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	PARKS & OPEN SPACE	2-MEDIUM RISK, Parks maintained grassland. 4-VERY HIGH RISK if current management is not maintained	2-MEDIUM RISK, actively weed managed parklands. 4-VERY HIGH RISK if current management is not maintained	2-MEDIUM RISK, low lying parks act as sediment traps for urban stormwater discharges	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK, parks in low lying areas maybe subject to inundation from sea level rises	2-MEDIUM to 3-HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISK, irrigation uses treated water	0-NO RISK, managed	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	3-HIGH RISK, for bushland reserves affected by weeds, vandalism, camping.	4 – VERY HIGH TO EXTREME RISK from changes in Planning Act & Regulation (NT) restricts ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	RAPID CREEK RESERVE	4-VERY HIGH RISK, popular developing urban/industrial area and significant stormwater drainage from a large urban catchment. Currently no GPTs	4-VERY HIGH RISK, known weed infestation only part of weeds managed due to various ownerships/ landholders	4- VERY HIGH TO 5-EXTREME RISK from airport & defence activities through stormwater run-off	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2-MEDIUM to 3-HIGH RISK from airport & defence activities through stormwater run-off	4-VERY HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH TO 5- EXTREME RISK introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4 - VERY HIGH RISK, managed but annual fires due to weed invasion. arson, vandalism	3-VERY HIGH RISK, Rapid Creek Reserve protected but significant development in the catchment significantly affects the health of the Creek.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	2 REGISTERED NATIONAL HERITAGE SITES: RAAF precinct,	2-MEDIUM RISK, Parks maintained grassland. 4-VERY HIGH RISK if current	2-MEDIUM RISK, actively weed managed parklands. 4-VERY HIGH RISK if current	2-MEDIUM RISK, low lying parks act as sediment traps for urban stormwater	Not Applicable does not include a foreshore area.	4- VERY HIGH RISK, for sites in low lying areas maybe subject to inundation from sea	2-MEDIUM to 3-HIGH RISK from airport & defence activities through stormwater run-off	1-LOW RISK, irrigation uses treated water	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	4 - VERY HIGH RISK, managed but annual fires due to weed invasion. arson, vandalism	3-HIGH RISK, location of Water Tower 129 and listed buildings to be investigated. Listing	1-LOW RISK largely based on competition between rare species,	1-LOW RISK, unless public access or environmental management

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE			
		management is not maintained	management is not maintained	discharges		level rises			sensitive native plants			does not necessarily provide protection.	recreational uses and heritage/cultural management requirements	activities are restricted in future (fire, water, weed mgt)
18. MICKET CREEK/ HOLMES JUNGLE	3 REGISTERED NATIONAL HERITAGE SITES: Micket Creek Complex, Holmes Jungle and Swamp, Darwin Harbour Wetlands	5-EXTREME RISK, significant illegal rubbish at the sites and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime However Shooting range activities may add to the problem through lead pellets used.	5-EXTREME RISK, heavily weed infested known to occur at native bush land adjacent to urban areas. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM RISK, Most of the areas foreshore is protected by dense Mangrove community which act to stabilise the coastline. The majority of the foreshore is protected through declaration as conservation reserve and little development is expected in the foreseeable future.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level, increased salinity will also impact may alter the vegetation community composition	3- HIGH RISK, sewage treatment, landfills and land use, including adjacent historic bombing range, shooting range have the potential to cause environmental impact in conservation areas.	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for impacts of historic as well as current land use, including shooting range, sewerage and land filling activities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK, some areas managed but annual high temperatures fires due to weed invasion. arson, vandalism	3-HIGH TO VERY HIGH RISK, Holmes Jungle protected conservation reserve but Micket Creek complex, on Defence land unprotected from future development. Exact protection location of "Darwin Harbour Wetlands" to be investigated.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	FLORA & FAUNA	5-EXTREME RISK, significant illegal rubbish at the sites and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime However Shooting range activities may add to the problem through lead pellets used.	5-EXTREME RISK, heavily weed infested known to occur at native bush land adjacent to urban areas. Uncontrolled vehicle access assists the spread of weeds which damage fauna habitats.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM RISK Most of the areas foreshore is protected by dense Mangrove community which act to stabilise the coastline. The majority of the foreshore is protected through declaration as conservation reserve and little development is expected in the foreseeable future.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level, increased salinity will also impact may alter the vegetation community composition and freshwater dependent fauna populations.	3- HIGH RISK, sewage treatment, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for impacts of historic as well as current land use, including shooting range, sewerage and land filling activities.	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK, some areas managed but annual high temperatures fires due to weed invasion. arson, vandalism	3-HIGH TO VERY HIGH RISK, Holmes Jungle protected conservation reserve but Micket Creek complex, on Defence land unprotected from future development. Exact protection location of "Darwin Harbour Wetlands" to be investigated	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	NATIONAL VEGETATION COMMUNITY/ HABITAT	5-EXTREME RISK, significant illegal rubbish at the sites and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime However Shooting range activities may add to the problem through lead pellets used.	5-EXTREME RISK, heavily weed infested known to occur at native bush land adjacent to urban areas. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM RISK Most of the areas foreshore is protected by dense Mangrove community which act to stabilise the coastline. The majority of the foreshore is protected through declaration as conservation reserve and little development is expected in the foreseeable future.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3- HIGH RISK, sewage treatment, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for impacts of historic as well as current land use, including shooting range, sewerage and land filling activities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK, some areas managed but annual high temperatures fires due to weed invasion. arson, vandalism	3-HIGH TO VERY HIGH RISK, Holmes Jungle protected conservation reserve but Micket Creek complex, on Defence land unprotected from future development. Exact protection location of "Darwin Harbour Wetlands" to be investigated	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	PARKS & OPEN SPACE	4-VERY HIGH RISK, parklands are managed but open space bushland includes environmentally sensitive crown land which has serious littering problems.	4-VERY HIGH RISK, parklands are managed but open space bushland includes environmentally sensitive crown land which has serious weed infestation problems.	4-VERY HIGH RISK low lying Parklands are managed but bushland reserves are subject to sedimentation during the wet season, particularly if the annual wildfire frequencies are high and prevent re-stabilisation from shrubs and grasses.	NOT APPLICABLE no parks and open spaces on the areas foreshore	4- VERY HIGH RISK, parks in low lying areas maybe subject to inundation from sea level rises	3- HIGH RISK, managed parks at little risk but native bushland reserves could be impacted by sewage system leakage, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	2-MEDIUM RISK, urban stormwater discharges without pollution control may impact on park and reserves	0-NO RISK, managed	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	2-MEDIUM TO 3-HIGH RISK, largely well managed but bushland reserve fires of high temperatures due to weed invasion. arson, vandalism are a significant risk,	4 - VERY HIGH RISK from changes in Planning Act & Regulation (NT) restrict ability of public to appeal on open space issues. Briefing required on new legislation & Planning Scheme. Also Holmes Jungle is a declared conservation area, surrounding wetlands and crown bushlands are not.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture	
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,	5 - EXTREME RISK ON VALUE									
18. MICKET CREEK/ HOLMES JUNGLE	HOMES JUNGLE	4-VERY HIGH RISK, Holmes Jungle reserve is managed but open space bushland includes environmentally sensitive crown land which has serious littering problems.	5-EXTREME RISK, heavily weed infested known to occur at native bush land adjacent to urban areas. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE, does not include foreshore	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3- HIGH RISK, some management but sewage treatment, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for impacts of historic as well as current land use, including shooting range, sewerage and land filling activities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK, some areas managed but annual high temperatures fires due to weed invasion. arson, vandalism	3-HIGH RISK, Holmes Jungle is a declared conservation reserve but surrounding crown and defence land is not. Development of large adjacent land parcels could impact substantially on Holmes Jungle wetlands which are already subject to effects from downstream drainage systems cut into the aquifer.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	16 BIRD SPECIES Regionally Uncommon Or Listed As Endangered	4-VERY HIGH RISK, Holmes Jungle reserve is managed but open space bushland includes environmentally sensitive crown land which has serious littering problems. Litter is a great hazard for bird habitats and health. Micket Creek Shooting range activities may interfere with breeding.	5-EXTREME RISK, heavily weed infested known to occur at native bush land adjacent to urban areas. Uncontrolled vehicle access assists the spread of weeds which impact on bird habitats, incl roosting trees.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. Sediment built-up can seriously damage bird habitats, particularly ground nesting species.	NOT APPLICABLE	4- VERY HIGH RISK rises in sea level, increased salinity and higher temperatures may alter bird habitats and lead to limited availability of freshwater.	4- VERY HIGH RISK, sewage treatment, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	4- VERY HIGH RISK affected by high sediment loads the potential for impacts of land use, including shooting range, sewerage and land filling activities.	0-NO RISK	4- VERY HIGH RISK introducing pests, cats, dogs and Cane Toads	4 - VERY HIGH RISK, some areas managed but annual high temperatures fires due to weed invasion. arson, vandalism	4-VERY HIGH TO EXTREME RISK, wetlands in this area are largely feed by Darwin's only freshwater aquifer which is already subject to depletion from downstream drainage systems cut into the water table by re-development s and new developments.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	MICKET CREEK	5-EXTREME RISK, significant illegal rubbish at the sites and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime However Shooting range activities may add to the problem through lead pellets used.	5-EXTREME RISK, heavily weed infested known to occur at native bush land adjacent to urban areas. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM RISK Most of the areas foreshore is protected by dense Mangrove community which act to stabilise the coastline. The majority of the foreshore is protected through declaration as conservation reserve and little development is expected in the foreseeable future	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, sewage treatment, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for impacts of land use, including shooting range, sewerage and land filling activities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4 - VERY HIGH RISK, largely unmanaged managed but annual high temperatures fires due to weed invasion. arson, vandalism	3-HIGH TO 4-VERY HIGH RISK, Micket Creek complex, on Defence land unprotected from future development. Exact Register of National Estate protection location of the listed "Darwin Harbour Wetlands" to be investigated as it may include Micket Creek.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes	
	RARE NT MANGROVE: <i>Avicennia integra</i>	5-EXTREME RISK, significant illegal rubbish at the sites and surrounding crown bush land. Shooting range activities may add to the litter problem through lead pellets used and flushed into Mangrove areas in the wet.	3-HIGH RISK, weeds can spread to the brackish Mangrove areas during the wet season and impact on <i>Avicennia integra</i> , particular aggressive vines pose a displacement risk.	4-Very High Risk, Undeveloped swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. Sediment built up has the potential to damage	2-MEDIUM RISK Most of the areas foreshore is protected by dense Mangrove community which act to stabilise the coastline. The majority of the foreshore is protected through declaration as conservation reserve and little	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	3- HIGH RISK, sewage treatment, landfills and land use, including adjacent historic bombing range , shooting range have the potential to cause environmental impact in conservation areas	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for leakage from the sewerage and land filling activities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete <i>Avicennia integra</i>	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	4 - VERY HIGH RISK, largely unmanaged managed but annual high temperatures fires due to weed invasion. arson, vandalism	3-HIGH TO 4-VERY HIGH RISK, Mangroves located on Defence land unprotected from future development. Exact Register of National Estate protection location of the listed "Darwin Harbour Wetlands" to be investigated as it may include Micket Creek.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)	

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
				the rare <i>Avicennia integra</i> population	development is expected in the foreseeable future									
19. SE LEANYER SWAMP	WETLANDS	5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime.	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds.	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE, No foreshore but very low lying areas subject to wet season inundation	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition of valuable Leanyer wetlands.	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK TO 5-EXTREME risk affected by high sediment loads the potential for leakage from the sewerage system piping network	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK TO 5-EXTREME , introduced species particularly cats, dogs cane loads and weeds	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when ephemeral wetlands dry up.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands which are already subject to effects from downstream drainage systems cut into the aquifer.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	TREE OF SIGNIFICANCE	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	NOT APPLICABLE, No foreshore	3-HIGH RISK, At risk of impact from cyclonic damage due to the increased frequency of cyclones	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1-LOW RISKS, invasive/aggressive native vines/trees	1-LOW RISK confined primarily to mistletoe infestation or borer	1-LOW RISK, (vandalism, lightning strike)	4-VERY High, no formal legal protection for significant trees	Not Applicable	0-NO RISK
	FLORA & FAUNA	5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE, No foreshore but very low lying areas subject to wet season inundation 4-VERY HIGH RISK for Mangrove community at the north west corner of this EMU	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts	4- VERY HIGH RISK TO 5-EXTREME risk affected by high sediment loads, weed seeds and the potential for leakage from the sewerage system piping network	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	PARKS & OPEN SPACE	4-VERY HIGH RISK, parklands are managed but open space bushland includes environmentally sensitive crown land which has serious littering problems.	4-VERY HIGH RISK, parklands are managed but open space bushland includes environmentally sensitive crown land which has serious weed infestation problems.	4-VERY HIGH RISK low lying Parklands are subject to sedimentation during the wet season, particularly if the annual wildfire frequencies are high and prevent re-stabilisation from shrubs and grasses in remnant bushlands.	NOT APPLICABLE, No foreshore	4-VERY HIGH RISK while risk for modified parks is low, the large natural bush park and reserves in low lying areas are subject to inundation if sea level rises. In addition native community composition may change significantly through climate change.	2-MEDIUM RISK, parks are managed. Some risk from urban stormwater discharges of commercial /industrial activities.	1-LOW RISK treated water used for irrigation, but bushland reserves are largely unmanaged and subject to 4- VERY HIGH RISK TO 5-EXTREME risk affected by high sediment loads the potential for leakage from the sewerage system piping network	0-NO RISK, managed	3-HIGH RISK, managed but affected by cats, dogs, cane toad, weeds	2-MEDIUM TO 3-HIGH RISK, largely well managed but bushland reserve fires of high temperatures due to weed invasion. arson, vandalism are a significant risk,	3 HIGH TO -4 VERY HIGH RISK If Open space is rezoned for development without public appeals rights, as is the case with new legislation & Planning Scheme	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	3 REGISTERED NATIONAL HERITAGE: Micket Creek complex & Holmes Jungle and Swamp.	5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban	NOT APPLICABLE, No foreshore	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts	4- VERY HIGH RISK TO 5-EXTREME risk affected by high sediment loads the potential for leakage from the sewerage system piping network	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and Cane Toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands which are already subject to effects from downstream	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
19. SE LEANYER SWAMP		regime.		suburbs are well established and risk is lower there.							season when ephemeral wetlands dry up.	drainage systems cut into the aquifer.		
	NATIVE VEGETATION COMMUNITY/HABITAT	5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land. Littering at the active Shoal Bay landfill is subject to a daily litter collection management regime	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds.	4-Very High Risk, Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE, No foreshore but very low lying areas subject to wet season inundation	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK TO 5- EXTREME risk affected by high sediment loads the potential for leakage from the sewerage system piping network	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
20. SW LEANYER SWAMP/ WATER PARK	WETLANDS	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds.	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introduced pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents.	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when ephemeral wetlands dry up.	4 - VERY HIGH to 5- EXTREME Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, Public Access restricted through fencing. Heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed, mosquitoes and littering management purposes
	1 SITE REGISTERED AS NATIONAL HERITAGE : Leanyer Swamp	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introduced pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when ephemeral wetlands dry up.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, Public Access restricted through fencing. Heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed, mosquitoes and littering management purposes
	FLORA & FAUNA	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, Public Access restricted through fencing. Heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed, mosquitoes and littering management purposes
	PARKS & OPEN SPACE	4-VERY HIGH RISK, parklands are managed but open space bushland includes	4-VERY HIGH RISK, parklands are managed but open space bushland includes	4-VERY HIGH RISK low lying Parklands are managed but bushland reserves are subject to	NOT APPLICABLE does not include a foreshore area.	2-MEDIUM TO 3-HIGH RISK, sea level rises may impact on low-lying parks. High	3- HIGH RISK, parklands are managed but bushlands maybe affected by urban	2-MEDIUM RISK, urban stormwater discharges without pollution control may impact on park	1-LOW RISKS, invasive/aggressive native vines/trees may be a risk to bushland open	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	2-MEDIUM RISK for managed parks but 3-HIGH RISK for bushlands affected by weeds and used	3 HIGH TO -4 VERY HIGH RISK If Open space is rezoned for development	1-LOW RISK largely based on competition between rare species,	1-LOW RISK, unless public access or environmental management

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
20. SW LEANYER SWAMP/ WATER PARK		environmentally sensitive crown land which has serious littering problems	environmentally sensitive crown land which has serious weed infestation problems.	sedimentation during the wet season. particularly if the annual wildfire frequencies are high and prevent re-stabilisation from shrubs and grasses in remnant bushlands.		temperatures and increased salinity may impact vegetation.	stormwater discharges from industrial/commercial activities, including adjacent old landfills and sewage treatment activities.	and reserves	space		for illegal activities, including rubbish dumping in crown land.	without public appeals rights, as is the case with new legislation & Planning Scheme	recreational uses and heritage/cultural management requirements	activities are restricted in future (fire, water, weed mgt)
	NATIVE VEGETATION COMMUNITY/ HABITAT	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	5-EXTREME RISK, heavily weed infested crown land, largely unmanaged adjacent to the suburb of Leanyer. Uncontrolled vehicle access assists the spread of weeds.	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment have the potential for negative impacts	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4- VERY HIGH RISK introducing pests, particularly weeds and cats, dogs and Cane Toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, Public Access restricted through fencing. Heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed, mosquitoes and littering management purposes
21. WEST LEANYER SWAMP	WETLANDS	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land.	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when ephemeral wetlands dry up.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, Public Access restricted through fencing. Heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed, mosquitoes and littering management purposes
	FLORA & FAUNA	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts	4-VERY HIGH RISK, urban stormwater discharges increase sedimentation and pollution from land-use activities have the potential for negative impacts	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, Public Access restricted through fencing. Heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed, mosquitoes and littering management purposes
	PARKS & OPEN SPACE	4-VERY HIGH RISK, parklands are managed but open space bushland includes environmentally sensitive crown land which has serious littering problems	2-MEDIUM TO 3-HIGH RISK, identified weeds are treated in managed parks but reserve bushlands are at risk from weed infestation	4-VERY HIGH RISK low lying Parklands are managed but bushland reserves are subject to sedimentation during the wet season. particularly if the annual wildfire frequencies are high	NOT APPLICABLE does not include a foreshore area.	2-MEDIUM TO 3-HIGH RISK, sea level rises may impact on low-lying parks. High temperatures and increased salinity may impact vegetation.	2 - MEDIUM RISK, recreation and tourism have impact potential	2-MEDIUM RISK, urban stormwater discharges without pollution control may impact on park and reserves	1-LOW RISKS, invasive/aggressive native vines/trees	4- VERY HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	2-MEDIUM TO 3-HIGH RISK, parks are managed but weed invasion in native bushland reserves pose a serious fire risk.	3 HIGH TO -4 VERY HIGH RISK If Open space is rezoned for development without public appeals rights, as is the case with new legislation & Planning Scheme	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
21. WEST LEANYER SWAMP	NATIVE VEGETATION COMMUNITY/HABITAT	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts	4-VERY HIGH RISK, re-development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of native vegetation communities.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	3 SITES REGISTERED AS NATIONAL HERITAGE : Leanyer Swamp, Drapier House, Brazier Residence	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	NOT APPLICABLE does not include a foreshore area.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level may also lead to increased salinity altering freshwater vegetation communities and fauna habitats.	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts	4-VERY HIGH RISK, re-development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of Leanyer Swamp. 1-LOW RISK from water quality on Dapier House and Brazier Residence expected.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and aquarium contents dumping are a significant risk to Leanyer Swamp. 1-LOW RISK for buildings	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when ephemeral wetlands dry up.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
22. LEANYER SWAMP/ BUFFALO CREEK	WETLANDS	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping at the old Leanyer landfill site and surrounding crown bush land.	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM TO 3 - HIGH RISK, Wetlands are large and only the relatively small areas abutting the foreshore are affected by erosion Some erosion protection exists from native vegetation and Mangrove forests.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use of adjacent areas. bombing range still have the potential for negative impacts	4- VERY HIGH RISK, Industrial activities related to land filling and sewage treatment. Historic land-use i.e. bombing range still have the potential for negative impacts.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when ephemeral wetlands dry up.	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	NATIVE VEGETATION COMMUNITY/HABITAT	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping on crown bush land	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	4-VERY HIGH RISK Substantial erosion has occurred and is still in progress in this area. Some erosion protection exists in undisturbed native vegetation habitats and Mangrove forest areas. However cliffs and sandy beaches are significantly affected by erosion.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use of adjacent areas. bombing range still have the potential for negative impacts	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of native vegetation habitats.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion	5-EXTREME RISK, Substantial urban development in the area, further development of large adjacent land parcels could impact substantially on the wetlands, native flora and fauna habitats	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	4 SITES REGISTERED AS NATIONAL HERITAGE:	4-VERY HIGH RISK TO 5-EXTREME	4-VERY HIGH RISK TO 5-EXTREME	4-VERY HIGH RISK TO 5-EXTREME	4-VERY HIGH RISK Substantial erosion	4-VERY HIGH RISK from sea level rises,	3-HIGH RISK TO 4-VERY HIGH RISK,	4-VERY HIGH RISK, increased	1-LOW RISKS, invasive/aggressive	4 - VERY HIGH to 5- EXTREME	4-VERY HIGH RISK, too frequent	3-HIGH RISK TO 4-VERY HIGH RISK,	1-LOW RISK largely based on	1-LOW RISK, unless public

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE			
22. LEANYER SWAMP/ BUFFALO CREEK	Casuarina Beach, Lee Point, Casuarina Beach Strong Point, Buffalo Creek	RISK, significant illegal rubbish dumping on crown bush land	RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	has occurred and is still in progress in this area. Some erosion protection exists in undisturbed native vegetation habitats and Mangrove forest areas. However cliffs and sandy beaches are significantly affected by erosion.	cyclone damage due to increased intensity.	Recreational activities, camping at Casuarina & Lee Point as well as Industrial activities related to sewage treatment. Historic land-use of adjacent areas. bombing range for Buffalo Creek have the potential for negative impacts	development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of Casuarina Coastal Reserve	native vines/trees	introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents and boating activities.	fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	multiple ownerships, NT Government, Defence (Buffalo Creek) and private ownership at Lee Point . Major development in progress at Lee Point significant potential for environmental impact and public access restrictions.	competition between rare species, recreational uses and heritage/cultural management requirements	access or environmental management activities are restricted in future (fire, water, weed mgt)
	FLORA & FAUNA	4-VERY HIGH RISK TO 5-EXTREME RISK, significant illegal rubbish dumping on crown bush land	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	4-VERY HIGH RISK Substantial erosion has occurred and is still in progress in this area. Some erosion protection exists in undisturbed native vegetation habitats and Mangrove forest areas. However cliffs and sandy beaches are significantly affected by erosion.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Recreational activities, camping at Casuarina & Lee Point as well as Industrial activities related to sewage treatment. Historic land-use of adjacent areas. bombing range for Buffalo Creek have the potential for negative impacts	4-VERY HIGH RISK, coastal re-development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of fauna and flora habitats.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion.	4-VERY HIGH RISK TO EXTREME RISK, multiple ownerships, NT Government, Defence (Buffalo Creek) and private ownership at Lee Point. Major development in progress at Lee Point significant potential for environmental impact and public access restrictions.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	TREES OF SIGNIFICANCE	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1- LOW RISK Evaluation required		1- LOW RISK Evaluation required	1- LOW RISK Evaluation required	1-LOW RISKS, invasive/aggressive native vines/trees			4-VERY HIGH RISK, no formal legal protection for significant trees	NOT APPLICABLE	0-NO RISK
	CASUARINA COASTAL RESERVE	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from camping.	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	4-VERY HIGH RISK Substantial erosion has occurred and is still in progress in this area. Some parts of the reserve are protected from Mangroves.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use of adjacent areas. bombing range for Buffalo Creek have the potential for negative impacts	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of Casuarina Coastal Reserve	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents and boating activities.	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	3 - HIGH RISK from tourist developments and near shore urban high-density developments to the protected Casuarina Reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (erosion, water, weed mgt)
	PARKS & OPEN SPACE	4-VERY HIGH RISK, parklands are managed but open space bushland includes environmentally sensitive crown land which has serious littering problems	3-HIGH RISK, known weed infestations despite management, particular in bush land open space.	4-VERY HIGH RISK Undeveloped bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM RISK, only foreshore parks are affected by ongoing coastal erosion, most parks are located well away from the erosion prone zone.	4-VERY HIGH RISK from sea level rises in low-lying parks and reserves, cyclone damage due to increased intensity.	2 - MEDIUM RISK, recreation and tourism have impact potential	2-MEDIUM RISK, urban stormwater discharges without pollution control may impact on park and reserves	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK introducing pests, weeds, cats, dogs, and cane toads Parks include bushland reserves.	3-HIGH RISK, Despite management for bushland open spaces too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion	3 HIGH TO -4 VERY HIGH RISK If Open space is rezoned for development without public appeals rights, as is the case with new legislation & Planning Scheme	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
WW II HERITAGE SITES :	Observation Post, Sandy Creek	4-HIGH RISK for Sandy Creek, recreational use, camping, illegal rubbish dumping cause litter problem	4-VERY HIGH RISK, for Sandy Creek: weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	4-VERY HIGH RISK for Sandy Creek: undeveloped bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil	4-VERY HIGH RISK Substantial erosion has occurred and is still in progress near WWII Heritage Sites.	4-VERY HIGH RISK, cyclone damage due to increased intensity.	2 - MEDIUM RISK, recreation and tourism have impact potential	1-LOW RISK, little impact expected from water quality issues.	0-NO RISK expected	3-HIGH RISK for Sandy Creek: introducing pests, weeds, cats, dogs, and cane toads Parks include bushland reserves	1-LOW RISK, vandalism and lightning	3-HIGH RISK, level of protection provided by listing is unclear given that other listed buildings have been demolished.	NOT APPLICABLE for Observation Post but 1-LOW RISK for Sandy Creek, based on competition between rare species,	NOT APPLICABLE

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
22. LEANYER SWAMP/ BUFFALO CREEK				erosion, particular during the wet season.									recreational uses and heritage/cultural management requirements	
	BUFFALO CREEK	5-EXTREME RISK, significant illegal rubbish dumping and intense recreational use cause historic littering problems at Buffalo Creek	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Uncontrolled vehicle access assists the spread of weeds	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	2-MEDIUM RISK the creek mouth is subject to coastal erosion but, at this stage, largely protected through Mangroves.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	4- VERY HIGH RISK, Industrial activities related to sewage treatment. Historic land-use of adjacent areas. bombing range for Buffalo Creek have the potential for negative impacts	4-VERY HIGH RISK, frequent fires expose soil to erosion and subsequent sedimentation of Buffalo Creek. Illegal rubbish dumping add to pollution loads during the wet season.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when floodplains dry up.	4-VERY HIGH RISK, Buffalo Creek is located largely on crown and defence land not subject to development constraints.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	3 SITES REGISTERED IN NORTHERN TERRITORY: Observation Post, Sandy Creek, Casuarina Coastal Reserve	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from camping... Buildings well managed with 1-LOW RISK.	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	4-VERY HIGH RISK TO 5-EXTREME RISK Undeveloped Leanyer swamp & bushland is subject to frequent wildfires and unrestricted vehicle access which leads to significant soil erosion, particular during the wet season. The urban suburbs are well established and risk is lower there.	4-VERY HIGH RISK Substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of near foreshore habitats.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when Sandy Creek and vegetation at Casuarina Coastal Reserve all but dries up.	3 - HIGH RISK, Heritage listed sites have been developed in the past and the level of protection afforded by listing is unclear. The Casuarina Coastal Reserve could be subject to tourist developments and near shore urban high-density developments raise concerns.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
23. MID CASUARINA RESERVE/ DRIPSTONE CAVES	NATIONAL HERITAGE REGISTER: Drip Stone Strong Point built during World War II, Darwin Foreshore	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from camping... Buildings well managed with 1-LOW RISK.	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	3- HIGH RISK Largely developed and good vegetation cover however risk arises from bushland areas subject to frequent wildfires and urban stormwater discharges without GPTs.	4-VERY HIGH RISK Substantial erosion has occurred and still is in progress in these areas.	4-VERY HIGH RISK cyclone damage due to increased intensity.	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of near foreshore habitats.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents have significant impact potential, particularly on the foreshore. Little impact on buildings.	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion. Fire risk confined to dry season when vegetation at Casuarina Coastal Reserve all but dries up.	3 - HIGH RISK from tourist developments and near shore urban high-density developments to the protected Casuarina Reserve. Protection for listed buildings are under a cloud as other listed buildings have been demolished despite Heritage listing.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	NATIVE VEGETATION COMMUNITY/HABITAT	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from camping.	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	3- HIGH RISK Largely developed and good vegetation cover however risk arises from bushland areas subject to frequent wildfires and urban stormwater discharges without GPTs.	3-HIGH to 4-VERY HIGH RISK Native vegetation communities & habitats in near foreshore locations are at risk: Substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of native vegetation habitats.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	3 - HIGH RISK from tourist developments and near shore urban high-density developments to the protected Casuarina Reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	FLORA & FAUNA	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires	3- HIGH RISK Largely developed and good vegetation cover however risk arises from	3-HIGH to 4-VERY HIGH RISK Flora and fauna habitats in near foreshore locations	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire	3 - HIGH RISK from tourist developments and near shore urban high-density	1-LOW RISK largely based on competition between rare species,	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE						5 - EXTREME RISK ON VALUE			
23. MID CASUARINA RESERVE/ DRIPSTONE CAVES		camping.	and stormwater aid in the distribution of seeds.	bushland areas subject to frequent wildfires and urban stormwater discharges without GPTs.	are at risk: Substantial erosion has occurred and still is in progress in these areas.	of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition		sedimentation and urban pollution discharges leading to degradation of flora and fauna habitats.			sensitive native vegetation communities. High intensity fires through weed invasion and camping.	developments to the protected Casuarina Reserve	recreational uses and heritage/cultural management requirements	management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	FORESHORE	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from camping.	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	3- HIGH RISK Largely developed and good vegetation cover however risk arises from bushland areas subject to frequent wildfires and urban stormwater discharges without GPTs.	3-HIGH to 4-VERY HIGH RISK substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of near foreshore habitats.	0-NO RISK	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	3 - HIGH RISK from tourist developments and near shore urban high-density developments to the protected Casuarina Reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	CASUARINA COASTAL RESERVE	3- HIGH RISK, significant illegal rubbish dumping on crown bush land and littering from camping.	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	3- HIGH RISK Largely developed and good vegetation cover however risk arises from bushland areas subject to frequent wildfires and urban stormwater discharges without GPTs.	3-HIGH to 4-VERY HIGH RISK substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of Casuarina Coastal Reserve	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	3 - HIGH RISK from tourist developments and near shore urban high-density developments to the protected Casuarina Reserve	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (erosion, water, weed mgt)
	DRIPSTONE CAVES	3- HIGH RISK, parklands are managed but intense use , including camping leads to littering problems	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	3- HIGH RISK Largely developed and good vegetation cover however risk arises from bushland areas subject to frequent wildfires and urban stormwater discharges without GPTs.	3-HIGH to 4-VERY HIGH RISK substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Inundation due to rises in sea levels. will also impact	2 - MEDIUM RISK, recreation and tourism have impact potential	2-MEDIUM RISK from urban stormwater system and associated pollution.	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK introducing pests, weeds, cats, dogs, cane toads	2-MEDIUM RISK, fires fuelled by weeds could damage the area.	1-LOW RISK, Casuarina Coastal Reserve, the location of Dripstone Caves is protected from development.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (erosion, water, weed mgt)
	PARKS & OPEN SPACE	3- HIGH RISK, parklands are managed but intense use , including camping leads to littering problems	3-HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	2-MEDIUM RISK good vegetation cover risk arises urban stormwater discharges without GPTs.	3-HIGH to 4-VERY HIGH RISK substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Inundation due to rises in sea levels. will also impact	2 - MEDIUM RISK, recreation and tourism have impact potential	2-MEDIUM RISK from urban stormwater system and associated pollution.	1-LOW RISKS, invasive/aggressive native vines/trees	3- HIGH RISK , introduced species particularly cats, dogs cane toads and weeds	2-MEDIUM TO 3-HIGH RISK, parks are managed but weed invasion in native bushland reserves pose a serious fire risk.	3 HIGH TO -4 VERY HIGH RISK If Open space is rezoned for development without public appeals rights, as is the case with new legislation & Planning Scheme	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
24. NORTH CASUARINA RESERVE/ LEE POINT EAST	5 SITES REGISTERED AS NATIONAL HERITAGE: Casuarina Beach, Lee Point, Casuarina Beach Strong Point, Lee Point Strong Point, Sandy Creek	3-HIGH RISK TO 4-VERY HIGH RISK at most sites from illegal camping, recreational use and stormwater discharges.	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Historic disturbance, fire and vehicle access assists the spread of weeds	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Inundation due to rises in sea levels. will also impact	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of Casuarina Coastal Reserve and Sandy Creek.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	4-VERY HIGH RISK Casuarina Coastal Reserve protected but multiple ownerships, including private has lead to more and more development proposals. New suburbs proposed for Lee Point.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (erosion, water, weed mgt)
	3 SITES LISTED ON NT REGISTER: Casuarina Coastal Reserve, Observation Post, Sandy Creek	3-HIGH RISK TO 4-VERY HIGH RISK at most sites from illegal camping, recreational use and stormwater discharges.	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Historic disturbance, fire and vehicle	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has	4- VERY HIGH RISK At risk of impact from damage due to the increased frequency of cyclones. Rises in sea level will also	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation	4-VERY HIGH RISK Casuarina Coastal Reserve protected but multiple ownerships, including private has lead to more	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural	1-LOW RISK, unless public access or environmental management activities are restricted in future

THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,	2 - MEDIUM RISK ON VALUE,	3 - HIGH RISK ON VALUE,	4 - VERY HIGH RISK ON VALUE,						5 - EXTREME RISK ON VALUE			
24. NORTH CASUARINA RESERVE/ LEE POINT EAST			access assists the spread of weeds	sedimentation and urban pollution discharges.	occurred and still is in progress in these areas.	impact may alter the mangrove area and vegetation community composition		discharges leading to degradation of Casuarina Coastal Reserve and Sandy Creek.		aquarium contents	communities. High intensity fires through weed invasion and camping.	and more development proposals. New suburbs proposed for Lee Point.	management requirements	(erosion, water, weed mgt)
	FORESHORE: Coral reef with rich sponge fauna, seagrass meadows & Dugong habitat, extensive tidal flats	4- VERY HIGH RISK at most sites from illegal camping, recreational use and stormwater discharges. No GPT in place at present.	3-HIGH RISK from marine aquarium discharges and shipping.	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	4-VERY HIGH RISK, sea levels rises may erode / inundate permanently foreshore tidal flats and increasing temperatures may impact on seagrass meadows and.	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of near foreshore habitats.	0-NO RISK	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	2-MEDIUM RISK from ash pollution.	4-VERY HIGH RISK Casuarina Coastal Reserve protected but multiple ownerships, including private has lead to more and more development proposals.. New Lee Point suburbs.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	NATIVE VEGETATION COMMUNITY/HABITAT: Mangroves, Eucalyptus woodlands	3-HIGH RISK TO 4-VERY HIGH RISK at most sites from illegal camping, recreational use and stormwater discharges	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Historic disturbance, fire and vehicle access assists the spread of weeds	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges leading to degradation of native vegetation habitats.	1-LOW RISKS, invasive/aggressive native vines/trees which may out compete more sensitive native plants	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	4-VERY HIGH RISK Casuarina Coastal Reserve protected but multiple ownerships, including private has lead to more and more development proposals. New suburbs for Lee Point. Little enforceable native vegetation protection.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to native vegetation habitats for fire & weed management purposes
	PARKS & OPEN SPACE	3- HIGH RISK, parklands are managed but intense use , including camping leads to littering problems	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	4-VERY HIGH RISK Undeveloped bushland is subject to frequent wildfires and unrestricted vehicle access resulting in major soil erosion, particular during the wet season..	3-HIGH to 4-VERY HIGH RISK Parks at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	4-VERY HIGH RISK, sea level rises may inundate low-lying parks, temperature rises and increased salinity may affect vegetation in parks and bushland reserves.	2 - MEDIUM RISK, recreation and tourism have impact potential	3- HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution discharges.	1-LOW RISKS, invasive/aggressive native vines/trees	3-HIGH RISK introducing pests, weeds, cats, dogs, cane toads	2-MEDIUM TO 3-HIGH RISK, parks are managed but weed invasion in native bushland reserves pose a serious fire risk.	3 HIGH TO -4 VERY HIGH RISK If Open space is rezoned for development without public appeals rights, as is the case with new legislation & Planning Scheme	NOT APPLICABLE	1-LOW RISK, unless public access or environmental management activities are restricted in future (fire, water, weed mgt)
	CASUARINA COASTAL RESERVE	3-HIGH RISK TO 4-VERY HIGH RISK at most sites from illegal camping, recreational use and stormwater discharges	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads and inappropriate disposal of aquarium contents	4-VERY HIGH RISK, too frequent fires during the dry season impact on sensitive native vegetation communities. High intensity fires through weed invasion and camping.	4-VERY HIGH RISK Casuarina Coastal Reserve protected but development pressure exists from multiple ownerships, including private adjacent to the reserve.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	1-LOW RISK, unless public access or environmental management activities are restricted in future (erosion, water, weed mgt)
24. NORTH CASUARINA RESERVE/ LEE POINT EAST	FLORA & FAUNA	3-HIGH RISK TO 4-VERY HIGH RISK at most sites from illegal camping, recreational use and stormwater discharges	4-VERY HIGH RISK TO 5-EXTREME RISK, heavily weed infested crown land, largely unmanaged. Historic disturbance, fire and vehicle access assists the spread of weeds	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	3-HIGH to 4-VERY HIGH RISK Vegetation communities at the cliff and dune areas at risk as substantial erosion has occurred and still is in progress in these areas.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact may alter the mangrove area and vegetation community composition	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development, high incident of wildfires and urban stormwater discharges increase sedimentation and urban pollution discharges.	1-LOW RISKS, invasive/aggressive native vines/trees	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads.	4-VERY HIGH RISK, too frequent fires during the dry season impact on the more fire sensitive native vegetation communities. High intensity fires through weed invasion and camping.	4-VERY HIGH RISK Casuarina Coastal Reserve protected but multiple ownerships, including private has lead to more and more development proposals. Little native vegetation protection.	1-LOW RISK largely based on competition between rare species, recreational uses and heritage/cultural management requirements	2- MEDIUM RISK, heritage protection could in future impact/ restrict access to habitat management (inhibiting fire & weed management activities or fencing impedes use fauna patterns)
	DUNES	3- HIGH RISK, through intense use including camping leads to littering problems	4-VERY HIGH RISK, weed infestation managed but still not under control. Wildfires and stormwater aid in the distribution of seeds.	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and pollution load to dunes...	4-VERY HIGH RISK Vegetation communities at the dune areas are at risk from substantial ongoing erosion.	4- VERY HIGH RISK At risk of impact from cyclonic damage due to the increased frequency of cyclones. Rises in sea level will also impact .	2 - MEDIUM RISK, recreation and tourism have impact potential	4-VERY HIGH RISK, increased development and urban stormwater discharges increase sedimentation and urban pollution problems.	0-NO RISK	4 - VERY HIGH to 5- EXTREME introducing pests, weeds, cats, dogs, cane toads	2-MEDIUM RISK, frequent dry season fires from arson, camping affect saltbush communities.	4-VERY HIGH RISK Casuarina Coastal Reserve protected but developments near the foreshore , dunes as well as intense recreational use are of concern.	1-LOW RISK largely based on competition between conflicting land uses and heritage/cultural management requirements.	1-LOW RISK, unless public access or environmental management activities are restricted in future .



THE QUALITATIVE RAPID ENVIRONMENTAL RISK ASSESSMENT
 Risk factors which have effects on the environmental values

EMU	Value	Litter	Weeds	Sediments /soil erosion	Fore shore erosion	Greenhouse emissions	Industry Pollution	Water Quality	Native Vegetation	Introduced Pests	Fire	New Development	Endangered Fauna/Flora	Heritage/ Culture
		1 - LOW RISK ON VALUE,		2 - MEDIUM RISK ON VALUE,			3 - HIGH RISK ON VALUE,			4 - VERY HIGH RISK ON VALUE		5- EXTREME RISK ON VALUE		

METHODOLOGY SUMMARY

This assessment is based on the impact of known issues on values identified in the Atlas and through the community consultation program.

Priorities are determined by the level of environmental RISK from a particular issue and by the environmental consequence if action is delayed or no action is taken.

Two (2) sets of factors are taken into account to priority rank issues for each of the 24 EMUs:

1. habitats/landscapes with significant environmental value such as foreshore areas, wetlands of national significance or rare/endangered fauna or flora;
2. sites with significant Risks from catchment activities, development and/or impacts from environmental issues such as stormwater pollution, litter, beach erosion and weed infestation.

Table 1 identifies the values of each EMU and the issues potentially affecting these values.

During the assessment a value of:

- 1 = LOW RISK on value,
- 2 = MEDIUM RISK on value,
- 3 = HIGH RISK on value,
- 4 = VERY HIGH on value,
- 5 = EXTREME RISK on value is given to each issue identified in the EMU.

The number/level of RISK assigned must be directly proportional to the environmental impact the issue would have on the value if not addressed.

As more than 1 issue may affect a particular EMU the cumulative number of issues and their RISK ranking will be used to determine the overall environmental RISK in each individual EMU.