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Survey of coastal vegetation

in Council reserves at

Horseshoe Bay

Earthworks Report 00c01a

to Townsville City Council

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Methodology

A field survey of vegetation was conducted on 29 February, 2000, for 11 parcels of land managed by Townsville City Council along the coastal strip of Horseshoe Bay, as shown in Figure 1. Landforms included foredune, beach ridges and swales, alluvial levees, swamps and footslopes. A number of transects perpendicular to the coast were surveyed to identify vegetation types and species composition. Species classification follows Henderson (1997). Naturalised species are identified by an asterisk (*) symbol.

Each vegetation type is described and mapped using a tracing paper overlay of aerial photography (Figure 2). The relationships of the current vegetation communities to those mapped by Skull (1996), Sandercoe (1990) and the regional ecosystem model (Sattler and Williams 1999) are given in Table 1. Photographs of vegetation communities and noteworthy flora are presented in Appendix 1. The plant species recorded during this survey are listed in Table 2. One small site at the School Reserve, beside Horseshoe Bay Rd and Dent St (Lot H7329), has been planted with numerous exotic and non-local native species. These species have been listed separately, in Table 3. The conservation significance of vegetation communities and species are discussed, and some general recommendations are given.

General information

Magnetic Island has an area of 5164 ha. Batianoff and Dillewaard (1995), in a broad scale study of the Great Barrier Reef Islands, estimated that Magnetic Island has 457 plant species. The most detailed survey of Magnetic Island flora was by Sandercoe (1990), who recorded 500 flowering species and 19 fern species. A total of 168 species was recorded during the present survey.

Vegetation community descriptions

1. Grasslands

1.a. Triodia open hummock grassland

Landform: Beach ridge, usually first or second dune from beach.

Structure and composition: Usually associated with vine thicket woodland. Over 50% of area is bare sand, indicating very low water availability and/or low fertility.

Upper stratum: Scattered emergents, of vine thicket species.

Av. height: 3m

% cover: <5%

Mid stratum: none

Ground stratum: Dominated by tussocks of *Triodia stenostachya*. Other associated grasses include *Aristida holothera* and *Melinis repens**. Associated herbs are *Wahlenbergia gracilis* and *Hybanthus enneaspermus*.

Av. height: 1m

% cover: 20%

1.b. Melinis/Aristida open grasslands

Landform: Beach ridge and swale (usually swale behind foredune).

Structure and composition: Over 50% of area is bare sand.

Upper stratum: none

Mid stratum: none
Ground stratum: Clumps of *Aristida holothera* and *Melinis repens**, with scattered other herbaceous species.
Av. height: 0.5m
% cover: 20%

1.c. Sporobolus/Paspalum grasslands
Landform: Swales, estuarine alluvial fan on Endeavour Ck, also small patches in lower foredune. Generally highly saline soils.
Structure and composition: Forms dense swards in swales and alluvial fan, but only scattered plants in foredune.
Upper stratum: none
Mid stratum: Occasional *Clerodendrum inerme*.
Av. height: 1.5m
% cover: <5%
Ground stratum: *Sporobolus virginicus* and *Paspalum vaginatum* dominant. Scattered other grasses, herbs, sedges, and samphires.
Av. height: 0.5m
% cover: 100% (in swales and alluvial fan), 10% (in foredune)

1.d. Paspalum/Brachiaria closed grasslands
Landform: Swales, alluvial fan of Endeavour Ck, swamps, parts of Horseshoe Bay lagoon. Periodically inundated by shallow fresh water.
Structure and composition: Often associated with *Melaleuca* forest. Forms dense swards.
Upper stratum: Scattered *Eucalyptus terticornis* and *Melaleuca leucadendra*.
Av. height: 10m
% cover: <5%
Mid stratum: none
Ground stratum: *Paspalum vaginatum* dominant. *Brachiaria mutica*, *Schoenoplectus littoralis*, and various *Cyperus* spp may dominate in patches.
Av. height: 0.5m
% cover: 100%

2. Ipomoea/Canavalia vinelands

Landform: Foredune, and occasionally first swale.
Structure and composition: Associated with *Casuarina equesetifolia* woodland. Varies with height and slope of foredune.
Upper stratum: Occasional *Casuarina equesetifolia*
Av. height: 5m
% cover: 0-5%
Mid stratum: occasional shrub, such as *Scaevola taccada* and *Clerodendrum inerme*.
Av. height: 1.5m
% cover: <5%
Ground stratum: Dominated by *Ipomoea pes-caprae* and *Canavalia rosea*. Common grasses are *Cenchrus echinatus* and *Paspalum vaginatum*. The sedge *Cyperus stolonifera* is also common.
Av. height: 0.3m
% cover: 25-75%

3. Woodlands

3.a. Corymbia tessellaris/ Corymbia clarksoniana woodland

Landform: Beach ridge (generally three or more dunes back from the beach), footslope.
Structure and composition: Often contains mid stratum of vine thicket species, of varying density, and well-developed grassy ground stratum.
Upper stratum: *Corymbia tessellaris* and *Corymbia clarksoniana* dominant.

Av. height:10m
% cover: 30%

Mid stratum: Various vine thicket species, such as *Pleiogynium timorense*, *Mimusops elengi, Tabernaemontana orientalis* and *Alphitonia excelsa*. Woodland species, such as *Planchonia careya* and *Acacia leptostachya*. *Leucaena leucocephala** is an occasional weed.

Av. height: 4m
% cover: 5-75%

Ground stratum: Grasses such as *Panicum maximum**, *Heteropogon triticeus*, *Sorghum plumosum*. Herbs including *Stylosanthes spp** and *Grewia retusifolia*.

Av. height: 1m
% cover: 50-75%

3.b. Eucalyptus tereticornis woodland

Landform: Swale/alluvial terrace of Endeavour Ck. Relatively flat, but slightly higher than Melaleuca forest in base of swale.
Structure and composition: Contains mid stratum of vine thicket species, and well-developed ground stratum of herbs and grasses.
Upper stratum: *Eucalyptus tereticornis* dominant.

Av. height: 15m
% cover: 30%

Mid stratum: Numerous vine thicket species.

Av. height: 4m
% cover: 25%

Ground stratum: Well developed and diverse. Common species are *Synedrella nodiflora**, *Cyperus spp*, *Fimbristylis spp, Hyptis suaveolens**, and *Boerhavia domini*.

Av. height: 1m
% cover: 95%

3.c. Casuarina woodland

Landform: Foredune.
Structure and composition: Varies with height and slope of foredune.
Upper stratum: Dominated by *Casuarina equesetifolia*.

Av. height: 5m
% cover: 50%

Mid stratum: Various shrubs and vine thicket saplings.

Av. height: 1.5m
% cover: 5%

Ground stratum: Scattered grasses, such as *Cenchrus echinatus** and *Melinis repens**, and herbs, including *Tridax procumbens** and *Tribulus terrestris*.

Av. height: 0.5m
% cover: 10-25%

3.d. Vine thicket woodland

Landform: Beach ridge, usually close to foredune, where conditions too extreme (eg salinity, salt-laden wind, aridity, low fertility) for denser vegetation to develop.
Structure and composition: Limited diversity of tolerant vine thicket and ground stratum species. Over 25% of area is bare sand.
Upper stratum: Various vine thicket species, including *Petalostigma pubescens*, *Pouteria sericea, Pleiogynium timorense, Mimusops elengi, Tabernaemontana orientalis, Acacia leptostachya,* and *Diospyros geminata*.

Av. height: 3m
% cover: 5-20%

Mid stratum: Scattered shrubs, including *Dodonea lanceolata* and *Carissa ovata.*

Av. height: 1.5m
% cover: 5%

Ground stratum: Scattered grasses such as *Melinis repens*, *Aristida holothera* and *Triodia stenostachya*, and herbs including *Tridax procumbens*, Commelina ensifolia* and *Wahlenbergia gracilis*.

Av. height: 0.5m
% cover: 5-10%

4. Forests

4.a. Mangrove closed forest

Landform: Swale, usually directly behind foredune, periodically flooded with salt water.
Structure and composition: Dense canopy of mixed mangrove species, with very little lower strata.
Upper stratum: Various mangrove species, including *Bruguiera spp*, *Avicennia marina*, *Aegiceras corniculatum*, *Lumnitzera racemosa,* and *Ceriops tagal*.

Av. height: 4m
% cover: 90%

Mid stratum: mangrove seedlings.
Ground stratum: mangrove seedlings, *Sporobolus virginicus* along edges in some areas.

4.b. Melaleuca open/closed forest

Landform: Swales and alluvial terrace of Endeavour Ck (periodically flooded with fresh water). Fringes of swamp (Horseshoe bay lagoon, a semi-permanent lagoon in swale).
Structure and composition: Varies from closed forest with little to no lower strata, to open forest with well-developed mid stratum of vine thicket species and grassy ground stratum.
Upper stratum: *Melaleuca leucadendra* dominant.

Av. height: 10-15m
% cover: 50-90%

Mid stratum: Numerous vine thicket species, including *Pouteria sericea, Pleiogynium timorense, Mimusops elengi, Tabernaemontana orientalis, Alphitonia excelsa* and *Diospyros geminata*.

Av. height: 4m
% cover: 0-50%

Ground stratum: Grasses such as *Panicum maximum*, Heteropogon triticeus* and *Sorghum plumosum*. Herbs including *Stylosanthes spp** and *Grewia retusifolia*. Sedges such as *Cyperus spp, Scleria spp* and *Fimbristylis spp.*

Av. height: 0.75m
% cover: 0-75%

4.c. Vine thicket open/closed forest

Landform: Beach ridge/swale (generally at least third dune back from beach, where conditions more suitable).

Structure and composition: Varies from closed forest with little to no lower strata, to open forest with well-developed ground stratum.

Upper stratum: Occasional emergent, such as *Corymbia tessellaris* and *Melaleuca leucadendra*.

Av. height: 15m

% cover: <5%

Mid stratum: Diverse range of vine thicket species, including *Pouteria sericea, Pleiogynium timorense, Mimusops elengi, Tabernaemontana orientalis, Alphitonia excelsa, Canarium australianum* and *Diospyros geminata*. *Lantana camara** is a common weed.

Av. height: 6m

% cover: 50-100%

Ground stratum: Herbs such as *Dianella caerulea* and *Tacca leontopetaloides*. Grassses include *Panicum maximum** and *Oplismenus aemulus*.

Av. height: 1m

% cover: 0-25%

4.d. Riparian vine thicket closed forest

Landform: Alluvial levees of Endeavour Ck.

Structure and composition: Similar to vine thicket closed forest, but also containing specialist riparian species.

Upper stratum: Occasional emergent, such as *Corymbia tessellaris* and *Melaleuca leucadendra*..

Av. height: 15m

% cover: 5%

Mid stratum: As for vine thicket closed forest, and extra riparian species, such as *Lophostemon grandiflorus*. *Lantana camara** is a common weed.

Av. height: 6m

% cover: 75-100%

Ground stratum: Scattered grasses (eg *Panicum maximum*, Oplismenus aemulus*), sedges (eg *Scleria ciliaris*) and herbs (eg *Commelina ensifolia, Dianella caerulea*).

Av. height: 1m

% cover: 10%

5. Submerged/floating forbland

Landform: Swamp (Horseshoe bay lagoon, a permanent lagoon in swale). Water too deep to allow grasses and sedges to establish.

Structure and composition: Water lilies (*Nymphaea spp*) dominant.

% cover: 20%

Conservation significance:

- *Triodia* grassland is very uncommon on a coastal dune landform, with small occurrences recorded in Horseshoe Bay (this survey) and Maud Bay (R. Cumming pers. comm.). Batianoff (pers. comm.) has also observed small patches in the Central Queensland Coast Bioregion (Gloucester Island) and the Cape York Peninsula Bioregion (Cape Flattery, Cape York). This community is thus regarded as regionally significant. The limited size of this community type makes it unlikely to be mapped in typical broad-scale vegetation mapping projects (eg regional ecosystem mapping). Triodia grassland was mapped along a beach ridge in the sewage treatment reserve (EP1936, lots 214 and 215). Smaller unmapped patches were recorded within vine thicket woodland communities on beach ridges; eg in vine thicket woodland behind Casuarina woodland on unallocated state land (USL1476) and state land (EP2057).
- Vine thicket woodland/open forest/closed forest on coastal dunes is equivalent to low microphyll rainforest on coastal dunes (RE 11.2.3 – Sattler and Williams, 1999), and is considered to be a regional ecosystem of concern, as it is a naturally restricted type. It plays an important role in coastal dune stabilisation, and clearing is considered inappropriate in the Bowen Tree Clearing Guidelines for Leasehold lands (DNR undated).
- Very limited areas of beach scrub (mapped in the present survey as vine thicket woodland/open forest/closed forest) occur in the mainland Townsville region (Lavarack, 1991), and much has been degraded by clearing, tracks and weed invasion. The Magnetic Island beach scrubs are among the largest and most intact examples of this vegetation type in the Townsville region, and are thus worthy of conservation.
- Freshwater wetlands are rare on Magnetic Island, so the wetland associated with the Horseshoe Bay Lagoon has been assigned a high conservation value (Lukacs 1996). It is potentially at risk from urban encroachment, uncontrolled fire, weed invasion (eg *Brachiaria mutica*), stormwater runoff and impacts from the nearby sewage treatment plant. Less than half of the wetland is currently managed as Environmental Park, with the remainder either Park Reserve or privately owned. The Queensland National Parks and Wildlife Service (QNPWS, undated) and Lukacs (1996) have recommended that the entire area be gazetted and managed as an Environmental Park, and that disturbance to the fragile lagoon environment (eg residential encroachment, sewage pipeline construction) be minimised.
- A second wetland area associated with Endeavour Creek was located in State Land (EP2057). It contains extensive areas of saline wetland (eg Sporobolus/Paspalum grassland) and smaller areas of freshwater/brackish habitat (eg Paspalum/Brachiaria grassland). This wetland provides important seasonal habitat and food for wildlife, and should also be assigned a high conservation value.
- *Eucalyptus tereticornis* woodland has previously been recorded only on the western side of Magnetic Island, associated with Duck, Retreat and Chinaman Creeks (Sandercoe, 1990). The area of *Eucalyptus tereticornis* woodland, associated with Endeavour Ck in State Land (EP2057), is the first recorded occurrence of this community on the eastern side of Magnetic Island. *Eucalyptus tereticornis* is an important food tree of the koala.
- A limited area of mangrove habitat was recorded along the swale extending from the sewage treatment plant, along the Henry Lawson Street Road Reserve, and connecting to the sea just east of the Horseshoe Bay Township. This swale may contain the only remaining mangrove community in the north-eastern end of Magnetic Island, and thus represents a locally significant marine nursery. It also provides valuable seasonal habitat and food for numerous animal species.

- The golden orchid, *Dendrobium discolor*, was recorded in vine thicket woodland, growing in low branches and even on the ground in protected locations. Lavarack (1991) did not record this species in a survey of mainland beach scrubs from Dingo Beach (south of Bowen) to Rollingstone (north of Townsville), which he attributed to the low rainfall in this region. Sandercoe (1990) observed *D. discolor* in several vegetation communities (vine forest and mixed semi-deciduous woodland) on Magnetic Island, but not in beach ridge vegetation. Its occurrence in Horseshoe Bay is thus considered regionally significant.
- The prostrate herb, *Wedelia biflora*, (found in *Ipomoea/Canavalia* vineland on rear of frontal dune) is also uncommon in the drier coastal region around Townsville.
- Although not detected in the present survey, the vulnerable cabbage palm, *Livistona drudei*, may occur in moister vine thicket forest areas.
- The foreshore of Horseshoe Bay supports a complex mosaic of vegetation types, in relatively intact and undisturbed condition. This complexity is particularly marked in the north-western end, within State Land (EP2057), Unallocated State Land (USL51476) and Reserve (EP1936) allotments. The area provides a natural sanctuary for littoral wildlife, with unbroken access to a variety of habitats, and, as such, represents an area of extremely high conservation value.
- Foreshore ecosystems are highly dynamic, and play an important role in the stabilisation of our coastline. Natural impacts include wave action (through storms and strong winds), tides and floods; human impacts include weed invasion, fire, clearing and infrastructure development (such as the sewage treatment plant, roads, tracks and housing). Human disturbance in the Horseshoe Bay foreshore should be kept to a minimum to protect this dynamic system.

Recommendations:

- The surveyed area is among the largest and most intact examples of beach scrub in the Townsville region, and contains areas of unusual *Triodia* grassland on beach ridges. It also provides a protective buffer from storm events to the coastal lowlands of Horseshoe Bay. It is strongly recommended that the area is conserved and managed for these high conservation and coastal protection values.
- The Horseshoe Bay Lagoon is a wetland of high conservation value. Several previous reports have recommended gazettal and management of the whole wetland area as Environmental Park/Conservation Reserve. The current study strongly supports these recommendations.
- The wetlands and associated vegetation along Endeavour Creek contain a diverse mosaic of communities, and would be a valuable addition to the Horseshoe Bay Lagoon Conservation Reserve.
- Given that numerous vegetation units in the area have high conservation values, and occur within a complex mosaic of habitats in a relatively undisturbed and unfragmented condition, it is recommended that all tenure lots in the area be amalgamated into one environmental reserve.
- It would be valuable to use the mapping from this survey (Figure 2) to update present GIS digital mapping of the Horseshoe Bay foreshore. Instructions for converting the present detailed mapping to the broader scale Townsville City Council vegetation mapping (Skull, 1996) are given in Table 2.
- A number of invasive weeds have the potential to severely degrade the area, including *Leucaena leucocephala, Panicum maximum, Brachiaria mutica* and *Lantana camara*. It is recommended that a weed management plan be developed and implemented for strategic control of these species.

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Legislation:

DNR 1997. *Broadscale Tree Clearing Policy*. Qld Dept. Natural Resources.

Anon (no date, *c.* 1998).*Local Tree Clearing Guidelines for Leasehold Land for Bowen Shire Locality.*

Queensland *Fisheries Act,* 1994.

Queensland *Nature Conservation Act,* 1992.

Queensland *Nature Conservation* (*Wildlife) Regulation,* 1994.

Queensland *Nature Conservation (Protected plants in trade) Conservation Plan,* 1995.

Table 1: Comparison of mapping units used in this survey, Sandercoe (1990), Skull (1996) and Regional Ecosystem model (Sattler and Williams, 1999).

Vegetation type	Sandercoe (1990)	Skull (1996)	Regional ecosystem
1. Grasslands			
1.a Triodia open hummock grassland	19-Grassland (on sand, not boulder slopes)	Triodia grassland	Not mapped. Associated with 11.2.2
1.b Melinis/Aristida open grasslands	19-Grassland	Coastal grassland	Not mapped. Associated with 11.2.2
1.c Sporobolus/ Paspalum grasslands	5-Coastal sheoak woodland	Coastal grassland	11.1.1
1.d Paspalum/ Brachiaria closed grasslands	Associated with 6-Weeping teatree swamp	Coastal grassland/Para grass	11.2.4
2. Ipomoea/ Canavalia vinelands	5-Coastal sheoak woodland	Foredune scrub	11.2.2
3. Woodlands			
3.a Cor. tessellaris/ Cor. clarksoniana woodland	7-Moreton bay ash flats	Euc. tessellaris woodland	11.2.5
3.b Euc. tereticornis woodland	8-Forest red gum forest	Euc. tereticornis woodland	11.3.4
3.c Casuarina woodland	5-Coastal sheoak woodland	Foredune scrub	11.2.2
3.d Vine thicket woodland	Unmapped. Open form of 10-Littoral scrub?	Beach scrub	11.2.3
4. Forests			
4.a Mangrove closed forest	3-Mixed mangrove shrubland	Mangroves	11.1.4
4.b Melaleuca open/closed forest	6-Weeping teatree swamp	Melaleuca swamps	11.2.5
4.c Vine thicket open/closed forest	10-Littoral scrub/ 14-Vine forest	Vine thicket/ Beach scrub	11.2.3
4.d Riparian vine thicket closed forest	10-Littoral scrub/ 14-Vine forest	Vine thicket	11.2.3
5. Submerged/ floating forbland	Associated with 6-Weeping teatree swamp	Open water associated with sedgeland	11.2.4

Table 2: Plant species recorded during Horseshoe bay survey.
Naturalised species denoted by an asterisk (*).

Family	Species name	Common name	Growth form
Aizoaceae	*Sesuvium portulacastrum*	sea purslane	herb
Amaranthaceae	*Achyranthes aspera*	chaff flower	herb
Anacardiaceae	*Pleiogynium timorense*	burdekin plum	tree
Apocynaceae	*Alyxia spicata*	chain fruit	shrub/vine
Apocynaceae	*Carissa ovata*	currant bush	shrub
Apocynaceae	* *Cascabela thevetia*	Captain Cook tree, yellow oleander	shrub/tree
Apocynaceae	* *Catharanthus roseus*	pink periwinkle	herb
Apocynaceae	*Tabernaemontana orientalis*	orange banana bush	shrub
Araucariaceae	*Araucaria cunninghamii*	hoop pine	tree
Arecaceae	* *Cocos nucifera*	coconut	palm
Arecaceae	*Livistona decipiens*	cabbage palm	palm
Asclepiadaceae	* *Cryptostegia grandiflora*	rubber vine	vine
Asclepiadaceae	*Sarcostemma viminale subsp. australe*	caustic vine	vine
Asteraceae	* *Ageratum houstonianum*	blue billygoat weed	herb
Asteraceae	* *Emilia sonchifolia*	purple emilia	herb
Asteraceae	*Epaltes australis*	epaltes	herb
Asteraceae	* *Synedrella nodiflora*	Cinderella weed	herb
Asteraceae	* *Tridax procumbens*	tridax daisy	herb
Asteraceae	*Wedelia biflora*	beach wedelia	herb
Avicenniaceae	*Avicennia marina*	grey mangrove	tree
Bignoniaceae	* *Tecoma stans*	tecoma	shrub
Bixaceae	*Cochlospermum gillivraei*	kapok	tree
Boraginaceae	*Trichodesma zeylanicum*	camel bush	herb
Burseraceae	*Canarium australianum*	mango bark	tree
Cactaceae	* *Opuntia stricta var. stricta*	prickly pear	cactus
Caesalpiniaceae	* *Senna obtusifolia*	sicklepod	shrub
Caesalpiniaceae	* *Senna occidentalis*	coffee senna	shrub
Campanulaceae	*Wahlenbergia gracilis*	blue bells	herb
Capparaceae	*Capparis sepiaria*	bumble	shrub/vine
Capparaceae	*Cleome viscosa*	tick weed, spider flower	herb
Chenopodiaceae	*Salsola kali*	soft roly-poly	herb
Combretaceae	*Lumnitzera racemosa*	white-flowered black mangrove	tree
Combretaceae	*Terminalia muelleri*	Mueller's damson	tree
Commelinaceae	*Commelina ensifolia*	native wandering jew	herb
Convolvulaceae	*Evolvulus alsinoides*	tropical speedwell	herb
Convolvulaceae	*Ipomoea pes-caprae subsp. brasiliensis*	goat's foot morning glory	vine
Convolvulaceae	* *Ipomoea quamoclit*	star of bethlehem	vine
Convolvulaceae	* *Merremia quinquefolia*	mile-a-minute	vine
Convolvulaceae	*Xenostegia tridentata*	convolvulus	herb
Crassulaceae	* *Bryophyllum tubiflorum*	mother-of-millions	herb
Cyperaceae	*Cyperus dietrichiae*	sedge	sedge
Cyperaceae	*Cyperus iria*	rice sedge, variable sedge	sedge
Cyperaceae	*Cyperus pedunculatus*	sedge	sedge
Cyperaceae	*Cyperus polystachyos*	bunchy sedge	sedge
Cyperaceae	*Eleocharis spiralis*	eleocharis	sedge
Cyperaceae	*Gahnia aspera*	saw sedge	sedge
Cyperaceae	*Schoenoplectus litoralis*	club rush	sedge
Cyperaceae	*Scleria brownii*	sedge	sedge
Cyperaceae	*Scleria ciliaris*	sedge	sedge
Dracaenaceae	* *Sansevieria trifasciata*	mother-in-laws tongue	herb
Ebenaceae	*Diospyros geminata*	native ebony	tree
Euphorbiaceae	*Drypetes deplanchei*	yellow tulipwood	tree
Euphorbiaceae	*Euphorbia tannensis*	euphorbia	herb
Euphorbiaceae	*Excoecaria agallocha*	blind your eye mangrove	tree
Euphorbiaceae	*Macaranga tanarius*	cottonwood, brush macaranga, heart leaf	shrub/tree
Euphorbiaceae	*Petalostigma pubescens*	quinine bush	shrub/tree
Fabaceae	*Abrus precatorius*	gidee gidee	vine
Fabaceae	*Canavalia rosea*	beach bean, coastal jack bean	vine
Fabaceae	*Crotalaria aridicola*	Chillagoe horse poison	herb

Fabaceae	* *Crotalaria pallida*	rattle pod	herb
Fabaceae	*Indigofera linifolia*	native indigo	herb
Fabaceae	* *Macroptilium atropurpureum*	siratro	vine
Fabaceae	*Pongamia pinnata*	Indian beech	tree
Fabaceae	*Sesbania cannabina*	sesbania pea	shrub
Fabaceae	* *Stylosanthes hamata*	verano stylo	herb
Fabaceae	* *Stylosanthes scabra*	seca stylo	shrub
Goodeniaceae	*Scaevola taccada*	sea lettuce, Cardwell cabbage	shrub
Lamiaceae	*Clerodendrum floribundum*	lolly bush	shrub/tree
Lamiaceae	*Clerodendrum inerme*	beach lolly bush	shrub
Lamiaceae	* *Hyptis suaveolens*	mint weed	herb
Lamiaceae	*Premna serratifolia*	creek premna	shrub/tree
Lamiaceae	*Vitex trifolia*	native lavender, beach vitex	vine
Lauraceae	*Cassytha filiformis*	dodder laurel	vine
Lauraceae	*Litsea glutinosa*	scrub laurel	tree
Lauraceae	*Neolitsea brassii*	grey bollywood	tree
Lecythidaceae	*Planchonia careya*	cocky apple	shrub/tree
Malvaceae	*Abutilon auritum*	lantern flower	shrub
Malvaceae	*Hibiscus tiliaceus*	beach hibiscus, cottonwood	shrub/tree
Melastomataceae	*Memecylon pauciflorum*	cherry	shrub
Meliaceae	*Melia azedarach*	white cedar	tree
Meliaceae	*Turraea pubescens*	native witch-hazel	shrub/tree
Menispermaceae	*Stephania japonica*	tape vine, snake vine	vine
Mimosaceae	*Acacia leptostachya*	Townsville wattle	shrub/tree
Mimosaceae	* *Leucaena leucocephala*	leucaena	shrub/tree
Moraceae	*Ficus opposita*	sandpaper fig	shrub/tree
Moraceae	*Ficus platypoda*	rock fig	tree
Myrsinaceae	*Aegiceras corniculatum*	river mangrove	shrub/tree
Myrtaceae	*Austromyrtus bidwillii*	python tree	tree
Myrtaceae	*Corymbia clarksoniana*	bloodwood	tree
Myrtaceae	*Corymbia tessellaris*	Moreton Bay ash	tree
Myrtaceae	*Eucalyptus tereticornis*	blue gum	tree
Myrtaceae	*Lophostemon grandiflorus*	swamp box	tree
Myrtaceae	*Melaleuca leucadendra*	weeping paperbark	tree
Myrtaceae	*Melaleuca viridiflora*	broad leaf paperbark, broad leaf tea-tree	tree
Nyctaginaceae	*Boerhavia dominii*	tar vine	herb
Nymphaeaceae	*Nymphaea gigantea*	giant water lily	aquatic
Oleaceae	*Chionanthus ramiflora*	native olive	tree
Oleaceae	*Jasminum didymum*	native jasmine	vine
Orchidaceae	*Dendrobium discolor*	golden orchid	parasite
Pandanaceae	*Pandanus whitei*	pandanus, screw pine	palm-like tree
Passifloraceae	*Passiflora aurantia*	native passionfruit	vine
Passifloraceae	* *Passiflora foetida*	stinking passionfruit	vine
Phormiaceae	*Dianella caerulea*	blue flax lily	herb
Plumbaginaceae	*Aegialitis annulata*	club mangrove	shrub
Poaceae	*Alloteropsis semialata*	cockatoo grass	grass
Poaceae	*Aristida holathera*	wire grass	grass
Poaceae	*Bothriochloa bladhii*	forest bluegrass	grass
Poaceae	* *Brachiaria mutica*	para grass	grass
Poaceae	*Brachiaria subquadripara*	green summer grass	grass
Poaceae	* *Cenchrus echinatus*	Mossman River grass	grass
Poaceae	* *Chloris virgata*	feathertop rhodes grass	grass
Poaceae	*Cymbopogon ambiguus*	scent-grass	grass
Poaceae	*Cynodon dactylon*	green couch	grass
Poaceae	* *Dactyloctenium aegyptium*	coast button grass	grass
Poaceae	*Enneapogon robustissimus*	nine-awn	grass
Poaceae	*Heteropogon contortus*	black speargrass	grass
Poaceae	*Heteropogon triticeus*	giant speargrass	grass
Poaceae	*Imperata cylindrica*	blady grass	grass
Poaceae	* *Melinis repens*	red Natal grass	grass
Poaceae	*Oplismenus aemulus*	shady grass	grass
Poaceae	* *Panicum maximum var. maximum*	guinea grass	grass
Poaceae	*Paspalidium disjunctum*	paspalidium	grass
Poaceae	*Paspalum vaginatum*	saltwater couch	grass
Poaceae	*Perotis rara*	comet grass	grass
Poaceae	*Setaria oplismenoides*	setaria	grass

Poaceae		*Sorghum plumosum*	plume sorghum	grass
Poaceae	*	*Sporobolus pyramidalis*	giant rat's tail grass	grass
Poaceae		*Sporobolus virginicus*	saltwater couch	grass
Poaceae		*Triodia stenostachya*	porcupine grass	grass
Proteaceae		*Persoonia falcata*	geebung	shrub/tree
Rhamnaceae		*Alphitonia excelsa*	red ash	tree
Rhamnaceae		*Colubrina asiatica var. asiatica*	beach berry bush	shrub/vine
Rhizophoraceae		*Bruguiera exaristata*	small-leafed orange mangrove	tree
Rhizophoraceae		*Bruguiera gymnorhiza*	large-leafed orange mangrove	tree
Rhizophoraceae		*Ceriops tagal*	yellow mangrove	shrub/tree
Rhizophoraceae		*Rhizophora stylosa*	red mangrove	tree
Rubiaceae		*Larsenaikia ochreata*	native gardenia	shrub
Rubiaceae		*Morinda citrifolia*	cheese fruit	shrub/tree
Rubiaceae		*Pavetta australiensis*	snow cloud	shrub
Rubiaceae		*Pogonolobus reticulatus*	dye bush	shrub
Rubiaceae		*Timonius timon var. timon*	tim tam tree	tree
Rutaceae		*Geijera salicifolia*	scrub wilga	tree
Rutaceae		*Micromelum minutum*	lime berry	shrub
Santalaceae		*Exocarpos latifolius*	native cherry	tree
Sapindaceae		*Cupaniopsis anacardioides*	tuckeroo	tree
Sapindaceae		*Dodonaea lanceolata*	hop bush	shrub
Sapindaceae		*Ganophyllum falcatum*	red scaly ash	tree
Sapotaceae		*Mimusops elengi*	red coondoo	tree
Sapotaceae		*Pouteria sericea*	native plum, creek plum	tree
Smilacaceae		*Smilax australis*	sarsparilla vine, barbed wire vine	vine
Sterculiaceae		*Helicteres semiglabra*	helicteres	shrub
Sterculiaceae		*Sterculia quadrifida*	peanut tree	tree
Taccaceae		*Tacca leontopetaloides*	native arrowroot	herb
Tiliaceae		*Grewia retusifolia*	emu berry	shrub
Tiliaceae	*	*Triumfetta rhomboidea*	Chinese burr	herb
Ulmaceae		*Celtis paniculata*	silky celtis, native hackberry	tree
Ulmaceae		*Trema tomentosa*	poison peach	shrub/tree
Verbenaceae	*	*Lantana camara var. camara*	lantana	shrub
Verbenaceae	*	*Stachytarpheta jamaicensis*	snakeweed	herb
Violaceae		*Hybanthus enneaspermus*	spade flower	herb

Table 3: Exotic and non-local native plant species recorded in School Reserve (Lot H7329). Naturalised species denoted by an asterisk (*).

Family		Species name	Common name	Growth form
Apocynaceae	*	Allamanda cathartica	yellow allamanda, golden trumpet vine	shrub/vine
Araliaceae		Schefflera actinophylla	umbrella tree	tree
Caesalpiniaceae	*	Cassia spectabilis	amarilla	tree
Convolvulaceae	*	Ipomoea purpurea	common morning glory	vine
Cyperaceae	*	Cyperus involucratus	umbrella sedge	sedge
Fabaceae		Castanospermum australe	black bean	tree
Mimosaceae		Adenanthera pavonina	red bead tree	tree
Sapindaceae		Diploglottis diphyllostegia	northern tamarind	tree
Strelitziaceae	*	Ravenala madagascariensis	traveller's palm	palm-like tree