MEPA

Mount Nebo & Mount Glorious Environment Protection Association
End of Financial Year Partners' Report 2019-2020

Strategic Weed Management Project

Brisbane City Council

Moreton Bay Regional Council

Queensland Dept. of Transport & Main Roads

The project was proudly supported by the Lord Mayor's Community Sustainability and Environmental Grants Program – Environmental Grants.

Queensland Parks & Wildlife Service

Informative report to: Nikki Boyd MP (State Member for Pine Rivers)

Table of Contents

Executive Summary

This report covers MEPA's weed clearance and bush regeneration activities over the past 12 months – for the period ending June 2020. It includes work along approximately 50 km of road reserves, and a further 20 km of Energex easements and other public land in the Brisbane Forest Park / Southern D'Aguilar Range area. Both funded and volunteer weed clearance activities are recorded.

This on-ground weed control work is conducted in conjunction with broader community education, engagement and training activities in the Mt Glorious, Mt Nebo, Jolly's Lookout and McAfees Lookout area aimed at the conservation of scenic amenity and biodiversity in this high conservation-value area. Along with the control of weeds, MEPA also:

- works to identify environmental problems (e.g. with road reserve vegetation and infrastructure maintenance) and works with agencies to provide solutions;
- advocates good policy for the area's environmental sustainability;
- assists in wildlife protection and wildlife care; and
- encourages and engages private landholders to take up the challenge to help protect the Southern D'Aguilar Range.

The high-profile Weed Partnership itself presents a "strategic approach" to weed management in the sense that it:

(a) focuses on weeds of concern (i.e. those of highest threat); and
(b) concentrates on areas from which weeds establish and subsequently spread (i.e. road and power corridors, and private gardens).

An Extraordinary Season

The partnership is moving into its fifteenth year of funding. The results on the ground remain good, despite an extraordinary year. Late winter, spring and early summer of 2019 saw exceptionally dry conditions – the worst in several decades, with severe browning off of large sections of the eucalypt forest on lower and mid slopes. The wetter, higher forest also saw extensive defoliation and drying. The months of November and December saw severe fire conditions develop, with some fire in the west of the Park. Relief arrived with Christmas Eve rains ushering in wetter summer conditions. The *overall rainfall deficit* at Mt Glorious over the last twelve months is close to 800mm – 50% of the average annual rainfall – accompanied by unusually dry winds.

The arrival of rain produced what appears to have been an extreme stress response in vegetation, with an explosion of growth, both of natives and weeds – with one of the most difficult weed seasons on record. The growth curve was extraordinary (thus many regular weeds exploded at once and in profusion – Easter Cassia, for example, also flowering over a greatly extended period) and some previously low-level weeds appearing in huge numbers (White Passion Vine, for example, appeared at over 20 *new* sites from McAfees to past Mt Glorious, in patches sometimes of 100m^2 or more).

This extraordinary plant growth was accompanied by a remarkable insect explosion – a “boom” year. More butterflies, caterpillars, etc. were seen than have been seen in decades, with some species of native trees being entirely defoliated across their entire range in the D’Aguilars.

One of many thousands of butterflies, in their best season in decades.

Despite the extreme weather conditions the health of the native road corridors is generally good, grasses etc. having bounced back with summer rains. The Mt Nebo-Mt Glorious Tourist Rd has increasing lantana and Bell Miner Dieback, but we are unable to manage this problem (it requires fire to control the problem).

Points of special interest include:

- Continued reduction of Signal, Guinea and Molasses grasses in the lower drier road reserve. Strong recovery of native grass cover, with large areas now covered in swathes of native grasses in excellent condition.

- Ongoing control and continued reduction of Madeira vine, Cat’s Claw creeper, White Passion Vine, Chinese Elm, Privet, Indian Ginger, Easter Cassia and *Paspalum mandiocanum* in the mid and higher areas.

- Continued reduction of Easter Cassia along the Tourist Drive (Mt Nebo Rd and Mt Glorious Rd).

- Ongoing and difficult control of a large outbreak of Morning Glory in the upper reaches of the South Pine River (an escapee from an old road plant in the area).

- *Dyschoriste depressa*, and *Euphorbia cyathophora* is being found much more widely along the entire road reserve from The Gap to Mt Glorious, spread by the various mowing contractors working the road. Work is underway to control the outbreaks where we find them.

General Background

The natural bushland area that comprises Brisbane Forest Park between The Gap and Lake Wivenhoe, is one of Brisbane's most critical nature-based tourism assets. The relative health of native vegetation in the road corridors and adjoining power corridors is critical to the value of this outstanding asset. Effective management of these corridors is therefore seen as having critical priority because of its tourism value, as well as it being the point where existing and future pest management issues are likely to emerge. Good management of the corridors creates a critical environmental buffer for both the National Parks, adjoining water catchment areas, and private landholders living in the area.

Building on many years of voluntary work by the communities of Mt Glorious and Mt Nebo, and the Mt Nebo and Mt Glorious Environment Protection Association (MEPA) in particular over the last five years, a successful partnership has been built to promote a more coordinated management system for the area's road and power corridors, public lands and private properties.

Current partners contributed a total of $47,000 per annum towards improved integrated management of the area. Of this, $24,000 was cash contribution used to employ contractors for a lot of the weed mapping and eradication work. Additional weed mapping, monitoring, detailed follow-up work, project management, and volunteer contributions make up the rest of the project budget.

A local miniature fungus
– found above 400m in the D'Aguliar Ranges

Current Partners: 2019-2020

MEPA	$18,000 (in kind)
Moreton Bay Regional Council	$12,000
Brisbane City Council (part funding for the year)	$13,000
Transport and Main Roads	$7,000
Queensland Parks and Wildlife Service	$5,000 (in-kind)

Ongoing Partners: 2020-2021

We are currently renewing contracts with all partners above.

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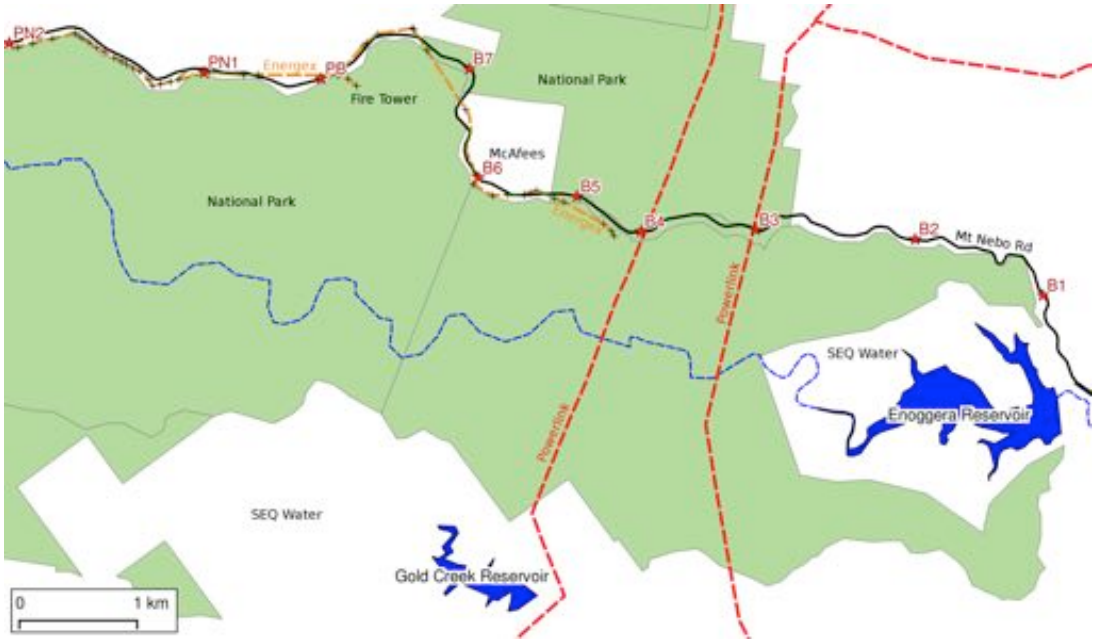
Acknowledgements

This report was produced with information supplied by and with the assistance of MEPA office bearers, MEPA volunteers & weed contractors. QPWS ranger Jay Lessons is ever-helpful in a number of ways, facilitating access to Park areas and sharing important on-ground information to assist in optimising outcomes in respect of weed control.

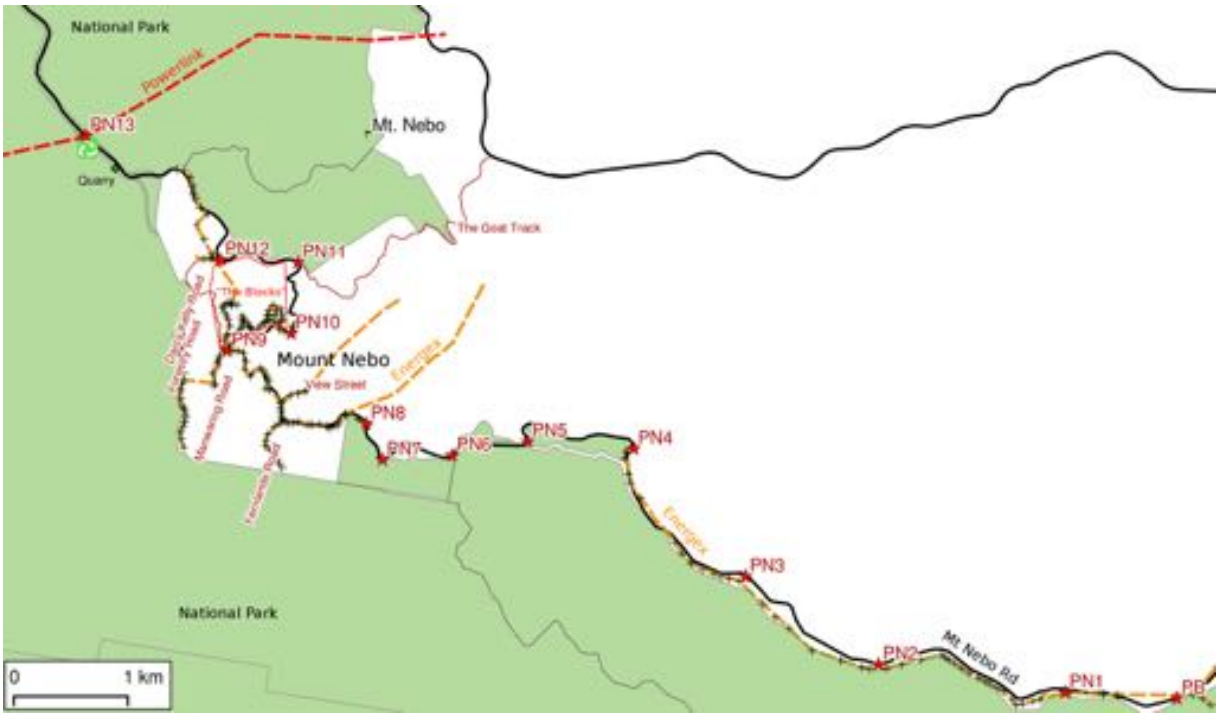
Report Date: 24th June, 2020

Another local orchid (*Dendrobium kingianum*) found across the D'Aguilar Ranges

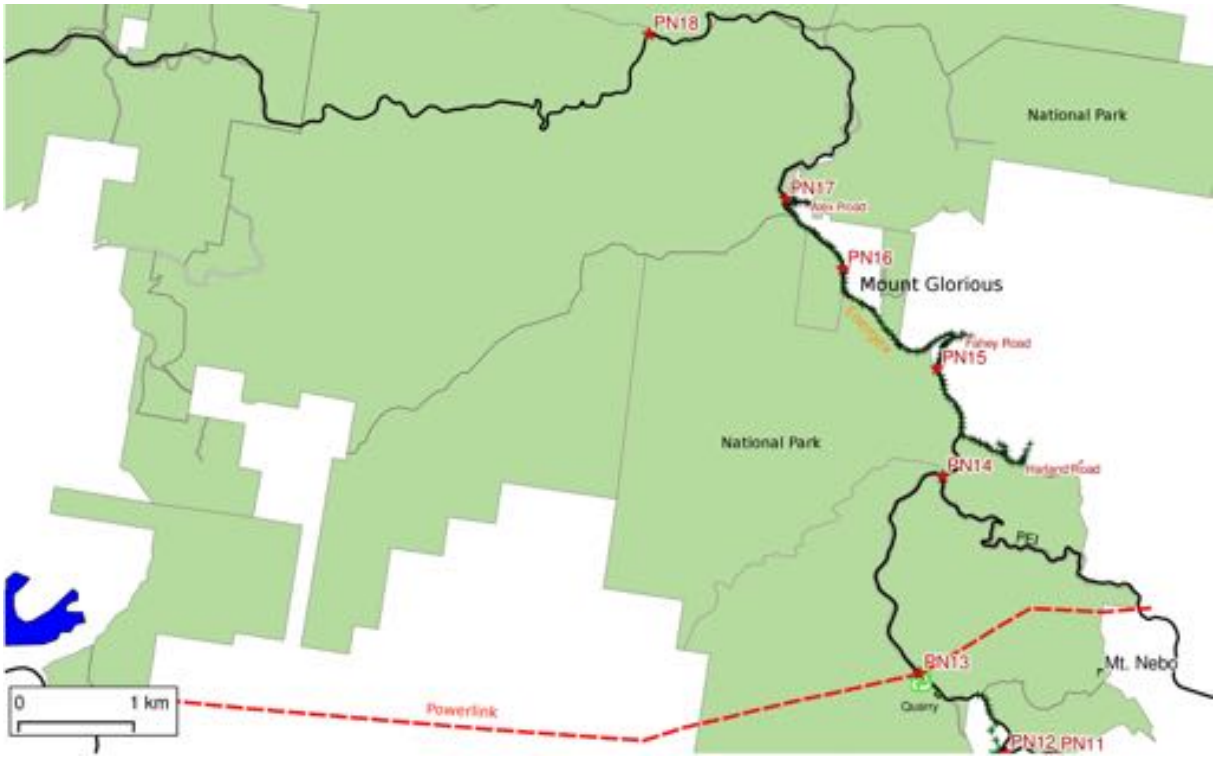
Maps



Map 1 – BCC section (Mount Nebo Rd: B1-PB)



Map 2 – Mt Nebo Rd Section (PB–PN8), Mt Nebo section (PN8–PN13 & village roads)



Map 3 – Westridge section (PN13–PN15), PEI section, Harland Rd section, Mt Glorious section (PN15–PN17) including village roads, Wivenhoe Rd section (PN17–PN18).

Weeds Notes

Brisbane City Council Area

Mount Nebo Road

Weed treatment along Mt Nebo Road reserve from Park HQ to Enoggera Fire Tower.

Map 1 on page 7 (B1-PB).

Weed management

Project started	2006
BCC funded	2006–Feb. 2017; March 2018 onwards: this project is proudly supported by the Lord Mayor's Community Sustainability and Environmental Grants Program – Environmental Grants.
MEPA volunteer and/or other funding sources	2006–present

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds

(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Bamboo (various), Basket Asparagus, Black Eyed Susan, Brazilian Nightshade, Broad Leaf Paspalum, Camphor Laurel, Cape Gooseberry, Cassia, Chinese Elm, Climbing Asparagus, Creeping Lantana, Crofton Weed, Crucifix Orchid, Curry-leaf Tree, Exotic Lilies, Glycine, Jacaranda, Johnson Grass, Lacy Asparagus (Florist's Fern), Mile-a-Minute, Morning Glory, Mother-in-Laws Tongue, Mother-of-Millions, Ochna, Paper Mulberry, Paspalum (Common or Giant), Pigeon Grass, Prickly Pear, Purple Top, Rhodes Grass, Succulents (various), Signal Grass, Silver Leaf Desmodium, Singapore Daisy, Siratro, Stinking Passion Vine, Tipuana tipu, Umbrella Tree, Wild Tobacco, White Passion Vine, Yellow Bells

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Cats Claw Creeper – very limited extent (McAfees area).

Coral Berry – extensive infestation in adjacent NP.

Dyschoriste – along spoon drains in slasher zone.

Euphorbia – along spoon drains in slasher zone.

Green Guinea Grass – large area outside road reserve (various sites).

Macrotyloma – several sites.

Madeira Vine – few sites of limited extent (primarily McAfees area).

Mossman River Grass – ongoing monitoring (apparently eradicated).

Whisky Grass – limited extent.

Long-term weeds

Strategy: these weeds are widespread along the D'Aguilar Range; treatment is limited to reducing further impact on native vegetation and where possible, restricting growth of the infestation.

Lantana – removal from slasher zone.

Molasses Grass – removal from slasher zone.

Moreton Bay Regional Council Area

MBRC: **Mt Nebo Rd (PB-PN8)**

Map 2 on page 7 (PB-PN8).

Weed management

Project started	2006
MBRC funded	2006–present
MEPA volunteer and/or other funding sources	2006–present

Special Site Notes

- PB to PN8 – Mt Nebo Rd

In 2007 a Cassia control project was commenced to control Cassia within the road reserve. This has greatly reduced the abundance of this weed (despite a very bad 2019/20 summer season). MEPA continues Cassia removal in this area and along many other MBRC road reserves with encouraging results to date.

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Broad Leaf Paspalum, Cassia, Chinese Elm, Crucifix Orchid, Groundsel, Jacaranda, Johnson Grass, Kahili Ginger, Leucaena, Molasses Grass, Mother-in-Laws Tongue, Mother-of-Millions, Ochna, Paspalum (Common or Giant), Pigeon Grass, Prickly Pear, Purple Top, Silver Leaf Desmodium, Singapore Daisy, Succulents (various), Spotted Dog.

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Black Eyed Susan – limited extent (PN1 to PN4), adjacent to private land.

Cats Claw Creeper – limited extent (PN7).

Creeping Lantana – PN2 to PN3.

Dyschoriste – along spoon drains in slasher zone.

Euphorbia – along spoon drains in slasher zone.

Glycine – Large area in adjacent private land (PN4 to PN5); also at intersection of Mt Nebo and Mt Glorious roads.

Macrotyloma – PN2 to PN3.

Madeira Vine – limited extent (near PN7).

Morning Glory – adjacent to private land (PN2, PN4, PN5). Maintaining buffer with Park. Infestation near PN7 now eradicated.

Rhodes Grass – introduced at recent road work site, PN1. Currently eradicated.

Signal Grass – widely dispersed (PB to PN5) but mostly near PN1 & PN4.

Siratro – appearing along private land boundary (PN2 to PN3). Also, downhill from Jolly's Lookout (PN4 to PN5).

Whisky Grass – few plants occasionally found.

White Passion Vine – a “sleeper” weed that exploded (and was controlled) across a very wide range this season.

Long-term weeds

Strategy: these weeds are widespread along the D'Aguilar Range; treatment is limited to reducingfurther impact on native vegetation and where possible, restricting growth of the infestation.

Green Guinea Grass – large infestation near PB on steep slope.

Lantana

MBRC: **Mount Nebo**

Mt Nebo Rd (PN8-PN13) and village side roads.

Map 2 on page 7 (PN8-PN13).

Weed management

Project started	2006
MBRC funded	2006–present
MEPA volunteer and/or other funding sources	2006–present

Special Site Notes

- PN6 to PN7 – Boombana section, D'Aguilar NP, Mount Nebo

SEQC funded work to control invasive Ochna (2017-8) spreading into Boombana from the road reserve. The work here has removed 95% of the Ochna (including some very large shrubs). Volunteer work is ongoing.

- PN10 to PN11 – Near PN10 (Bailey's Corner)

Several years ago the former Pine Rivers Shire Council (now MBRC) began funding Madiera Vine control work in this area through MEPA. Originally, this site was a major Madeira Vine infestation. It is the likely source of all the Madeira infestations downhill in the upper reaches of the Dawson Creek catchment. This work is ongoing.

- PN11 to PN12 – Manorina section, D'Aguilar NP, Mt Nebo

This site is on the northern road side of the upper Dawson Creek catchment area and borders on Manorina National Park. It was originally an Envirofund site, and subsequently received funding for invasive Ochna control from SEQ Catchments (2015-6). This northern side of the road reserve has undergone extensive weed control and re-planting, and is now in excellent shape with regard to weeds. Given this site's proximity to the National Park and its position at the head of the Dawson Creek catchment, MEPA is working to restore for this site to near-pristine condition in the future. The southern side of the road reserve remains problematic but is being increasingly cleared of weeds.

- PN13 – Quarry near Mount Nebo Transfer Station

This site has been used as a Council dump site for fill. Fill disposed of at this site by the former Pine Rivers Shire Council road engineering crews up until early 2007 had contained Madeira Vine. MEPA is now contracted to MBRC Roads to control weeds on this and a similar site at the 11km mark, Mt Nebo Rd.

- PN13 – Mount Nebo Transfer Station

MEPA has now taken on the weed management contract to control and eradicate weeds around the Transfer Station grounds.

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Arundo Grass, Cassia, Chinese Elm, Groundsel, Kahili Ginger, Large Leaf Privet, Loquat, Mossman River Grass, Ochna, Passionfruit, Pigeon Grass, Strelitzia, Umbrella Tree, Wild Tobacco, White Moth Vine, Yellow Bells

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Balloon Vine – limit extend, nearly eradicated.

Broad Leaf Paspalum – chiefly Forestry Rd, View St. & Manwaring Rd.

Cats Claw Creeper – Forestry Rd (opposite Taylors Break: identified 2008-2010).

Dyschoriste – found in slasher zone.

Madeira Vine – Now mostly limited to The Blocks & PN10-PN11.

Molasses Grass – limited extent.

Morning Glory – several infestations around the village – now chiefly limited to The Blocks.

Mother-of-Millions – originally several infestations around the village. Now mostly confined to The Blocks.

Signal Grass – mostly confined to View St.

Singapore Daisy – mostly eradicated except at The Blocks.

Spotted Dog – mostly eradicated except at The Blocks & PN10-PN11.

Long-term weeds

Strategy: in the Mt Nebo village area significant populations of these weeds exist on private property, thus complicating effective control on public land. Treatment is generally limited to maintaining the slasher zone to limit seed transport and minimising further impact on native vegetation. MEPA has a long standing community weed awareness program.

Bamboo – Forestry Rd.

Basket Asparagus – Below the Blocks.

Bauhinia – Below the Blocks.

Black Eyed Susan – mostly limited to The Blocks, but small infestations elsewhere.

Cape Honey Suckle – The Blocks, Manwaring Rd. & Darcy Kelly Rd.

Green Guinea Grass – substantial infestations in places along Mt Nebo Rd, minimal elsewhere.

Jacaranda – few street trees.

Lantana

Tipuana Tipu – few street trees.

MBRC: Mt Nebo Rd, Westridge Section (PN13-PN15)

Map 3 on page 8.

Weed management

Project started	2006
MBRC funded	2006–present
MEPA volunteer and/or other funding sources	2006–present

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Cape Honey Suckle, Cassia, Chinese Elm, Crofton Weed, Green Guinea Grass, Kahili Ginger, Morning Glory, Passionfruit, Silver Leaf Desmodium, Spotted Dog, Tipuana Tipu, Wild Tobacco, Whisky Grass, White Moth Vine, Signal Grass, Singapore Daisy

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Broad Leaf Paspalum – scattered plants.

Glycine – scattered outbreaks near Mt Nebo and Mt Glorious roads.

Mother-of-Millions – one site of limited extent.

White Passion Vine – a "sleeper" weed that exploded this season (esp. in wetter areas).

Long-term weeds

Strategy: these weeds are widespread along the D'Aguilar Range; treatment is limited to reducing further impact on native vegetation and where possible, restricting growth of the infestation.

Lantana

MBRC: **Mt Glorious Rd, PEI Section**

Map 3 on page 8.

Weed management

Project started	2006
Qld Dept. of Transport & Main Roads funding	2013–present
MEPA volunteer and/or other funding sources	2006–present

Special Site Notes

A large and high-threat outbreak of Morning Glory adjacent to and along the banks of the South Pine River is currently being brought under control with funding from TMR. This work is difficult (in very rough country), on-going and will still take some years to complete.

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Broad-leaf Paspalum, Cassia, Glycine, Green Guinea Grass, Signal Grass, Silver-leaf Desmodium, Siratro, Mother of Millions, Madeira Vine, Molasses Grass

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Desmodium tortuosum – minimal.

Molasses Grass – a single occurrence (~600m^2) on a steep slope; nearly eradicated.

Morning Glory – special site mentioned above.

Pigeon Grass

Whisky Grass – minimal.

White Passion Vine – minimal (occurring only in higher section).

Long-term weeds

Strategy: these weeds are widespread along the D'Aguilar Range; treatment is limited to reducing further impact on native vegetation and where possible, restricting growth of the infestation.

Lantana

MBRC: **Harland Rd (and side roads)**

Map 3 on page 8.

Weed management

Project started	2006
MEPA volunteer	2006–present
MBRC fire mitigation zone funding	2010–2017

Special Site Notes

The south side of Harland Road is the subject of an integrated weed & fire management project. This area has been established as a *fire mitigation zone* which has resulted in the removal of the mid-story vegetation. MEPA was originally contracted by the Moreton Bay Regional Council (MBRC) to maintain this area but that work has now been taken in-house by Council. MEPA has reverted to weed control in this road reserve that is in near-pristine condition, abutting rainforest slopes above the headwaters of the South Pine River.

Initial condition

Most weeds listed below were originally identified as scattered over much of the area.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Black Eyed Susan, Broad Leaf Paspalum, Green Guinea Grass, Groundsel, Kahili Ginger, Lantana, Ochna, Passionfruit, Signal Grass, Silver Leaf Desmodium, succulent (purple), White Passion Vine.

MBRC: **Mt Glorious**

Mt Glorious Rd, Mt Glorious to The Summit (PN15-PN17) including side roads.

Map 3 on page 8.

Weed management

Project started	2006
MBRC funding	2006–present
MEPA volunteer and/or other funding sources	2006–present
Qld Dept. of Transport & Main Roads funding	2013–present

Special Site Notes

- PN15 to PN16 – Mount Glorious

This area includes 2km of community revegetation originally funded by a Main Roads Grant ($10,000) building upon a small project using Main Road's volunteers and Envirofund financial support and included intensive voluntary activity. This is also an Adopt-a-Road site.

This 2 km strip has been cleared of Lantana and re-vegetated to 'show-case' the Bradley Method of bush restoration. This method involves concentrating on the healthy areas of bush and gradually extending the boundary of the healthy areas.

- Fahey Road – Mount Glorious

This area includes a large Cats-Claw creeper infestation. Treatment of the Cats-Claw is on-going on a regular basis and work is underway with landholders above the Cedar Creek valley. The infestation is old and will require many years of ongoing follow-up work.

Treatment also continues on a number of other weeds such as Chinese Elm – mostly juvenile within the road reserve but some mature trees exist on adjacent private land.

Funding (2016-7) from SEQ Catchments for special catchment protection (Cedar Creek catchment) has significantly improved outcomes here.

- Alex Road – Mount Glorious

The end of Alex Road (bordering with D'Aguilar National Park) included numerous invasive weeds. As a result of a weed clearance and re-vegetation program by local volunteers this area is now pristine. The general road reserve continues to be monitored by MEPA volunteers.

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Basket Asparagus, Bauhinia, Black Eyed Susan, Broad Leaf Paspalum, Buddleia, Cassia, Chinese Elm, Kahili Ginger, Morning Glory, Ochna, Succulents (purple), Strelitzia, Wild Tobacco, White Moth Vine.

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Cats Claw Creeper – PN15 to PN16 (minimal), Fahey Rd (substantial).

Crofton Weed – Alex/Atunga.

German Ivy – PN15 to PN16.

Green Guinea Grass – mostly eradicated.

Laurel Clock Vine – single plant (PN15-PN16) being treated with Arsenal herbicide injection.

Madeira Vine – PN15 to PN16, Attunga Ln.

Parrot Lilly – Quality St.

White Passion Vine – a “sleeper” weed that exploded this season.

Long-term weeds

Strategy: in the Mt Glorious village area significant populations of these weeds exist on private property, thus complicating effective control on public land. Treatment is generally limited to maintaining the slasher zone to limit seed transport and/or otherwise minimising further impact on native vegetation. MEPA has a long standing community weed awareness program.

Cape Honey Suckle – Fahey Rd.

Large Leaf Privet – PN15 to PN16, Alex/Atunga

Lantana

Small Leaf Privet – PN15 to PN16, Fahey Rd, Alex/Atunga.

Spotted Dog – Fahey Rd.

Wandering Jew – PN15 to PN17.

MBRC: Northbrook Parkway (PN17-PN18)

Map 3 on page 8.

Weed management

Project started	2006
MBRC funding	2006–present
MEPA volunteer and/or other funding sources	2006–present
SEQC funding	2012–13
TMR funding	2018

Special Site Notes

Beyond the immediate roadside, Lantana is generally a minor weed due to well-established rainforest canopy. Special funding from SEQ Catchments and, more recently, from TMR, has almost eliminated the presence of this weed in the disturbed roadside areas.

Initial condition

Most weeds listed below were originally identified as scattered over much of the area and/or having infestations of high density.

Results

Eradicated weeds
(or those now reduced to extremely low levels)

Strategy: aiming for complete eradication.

Devils Fig, Green Guinea Grass, Johnson Grass, Lantana, Palm Grass, Signal Grass, Wild Tobacco

Critical weeds

Strategy: these weeds are aggressive and require continual treatment and monitoring.

Broad Leaf Paspalum – scattered.

Crofton Weed – scattered.

Siratro & Glycine – at road repair site 5kms past Mt Glorious.

White Passion Vine – some occurrences emerged this season.

Long-term weeds

Strategy: these weeds are widespread along the D'Aguilar Range; treatment is limited to reducing further impact on native vegetation and where possible, restricting growth of the infestation.

Montbretia

Wandering Jew

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