

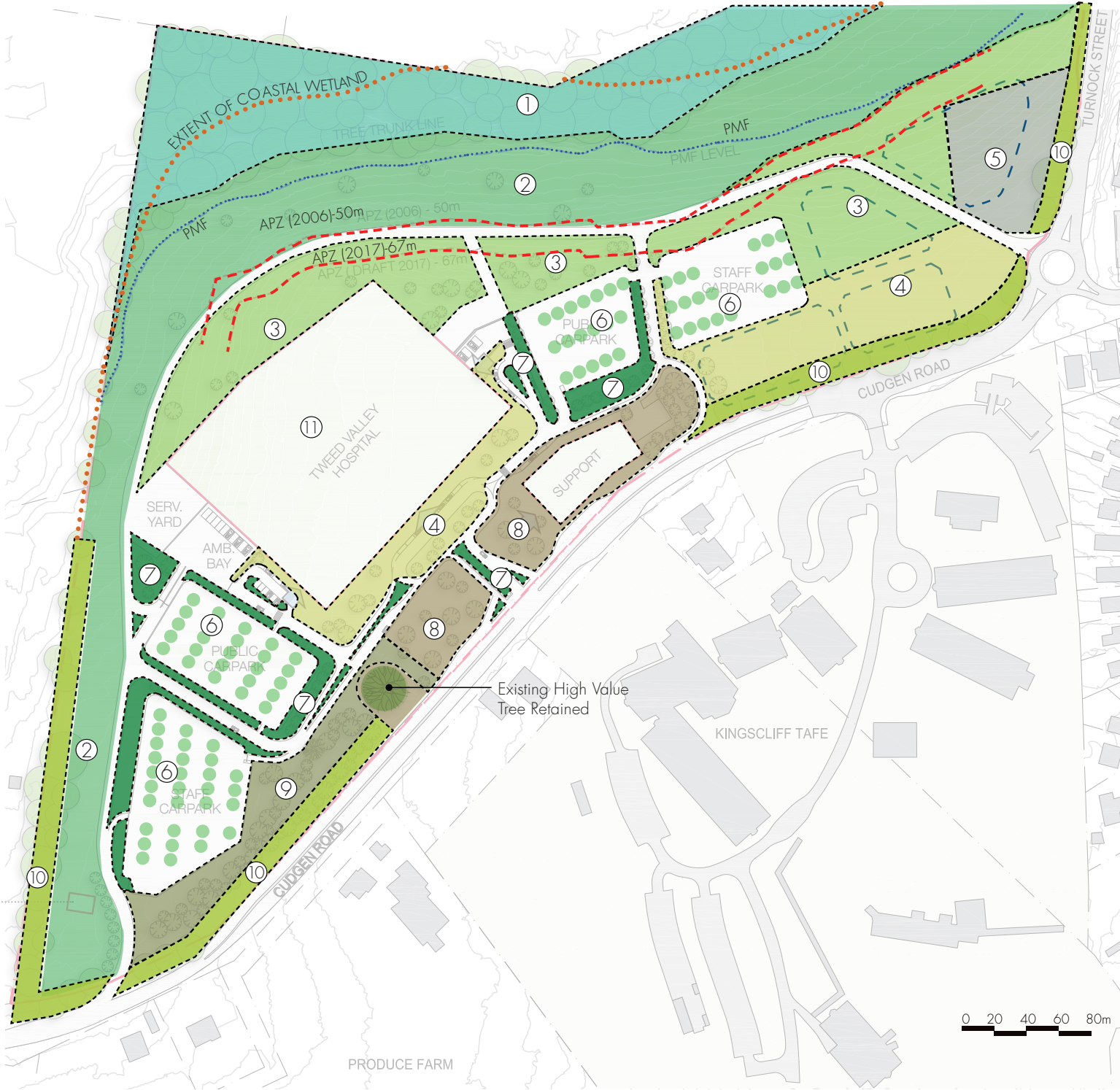
LANDSCAPE PROPOSAL

LANDSCAPE ZONAL PLAN

KEY

- APZ - Asset Protection Zone
- PMF - Probable Maximum Flood
- - - Future Development Zone
- 1. Retained undisturbed forest
- 2. Landscaped embankment. Drainage, bio retentions & detention tbc and coordinated with civil engineers.
- 3. North Hospital landscape zone. Steep topography. (character complementary to context, gardens, food production, breakout spaces)
- 4. South Hospital landscape zone. Flat topography (open lawns, gardens, plazas & feature entries)
- 5. Retained existing fruit tree orchard
- 6. WSUD car park planting (trees and planting in rain gardens)
- 7. WSUD roadway and plant area landscape (trees and planting in rain gardens)
- 8. Entry Landscape. Programmed gathering space upon entry. Low vegetation (max.0.6m high) to maintain sight lines to hospital and entry roadway. Trees located where view lines unaffected (crown lifted to min. 1.8m high).
- 9. Additional planting to achieve minimum 30m wide vegetated buffer to adjacent agricultural land.
- 10. 10m wide vegetated buffer. Retain and augment existing boundary vegetation (selective removal to achieve required access and sight lines). Staged replacement of pine trees and understorey with native species.
- 11. Landscaped courtyards within hospital envelope

Note: All zones vegetated in accordance with Asset Protection Zone (APZ) guidelines where required refer to 'Bushfire Constraints Assessment'.



Matters of National Environmental Significance Report

NSW Health Infrastructure Tweed Valley Hospital

APPENDIX C. FLORISTIC AND VEGETATION INTEGRITY PLOT SURVEY FIELD RECORDS

BAM Site – Field Survey Form				Site Sheet no: 1 of 2			
		Survey Name	Zone ID	Recorders			
Date	1 5 / 0 6 / 1 8	TVH	Veg Zone 1	Damian Licari and Gina Minatel			
Zone	5 6	Datum	GDA 1994	Plot ID	19	Plot dimensions	20m X 50m
Easting	5 55 890	Northing	687 39 27	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	350
Vegetation Class		Coastal Swamp Forest					Confidence: H M L
Plant Community Type		1064					EEC: Yes Confidence: H M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)		Sum values
Count of Native Richness	Trees	4
	Shrubs	1
	Grasses etc.	2
	Forbs	5
	Ferns	3
	Other	1
Sum of Cover of native vascular plants by growth form group	Trees	30.3
	Shrubs	0.2
	Grasses etc.	10.5
	Forbs	30.3
	Ferns	50.4
	Other	15
High Threat Weed cover		10

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	0
50 – 79 cm	0	
30 – 49 cm	Present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	absent	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	253.50	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)	Bare ground cover (%)	Cryptogam cover (%)	Rock cover (%)
Subplot score (% in each)	100100100100100	a b c d e	a b c d e	a b c d e
Average of the 5 subplots	100			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders			
Date	15 / 06 / 18	TVH	19	Damian Licari and Gina Minatel			
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher	
Tree	Melaleuca quinquenervia-Broad-leaved Paperbark	N	30		U		
Tree	Macaranga tanarius-Blush Macaranga	N	0.1	1	G		
Other	Parsonsia straminea-Common Silkpod	N	15		U		
Exotic	Paspalum conjugatum-Sour Grass	E	40		G		
Shurb	Hibiscus diversifolius-Swamp Hibiscus	N	0.2	2	M		
HTE	Ipomoea cairica- Coastal Morning Glory	HTE	10		G,M		
Fern	Blechnum indicum-Swamp Water Fern	N	50		G		
Forb	Persicaria strigosa- Spotted Knotweed	N	20		G		
Grass	Phragmites australis-Common Reed	N	10		G		
Forb	Solanum americanum-Glossy Nightshade	N	0.1	2	G		
Forb	Crinum pedunculatum-Swamp Lily	N	0.1	3	G,M		
Tree	Glochidion ferdinandi-Cheese Tree	N	0.1	1	G		
Forb	Persicaria dichotoma-Blume	N	0.1	3	G		
Grass	Baumea rubiginosa- Soft twigrush	N	0.5	30	G		
Forb	Persicaria sp.-Persicaria	N	10		G		
Fern	Hypolepis muelleri-Harsh Ground Fern	N	0.1	2	G		
Fern	Lygodium microphyllum-Climbing Snake Fern	N	0.3	2	M		
Tree	Melicope elleryana-Pink-flowered Doughwood	N	0.1	1	M		
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GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form				Site Sheet no: 1 of 2			
		Survey Name	Zone ID	Recorders			
Date	10 / 07 / 18	TVH	Veg Zone 1	Damian Licari and Gina Minatel			
Zone	5 6	Datum	GDA1994	Plot ID	16	Plot dimensions	20m X 50m
Easting	555 898	Northing	68 73830	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	310
							Magnetic °
Vegetation Class		Coastal Swamp Forests					Confidence: H M L
Plant Community Type		1064					EEC: Yes Confidence: H M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)		Sum values
Count of Native Richness	Trees	5
	Shrubs	2
	Grasses etc.	5
	Forbs	1
	Ferns	2
	Other	2
Sum of Cover of native vascular plants by growth form group	Trees	26.8
	Shrubs	0.7
	Grasses etc.	40
	Forbs	10
	Ferns	120
	Other	25
High Threat Weed cover		13.5

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	1
50 – 79 cm	0	
30 – 49 cm	present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	252	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	95	70	80	95	100	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	88																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders			
Date	10 / 07 / 18	TVH	16	Damian Licari and Gina Minatel			
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher	
Tree	Melaleuca quinquenervia-Broad-leaved Paperbark	N	20		U		
Other	Archontophoenix cunninghamiana-Bangalow Palm	N	10		M		
Tree	Melicope elleryana-Pink-flowered Doughwood	N	5	4	M		
Fern	Blechnum indicum-Swamp Water Fern	N	90		G		
Grass	Phragmites australis-Common Reed	N	10		G		
Forb	Persicaria strigosa-Spotted Knotweed	N	10		G		
Other	Parsonsia straminea-Common Silkpod	N	15		U		
Grass	Lepironia articulata-Grey Rush	N	10		G		
Grass	Carex appressa-Tall Sedge	N	5	40	G		
HTE	Ipomoea cairica- Coastal Morning Glory	HTE	10		G,M		
HTE	Cinnamomum camphora-Camphor Laurel	HTE	3	20	G,M		
Shurb	Ficus coronata-Creek Sandpaper Fig	N	0.2	3	M		
HTE	Schefflera actinophylla-Umbrella Tree	HTE	0.5	1	M		
Tree	Ficus macrophylla-Moreton Bay Fig	N	1	3	M		
Tree	Ficus obliqua-Small-leaved Fig	N	0.5	1	M		
Grass	Leersia hexandra-Swamp Ricegrass	N	10		G		
Fern	Hypolepis muelleri-Harsh Ground Fern	N	30		G		
Shurb	Myrsine Howittiana-Brush Muttonwood	N	0.5	1	M		
Tree	Glochidion ferdinandi var.pubens-Cheese Tree	N	0.3	1	G		
Grass	Baumea rubiginosa-Soft twigrush	N	5	100	G		
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GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form				Site Sheet no: 1 of 2			
		Survey Name	Zone ID	Recorders			
Date	11 / 07 / 18	TVH	Veg Zone 2	Damian Licari and Gina Minatel			
Zone 56	Datum GDA1994	Plot ID	11	Plot dimensions	20m X 50m	Photo #	
Easting 555871	Northing 6873727	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	220	Magnetic °	
Vegetation Class		Subtropical Rainforests				Confidence: H M L	
Plant Community Type		1302				EEC: Yes Confidence: H M L	

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)		Sum values
Count of Native Richness	Trees	6
	Shrubs	0
	Grasses etc.	1
	Forbs	2
	Ferns	1
	Other	6
Sum of Cover of native vascular plants by growth form group	Trees	110.1
	Shrubs	0
	Grasses etc.	0.1
	Forbs	3
	Ferns	0.2
	Other	39.4
High Threat Weed cover		9.4

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	2	3
50 – 79 cm	2	
30 – 49 cm	present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	119.50	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	80	75	95	100	100	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	90																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders			
Date	11 / 07 / 18	TVH	11	Damian Licari and Gina Minatel			
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher	
Tree	Ficus macrophylla-Moreton Bay Fig	N	80		U		
Tree	Ficus obliqua-Small-leaved Fig	N	20		U		
Tree	Melaleuca quinquenervia-Broad-leaved Paperbark	N	5	1	M		
Other	Archontophoenix cunninghamiana-Bangalow Palm	N	14		G,M,U		
Other	Mucuna gigantea subsp. gigantea-Burny Bean	N	0.2	5	G,M		
Other	Maclura cochinchinensis-Cockspur Thorn	N	10		G,M,U		
HTE	Ochna serrulata-Mickey Mouse Plant	HTE	0.1	2	G		
HTE	Schefflera actinophylla-Umbrella Tree	HTE	5	10	G,M		
Other	Cordyline congesta- Narrow-leaved Palm Lily	N	0.1	2	G,M		
HTE	Ipomoea indica- Morning Glory	HTE	2	5	M,U		
Tree	Macaranga tanarius-Blush Macaranga	N	0.1	5	G		
Forb	Alpinia caerulea-Native Ginger	N	1	10	G		
HTE	Cinnamomum camphora-Camphor Laurel	HTE	0.1	2	M		
Tree	Ficus coronata-Creek Sandpaper Fig	N	2	3	M		
Exotic	Solanum chrysotrichum-Devil's Fig	E	0.1	2	G		
Other	Flagellaria indica-Whip Vine	N	15		U		
Grass	Oplismenus aemulus-Australian Basket Grass	N	0.1	5	G		
Other	Smilax australis-Lawyer Vine	N	0.1	5	M,U		
Forb	Alocasia brisbanensis-Cunjevoi	N	2	10	G		
HTE	Ligustrum sinense-Small-leaved Privet	HTE	2	5	G,M		
HTE	Lantana camara- Lantana	HTE	0.2	2	G,M		
Exotic	Solanum mauritianum-Wild Tobacco Bush	E	0.2	1	M		
Tree	Acmena smithii-Lilly Pilly	N	3	1	M		
Exotic	Murraya paniculata-Murraya	E	0.4	1	G,M		
Fern	Christella dentata- Binung	N	0.2	2	G		
Exotic	Archontophoenix alexandrae - Alexandra palm	E	56		G,M,U		
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GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form				Site Sheet no: 1 of 2			
		Survey Name	Zone ID	Recorders			
Date	1 1 / 0 7 / 1 8	TVH	Veg Zone 4	Damian Licari and Gina Minatel			
Zone	Datum	Plot ID	99	Plot dimensions	10m X100m	Photo #	
5 6	GDA 1994						
Easting	Northing	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	178	Magnetic °	
5 55 489	687 3425						
Vegetation Class		Subtropical Rainforests				Confidence: H M L	
Plant Community Type		1302				Confidence: H M L	
		EEC: No					

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)		Sum values
Count of Native Richness	Trees	2
	Shrubs	0
	Grasses etc.	0
	Forbs	0
	Ferns	0
	Other	1
Sum of Cover of native vascular plants by growth form group	Trees	90
	Shrubs	0
	Grasses etc.	0
	Forbs	0
	Ferns	0
	Other	1
High Threat Weed cover		42

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	0
50 – 79 cm	0	
30 – 49 cm	present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	n/a
< 5 cm	present	
Length of logs (m) (≥10 cm diameter, >50 cm in length)	34.5	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	85	40	10	70	50	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	51																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders		
Date	11 / 07 / 18	TVH	99	Damian Licari and Gina Minatel		
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher
Tree	Macaranga tanarius-Blush Macaranga	N	80		M,U	
HTE	Ochna serrulata-Mickey Mouse Plant	HTE	5	10	G	
HTE	Bidens pilosa-Cobblers Pegs	HTE	2	20	G	
HTE	Chloris gayana-Rhodes Grass	HTE	10		G	
HTE	Cinnamomum camphora-Camphor Laurel	HTE	10		M,U	
HTE	Schefflera actinophylla- Umbrella Tree	HTE	5	4	M,U	
Tree	Cupaniopsis anacardioides-Tuckeroo	N	10	2	M,U	
Exotic	Strelizia Sp.-Strelizia	E	0.1	1	G	
HTE	Asparagus aethiopicus-Ground Asparagus	HTE	10		G	
Other	Parsonsia straminea-Common Silkpod	N	1	1	U	
Exotic	Sonchus asper-Prickly Sowthistle	E	0.1	5	G	
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	40					

GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form				Site Sheet no: 1 of 2			
		Survey Name	Zone ID	Recorders			
Date	1 2 / 0 7 / 1 8	TVH	Veg Zone 8	Damian Licari and Gina Minatel			
Zone	Datum	Plot ID	98	Plot dimensions	10m X100m	Photo #	
5 6	GDA 1994						
Easting	Northing	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	38	Magnetic °	
5 55 619	687 33 27						
Vegetation Class		Subtropical Rainforests				Confidence: H M L	
Plant Community Type		1302				Confidence: H M L	
		EEC: No					

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)		Sum values
Count of Native Richness	Trees	6
	Shrubs	0
	Grasses etc.	0
	Forbs	0
	Ferns	0
	Other	5
Sum of Cover of native vascular plants by growth form group	Trees	42
	Shrubs	0
	Grasses etc.	0
	Forbs	0
	Ferns	0
	Other	4.7
High Threat Weed cover		106

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	0
50 – 79 cm	0	
30 – 49 cm	absent	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	0	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	100	40	100	60	100	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	80																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders			
Date	1 2 07 / 1 8	TVH	98	Damian Licari and Gina Minatel			
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher	
HTE	Pinus elliottii-Slash Pine	HTE	75		U		
Tree	Guioa semiglaucula-Guioa	N	3	5	M		
Tree	Mallotus philippensis-Red Kamala	N	2	3	M		
Tree	Cryptocarya triplinervis var. triplinervis-3 veined laurel	N	2	5	M		
Tree	Macaranga tanarius-Blush Macaranga	N	30		M		
HTE	Senna pendula- Senna	HTE	1	1	M		
HTE	Ipomoea cairica- Coastal Morning Glory	HTE	5	10	M,U		
Other	Smilax australis-Lawyer Vine	N	1	3	M,U		
HTE	Cinnamomum camphora-Camphor Laurel	HTE	5	5	M,U		
HTE	Ochna serrulata-Mickey Mouse Plant	HTE	2	5	M		
HTE	Schefflera actinophylla-Umbrella Tree	HTE	2	5	M,U		
Exotic	Murraya paniculata-Murraya	E	0.5	2	M		
HTE	Bidens pilosa-Cobblers Pegs	HTE	5	50	G		
Other	Maclura cochinchinensis-Cockspur Thorn	N	1	1	G,M		
HTE	Chloris gayana-Rhodes Grass	HTE	1	20	G		
Other	Parsonsia straminea-Common Silkpod	N	2	3	M,U		
Tree	Mallotus discolor-White Kamala	N	1	1	M		
HTE	Asparagus aethiopicus-Ground Asparagus	HTE	10		G		
Exotic	Syagrus romanzoffiana-Cocos Palm	E	2	1	M		
Other	Archontophoenix cunninghamiana-Bangalow Palm	N	0.5	1	G,M		
Tree	Cupaniopsis anacardioides-Tuckeroo	N	4	3	M		
Exotic	Rhaphiolepis indica-Indian Hawthorn	E	1	1	M		
Exotic	Eragrostis tenuifolia-Elastic Grass	E	10		G		
Other	Amylothea dictyophleba-Brush Mistletoe	N	0.2	5	M		
	25						
	26						
	27						
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						

GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form						Site Sheet no: 1 of 2	
		Survey Name	Zone ID	Recorders			
Date	15 / 08 / 18	TVH	Veg Zone 7	Damian Licari and Christina Maloney			
Zone	56	Datum	GDA1994	Plot ID	100	Plot dimensions	10mx100m
Easting	555953	Northing	6873675	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	174
Vegetation Class		Coastal Floodplain Wetlands					Confidence: H M L
Plant Community Type		1235					EEC: No Confidence: H M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)	Sum values
Trees	4
Shrubs	0
Grasses etc.	0
Forbs	1
Ferns	0
Other	1
Count of Native Richness	
Trees	35.8
Shrubs	0
Grasses etc.	0
Forbs	0.1
Ferns	0
Other	3
Sum of Cover of native vascular plants by growth form group	
High Threat Weed cover	33.3

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	0
50 – 79 cm	1	
30 – 49 cm	Present	
20 – 29 cm	Present	
10 – 19 cm	Present	
5 – 9 cm	Present	
< 5 cm	Present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	9.5	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	85	95	90	95	95	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	92																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders		
Date	15_08 / 18	TVH	100	Damian Licari and Christina Maloney		
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher
Tree	Casuarina glauca-Swamp Oak	N	25		U	
Exotic	Melinis repens-Red Natal Grass	E	0.1	2	G	
HTE	Lantana camara-Lantana	HTE	2	3	M	
HTE	Bidens pilosa-Cobblers Pegs	HTE	10		G	
Tree	Macaranga tanarius-Blush Macaranga	N	0.5	10	M	
HTE	Senna pendula-Senna	HTE	2	5	M	
Exotic	Cenchrus purpureus-Barner Grass	E	35		M	
Forb	Oxalis sp.- Oxalis	N	0.1	1	G	
Exotic	Sonchus asper-Prickly Sowthistle	E	0.1	5	G	
HTE	Ricinus communis-Castor Oil Plant	HTE	0.2	1	M	
HTE	Ipomoea cairica-Coastal Morning Glory	HTE	6		M,U	
Exotic	Solanum mauritianum- Wild Tobacco Bush	E	5	4	M	
HTE	Schefflera actinophylla-Umbrella Tree	HTE	0.1	1	M	
Tree	Mallotus philippensis-Red Kamala	N	0.3	1	M	
Exotic	Macroptilium atropurpureum-Siratro	E	2	3	G	
Other	Diplocyclos palmatus- Native bryony	N	3	3	M	
HTE	Chloris gayana-Rhodes Grass	HTE	10		G	
HTE	Ipomoea indica-Morning Glory	HTE	3	10	M,U	
Exotic	Triumfetta rhomboidea-Chinese Bur	E	0.2	20	G	
Exotic	Passiflora subpeltata-White Passionflower	E	3	3	G,M	
Tree	Callistemon viminalis-Weeping Bottlebrush	N	10		M	
Exotic	Megathyrsus maximus var. coloratus- guinea grass	E	15		G	
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form						Site Sheet no: 1 of 3	
		Survey Name	Zone ID	Recorders			
Date	15 / 08 / 18	TVH	Veg Zone 6	Damian Licari and Christina Maloney			
Zone 56	Datum GDA 1994	Plot ID	101	Plot dimensions	20m X 50m	Photo #	
Easting 555957	Northing 6873725	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	255	Magnetic °	
Vegetation Class		North Coast Wet Sclerophyll Forests					Confidence: H M L
Plant Community Type		1569					EEC: No Confidence: H M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)	Sum values
Trees	8
Shrubs	1
Grasses etc.	0
Forbs	3
Ferns	0
Other	6
Count of Native Richness	
Trees	78.4
Shrubs	2
Grasses etc.	0
Forbs	0.7
Ferns	0
Other	7.8
Sum of Cover of native vascular plants by growth form group	
High Threat Weed cover	61.8

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	1
50 – 79 cm	present	
30 – 49 cm	present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	15	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	95	90	90	98	100	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	94.6																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders		
Date	15 08 18	TVH	101	Damian Licari and Christina Maloney		
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher
Tree	Eucalyptus grandis-Flooded Gum	N	40		U	
Tree	Eucalyptus microcorys-Tallowwood	N	20		U	
Tree	Macaranga tanarius-Blush Macaranga	N	10		G,M	
HTE	Schefflera actinophylla-Umbrella Tree	HTE	15		M	
Tree	Cryptocarya triplinervis-Three-veined laurel	N	6		G,M	
HTE	Senna pendula-Senna	HTE	2	10	M	
Other	Geitonoplesium cymosum-Scrambling Lily	N	0.1	5	G	
Exotic	Syagrus romanzoffiana- Cocos Palm	E	0.3	20	M	
Other	Smilax australis-Lawyer Vine	N	2	10	G,M,U	
Exotic	Ambrosia Artemisiaefolia-Common Ragweed	E	6		G	
Forb	Alpinia caerulea-Native Ginger	N	0.5	2	G	
HTE	Ipomoea cairica- Coastal Morning Glory	HTE	10		G,M	
Other	Parsonsia straminea-Common Silkpod	N	0.1	4	M	
HTE	Asparagus aethiopicus-Ground Asparagus	HTE	0.5	10	G	
Forb	Alocasia brisbanensis-Cunjevoi	N	0.1	1	G	
Tree	Ficus coronata-Creek Sandpaper Fig	N	0.2	2	M	
Other	Maclura cochinchinensis-Cockspur Thorn	N	5	5	G,M,U	
HTE	Bidens pilosa-Cobblers Pegs	HTE	10		G	
Exotic	Hypochaeris glabra-Smooth Catsear	E	0.1	1	G	
Exotic	Ageratum conyzoides subsp. Conyzoides-Goatweed	E	2	20	G	
HTE	Chloris gayana- Rhodes Grass	HTE	0.5	20	G	
Exotic	Stelitzia sp-Strelitzia	E	0.1	1	G	
HTE	Ochna serrulata-Mickey Mouse Plant	HTE	1	15	G	
HTE	Lantana camara- Lantana	HTE	2	3	M	
Tree	Glochidion ferdinandi-Cheese Tree	N	0.1	1	G	
HTE	Chrysanthemoides monilifera- Bitou Bush	HTE	0.2	1	G	
Forb	Oxalis sp.-Oxalis	N	0.1	1	G	
Exotic	Murraya paniculata-Murraya	E	2	10	M	
Exotic	Setaria sphacelata- Setaria	E	1	20	G	
HTE	Ipomoea purpurea- Common Morning Glory	HTE	10		G,M	
Exotic	Passiflora subpeltata-White Passionflower	E	2	20	G,M	
Exotic	Triumfetta rhomboidea- Chinese Bur	E	20		G	
Exotic	Paspalum conjugatum- Sour Grass	E	1	30	G	
Exotic	Vicia tetrasperma-Slender Vetch	E	0.1	5	G	
Exotic	Conyza bonariensis- Flaxleaf Fleabane	E	0.1	1	G	
Other	Hibbertia scandens-Climbing Guinea Flower	N	0.5	20	G	
Exotic	Tagetes minuta- Stinking Roger	E	1	10	G	
Exotic	Desmodium intortum-Green-leaved Desmodium	E	5	10	G	
HTE	Ageratina riparia- Mistflower	HTE	0.1	4	G	
Tree	Notelaea longifolia-Large Mock-olive	N	2	2	M	

GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders
Date	15_08_18	TVH	101	Damian Licari and Christina Maloney

GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher
Tree	Glochidion sumatranum-Umbrella Cheese Tree	N	0.1	5	G	
Other	Marsdenia rostrata- Milk Vine	N	0.1	10	G,M	
Shrub	Myrsine variabilis- Muttonwood	N	2	10	M	
HTE	Melinis minutiflora-Molasses Grass	HTE	10		G	
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
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	35					
	36					
	37					
	38					
	39					
	40					

GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form						Site Sheet no: 1 of 2	
		Survey Name	Zone ID	Recorders			
Date	15 / 08 / 18	TVH	Veg Zone 5	Damian Licari and Christina Maloney			
Zone 56	Datum GDA1994	Plot ID	102	Plot dimensions	10mX100m	Photo #	
Easting 555362	Northing 6873160	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	13	Magnetic °	
Vegetation Class		North Coast Wet Sclerophyll Forests				Confidence: H M L	
Plant Community Type		1569				EEC: No	Confidence: H M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)	Sum values
Trees	3
Shrubs	0
Grasses etc.	0
Forbs	1
Ferns	0
Other	4
Count of Native Richness	
Trees	70
Shrubs	0
Grasses etc.	0
Forbs	0.1
Ferns	0
Other	14.3
Sum of Cover of native vascular plants by growth form group	
High Threat Weed cover	62.6

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	5	1
50 – 79 cm	Present	
30 – 49 cm	present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	146	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	80	95	95	97	100	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	93.4																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders			
Date	15 / 08 / 18	TVH	102	Damian Licari and Christina Maloney			
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher	
Exotic	Syagrus romanzoffiana- Cocos Palm	E	4	3	M,U		
Tree	Macaranga tanarius-Blush Macaranga	N	20		M,U		
Tree	Eucalyptus grandis- Flooded Gum	N	40		U		
Tree	Guioa semiglauca-Guioa	N	10		M,U		
HTE	Cinnamomum camphora- Camphor Laurel	HTE	35		M,U		
Other	Maclura cochinchinensis-Cockspur Thorn	N	4	10	G,M,U		
Other	Smilax australis-Lawyer Vine	N	10		G,M,U		
HTE	Bidens pilosa- Cobblers Pegs	HTE	15		G		
HTE	Schefflera actinophylla- Umbrella Tree	HTE	0.5	3	M,U		
HTE	Ochna serrulata- Mickey Mouse Plant	HTE	0.5	10	G		
Exotic	Solanum nigrum- Black-berry Nightshade	E	0.2	15	G		
Exotic	Murraya paniculata- Murraya	E	0.3	10	M,U		
HTE	Lantana camara- Lantana	HTE	0.2	5	G,M		
HTE	Asparagus aethiopicus- Ground Asparagus	HTE	0.1	3	G		
HTE	Ligustrum sinense- Small-leaved Privet	HTE	0.5	6	G,M		
HTE	Senna pendula- Senna	HTE	0.5	10	M,U		
HTE	Tradescantia fluminensis- Trad	HTE	0.1	10	G		
Forb	Oxalis sp.- Oxalis	N	0.1	1	G		
Exotic	Triumfetta rhomboidea- Chinese Bur	E	10		G		
Other	Hibbertia scandens-Climbing Guinea Flower	N	0.1	2	G		
Exotic	Passiflora subpeltata- White Passionflower	E	1	3	G,M		
Exotic	Cestrum nocturnum- Lady of the Night	E	0.5	5	G,M		
Other	Stephania japonica-Snake vine	N	0.2	3	G,M		
Exotic	Passiflora suberosa- Cork Passionflower	E	0.5	15	G,M		
HTE	Ageratina riparia- Mistflower	HTE	0.2	5	G		
HTE	Melinis minutiflora- Molasses Grass	HTE	10		G		
	27						
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						

GF Code: see Growth Form definitions in Appendix 1

N: native, **E:** exotic, **HTE:** high threat exotic

GF – circle code if 'top 3'.

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); **Note:** 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m

Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

BAM Site – Field Survey Form				Site Sheet no: 1 of 2			
		Survey Name	Zone ID	Recorders			
Date	03 / 09 / 18	TVH	Veg Zone 3	Annette McKinley and Christina Maloney			
Zone 56	Datum GDA1994	Plot ID	103	Plot dimensions	20mX50m	Photo #	
Easting 555433	Northing 6873550	IBRA region	Burringbar-Conondale Ranges	Midline bearing from 0 m	68	Magnetic °	
Vegetation Class		Subtropical Rainforests				Confidence: H M L	
Plant Community Type		1302				EEC: Yes Confidence: H M L	

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m ² plot)		Sum values
Count of Native Richness	Trees	8
	Shrubs	3
	Grasses etc.	0
	Forbs	0
	Ferns	0
	Other	5
Sum of Cover of native vascular plants by growth form group	Trees	31.5
	Shrubs	0.7
	Grasses etc.	0
	Forbs	0
	Ferns	0
	Other	1.7
High Threat Weed cover		19.1

BAM Attribute (1000 m ² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	0	0
50 – 79 cm	0	
30 – 49 cm	present	
20 – 29 cm	present	
10 – 19 cm	present	
5 – 9 cm	present	
< 5 cm	present	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	38.5	Tally space

Counts apply when the number of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For a multi-stemmed tree, only the largest living stem is included in the count/estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	85	75	75	95	95	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	85																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)	0		
Cultivation (inc. pasture)	1		Edge of plot
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness	2		Lantana camera, Madeira vine, elephant grass, Bidens pilosa
Other			

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

400 m ² plot: Sheet _ of _		Survey Name	Plot Identifier	Recorders		
Date	03 09 18	TVH	103	Annette McKinley and Christina Maloney		
GF Code	Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable	N, E or HTE	Cover	Abund	stratum	voucher
Tree	Guioa semiglaucula-Guioa	N	8		M,U	
Tree	Macaranga tanarius-Blush Macaranga	N	10		M,U	
Tree	Diospyros fasciculosa-Grey Ebony	N	0.5	1	U	
HTE	Ligustrum sinense- Small-leaved Privet	HTE	10		G,M	
Exotic	Rivina humilis- Coral Berry	E	1	50	G	
HTE	Ipomoea cairica- Coastal Morning Glory	HTE	1	10	G,M,U	
Tree	Mallotus philippensis-Red Kamala	N	2	2	M	
HTE	Lantana camara-Lantana	HTE	4	2	G,M	
Other	Mucuna gigantea subsp. gigantea-Burny Bean	N	0.5	4	G,M,U	
Exotic	Passiflora edulis- Common Passionfruit	E	0.1	1	G,M,U	
HTE	Ochna serrulata- Mickey Mouse Plant	HTE	1	10	G	
Other	Trophis scandens-Burny Vine	N	0.1	2	G,M	
HTE	Bidens pilosa- Cobblers Pegs	HTE	3	500	G	
HTE	Senna pendula- Senna	HTE	0.1	2	M	
Exotic	Persea americana-avocado	E	0.5	2	M	
Tree	Commersonia bartramia-Brown Kurrajong	N	3	2	M,U	
Exotic	Cenchrus purpureus- Barner Grass	E	10		G	
Exotic	Solanum mauritianum- Wild Tobacco Bush	E	0.5	3	M	
Exotic	Murraya paniculata-Murraya	E	0.1	1	M	
Tree	Ficus fraseri-Sandpaper Fig	N	1	1	M	
Exotic	Cestrum sp. Cestrum	E	1	1	M	
Other	Cordyline congesta- Narrow-leaved Palm Lily	N	0.5	3	G	
Shrub	Eupomatia bennettii-Small Bolwarra	N	0.1	1	M	
Exotic	Passiflora suberosa- Cork Passionflower	E	0.1	2	G,M,U	
Tree	Cryptocarya triplinervis var. triplinervis-3 veined laurel	N	1	5	G,M	
Other	Flagellaria indica-Whip Vine	N	0.5	1	M,U	
Shrub	Capparis arborea-Native Pomegranate	N	0.5	1	M	
Shrub	Tabernaemontana pandacacui-Banana Bush	N	0.1	1	M	
Other	Maclura cochinchinensis-Cockspur Thorn	N	0.1	1	G,M,U	
Exotic	Monstera deliciosa-Fruit Salad Plant	E	0.2	1	G	
Exotic	Paspalum mandiocanum-Boradleaf Paspalum	E	0.1	1	G	
Tree	Macadamia integrifolia <-> tetraphylla hybrid	N	6	5	M,U	
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

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Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

Matters of National Environmental Significance Report

NSW Health Infrastructure Tweed Valley Hospital

APPENDIX D. FLORISTIC VEGETATION SURVEY SUMMARY OF RESULTS