Office of Environment & Heritage

Field data sheets for *BioMetric* (Version 3.1)

Reference sites package

This set of data sheets includes:

- a reference site – site value plot data sheet (up to 10 plots per reference site)
- a step point transect plot data sheet
- a Crown Separation Ratio transect tables plot data sheet
- a disturbance attributes and history record plot data sheet
- a thinning (stem density) plot data sheet
- *BioMetric* plot work sheets
- *BioMetric* and Threatened Species Tool scattered tree plot work sheets.

Refer to the *BioMetric* Operational Manual for detailed data collection methodologies.

Published by:

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OEH 2013/0237
This version: June 2013

Reference site – site value plot data sheet

BioMetric

Start a new sheet for each reference site

Refer to Appendix 5 of the *BioMetric* Operational Manual for reference site methods and tips

Ref site ID (assigned by assessor): _____ CMA: _____

Recorder(s): _____ Date: _____

Vegetation formation (see Keith 2004*)	
Vegetation class (see Keith 2004*)	
Vegetation type (see *BioMetric* Operational Manual)	

* Keith 2004, *Ocean shores to desert dunes: the native vegetation of New South Wales and the ACT*, NSW Department of Environment and Conservation, Sydney.

Dominant species per stratum		
Over-storey	**Mid-storey**	**Ground stratum**

Plot 1 Lat.	**Long.**	**Plot 2 Lat.**	**Long.**	**Plot 3 Lat.**	**Long.**	**Plot 4 Lat.**	**Long.**	**Plot 5 Lat.**	**Long.**
Orientation	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**
Plot 6 Lat.	**Long.**	**Plot 7 Lat.**	**Long.**	**Plot 8 Lat.**	**Long.**	**Plot 9 Lat.**	**Long.**	**Plot 10 Lat.**	**Long.**
Orientation	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**

Disturbance attributes and history

Record Severity, Frequency, Evidence and Age codes for each plot, e.g. L| Occ | Ob | R. Codes are: **Severity codes**: N = Nil (no evidence); L = Light; M = Moderate; S = Severe. **Frequency codes**: A = Absent (i.e. n/a); Ra = Rare; Occ = Occasional; F = Frequent. **Evidence codes**: O = Observation; W = Word of mouth (e.g. landholder). **Age codes**: On = Ongoing; R = Recent (< 3 years); NR = Not recent; O = Old.

Plot no.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Canopy dieback	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Grazing and trampling	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Soil disturbance	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Timber harvesting	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Flood damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Storm damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Firewood collection & tidying up	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Dense regrowth post-disturbance	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Fertiliser addition	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Fire damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Feral herbivores	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Weeds	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Other – indicate type: _____	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |

20 m x 20 m plot Refer to methods in Appendix 4 of *BioMetric* Operational Manual. Step Point Transect or Crown Separation Ratio (CSR) methods can also be used to assess % Foliage Cover (see tables on next page). CSR method is preferred for over-storey and mid-storey strata.

Number of native plant species										
Native mid-storey cover (%)										
Native ground stratum cover (%) – grasses										
Native ground stratum cover (%) – shrubs										
Native ground stratum cover (%) – other										

Larger sampling area (20 m x 50 m plot) Refer to methods in Appendix 4 of *BioMetric* Operational Manual. Alternative methods on next page.

No. of trees with hollows – use alternative method if appropriate										
Total length of fallen logs (m)										

Alternative (whole-of-zone) methods for zones containing scattered trees, such as sparsely wooded reference sites. Use Paddock Tree Calculator, accessible via the *NVAT Mapper,* for calculations.)

Native over-storey cover (%)	Average crown diameter (m): Average foliage cover (%): No. of trees: Sample area (ha):										
No. of trees with hollows	Sample area (ha): No. of trees with hollows:										

Record details of plot modification types, for example:

- timber harvesting - indicate whether stumps, coppicing, cut logs, ringbarking
- grazing and trampling - indicate grazing and trampling by introduced herbivores and/or over-abundant native herbivores
- soil disturbance - indicate whether ripping, cultivation, compaction, erosion
- fire damage – indicate if high frequency, or if certain strata particularly affected
- feral animals – indicate species (if known) and observed impacts; weeds – indicate abundance and invasiveness of each species.

Notes:

Modification type	Plot no.	Details

Step point transect tally tables

For methodology, refer to Appendix 4 of *BioMetric* Operational Manual

Plot no. _____ Transect no(s). _____	**No. hits (tally)**	**Percent**
Native over-storey cover (%)		
Native mid-storey cover (%)		
Native ground stratum cover (%) – grasses		
Native ground stratum cover (%) – shrubs		
Native ground stratum cover (%) – other		
Exotic plant cover (%)		
Litter cover (%) – optional		
Rock cover (%) – optional		
Bare ground cover (%) – optional		
Cryptogam cover (%) –- optional		

Plot no. _____ Transect no(s).	**No. hits (tally)**	**Percent**
Native over-storey cover (%)		
Native mid-storey cover (%)		
Native ground stratum cover (%) – grasses		
Native ground stratum cover (%) – shrubs		
Native ground stratum cover (%) – other		
Exotic plant cover (%)		
Litter cover (%) – optional		
Rock cover (%) – optional		
Bare ground cover (%) – optional		
Cryptogam cover (%) –- optional		

Crown Separation Ratio transect tables

For methodology, refer to Appendix 4 of *BioMetric* Operational Manual. Record stratum (o/s, m/s, g/s(g), g/s(s) or g/s(o). Use consistent units within each plot, i.e. m **or** cm. Use cm for ground stratum. Circle units used.

Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
Crown width (m **or** cm)													
Crown separation/Gap (m **or** cm)													
Crown type/Degree of openness (%)													

Calculations:

- CSR = mean Gap/mean Crown width = _____ m **or** cm
- Crown Cover (CC) = $80.6/(1+CSR)^2$ = _____ %
- Foliage Cover = CC (%) x mean Crown type (%)/100 = _____ %. Enter this value into *BioMetric* for correct stratum within appropriate plot.

Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
Crown width (m or cm)													
Crown separation/Gap (m or cm)													
Crown type/Degree of openness (%)													

Calculations:

- CSR = mean Gap/mean Crown width = _____ m **or** cm
- Crown Cover (CC) = $80.6/(1+CSR)^2$ = _____ %
- Foliage Cover = CC (%) x mean Crown type (%)/100 = _____ %. Enter this value into *BioMetric* for correct stratum within appropriate plot.

Please fax or email completed sheets to: VIS Administrator, Office of Environment and Heritage. Fax (02) 9585 6466.
Email: bionet@environment.nsw.gov.au. Thank you.

Step point transect plot data sheet

BioMetric

Start a new sheet for each zone (clearing or offset) or reference site

Plot type (circle one): Clearing / Offset / Reference **Linked zones** (list type(s) and nos.:

_____

CMA: _____ **Recorder(s)**: _____ **Date**: _____

Site location and description: _____

_____

PVP request no. from *PADACS*: _____ **Veg. zone no. from *NVAT Mapper***: _____

Vegetation type (*BioMetric*): _____

Step point transect tally tables

- Refer to Appendix 4 of *BioMetric* Operational Manual for methods.
- Only needs to be completed for the variables that have not been measured using an alternate method, e.g. plots or whole of zone.

Plot no. _____ Transect no(s). _____	**No. hits (tally)**	**Percent**
Native over-storey cover (%)		
Native mid-storey cover (%)		
Native ground stratum cover (%) – grasses		
Native ground stratum cover (%) – shrubs		
Native ground stratum cover (%) – other		
Exotic plant cover (%)		
Litter cover (%) – optional		
Rock cover (%) – optional		
Bare ground cover (%) – optional		
Cryptogam cover (%) –- optional		

Plot no. _____ Transect no(s). _____	**No. hits (tally)**	**Percent**
Native over-storey cover (%)		
Native mid-storey cover (%)		
Native ground stratum cover (%) – grasses		
Native ground stratum cover (%) – shrubs		
Native ground stratum cover (%) – other		
Exotic plant cover (%)		
Litter cover (%) – optional		
Rock cover (%) – optional		
Bare ground cover (%) – optional		
Cryptogam cover (%) –- optional		

Plot no. _____ Transect no(s). _____	**No. hits (tally)**	**Percent**
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Rock cover (%) – optional		
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Exotic plant cover (%)		
Litter cover (%) – optional		
Rock cover (%) – optional		
Bare ground cover (%) – optional		
Cryptogam cover (%) –- optional		

Crown Separation Ratio transect tables plot data sheet

BioMetric

Start a new sheet for each zone (clearing or offset) or reference site

Plot type (circle one): Clearing / Offset / Reference **Linked zones** (list type(s) and nos.): _____

CMA: _____ **Recorder(s)**: _____ **Date**: _____

Site location and description: _____

_____

PVP request no. from *PADACS*: _____**Veg. zone no. from *NVAT Mapper***: _____

Vegetation type (*BioMetric*): _____

Crown Separation Ratio transect tables

For methodology, refer to Appendix 4 of *BioMetric* Operational Manual. Record stratum (o/s, m/s, g/s(g), g/s(s) or g/s(o). Use consistent units within each plot, i.e. m **or** cm. Use cm for ground stratum. Circle units used.

Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
Crown width (m **or** cm)													
Crown separation/Gap (m **or** cm)													
Crown type/Degree of openness (%)													

Calculations:

- CSR = mean Gap/mean Crown width = _____ m **or** cm
- Crown Cover (CC) = $80.6/(1+CSR)^2$ = _____ %
- Foliage Cover = CC (%) x mean Crown type (%)/100 = _____ %. Enter this value into *BioMetric* for correct stratum within appropriate plot.

Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
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Crown width (m **or** cm)													
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Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
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Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
Crown width (m **or** cm)													
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Plot no.: _____ Stratum: _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Mean**
Crown width (m **or** cm)													
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Crown width (m **or** cm)													
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Disturbance attributes and history record plot data sheet

BioMetric

Start a new sheet for each new offset proposal

PVP request no. from *PADACS*: _____ **Date**: _____

CMA: _____ **Recorder(s)**: _____

Disturbance attributes and history Record Severity, Frequency, Evidence and Age codes for each plot, e.g. L| Occ | Ob | R . Codes are: **Severity codes**: N = Nil (no evidence); L = Light; M = Moderate; S = Severe. **Frequency codes**: A = Absent (i.e. n/a); Ra = Rare; Occ = Occasional; F = Frequent. **Evidence codes**: O = Observation; W = Word of mouth (e.g. landholder). **Age codes**: On = Ongoing; R = Recent (< 3 years); NR = Not recent; O = Old

	Plot no.									
Zone no. _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Canopy dieback	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Grazing and trampling	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Soil disturbance	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Timber harvesting	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Flood damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Storm damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Firewood collection and tidying up	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Dense regrowth post-disturbance	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Fertiliser addition	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Fire damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Feral herbivores	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Weeds	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Other – indicate type:_____	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |

Notes: Record details of plot modification types – see 'Notes table' on the next page for examples

Modification type	Plot no.	Details

	Plot no.									
Zone no. _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Canopy dieback	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Grazing and trampling	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Soil disturbance	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Timber harvesting	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Flood damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Storm damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Firewood collection and tidying up	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Dense regrowth post-disturbance	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Fertiliser addition	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Fire damage	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Feral herbivores	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Weeds	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |
Other – indicate type:_____	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |	| | |

Notes: Record details of plot modification types – see 'Notes table' on the next page for examples.

Modification type	Plot no.	Details

Plot no.										
Zone no. _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Canopy dieback										
Grazing and trampling										
Soil disturbance										
Timber harvesting										
Flood damage										
Storm damage										
Firewood collection and tidying up										
Dense regrowth post-disturbance										
Fertiliser addition										
Fire damage										
Feral herbivores										
Weeds										
Other – indicate type:_____										

Notes: Record details of plot modification types – see 'Notes table' below for examples.

Modification type	Plot no.	Details

Plot no.										
Zone no. _____	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
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Firewood collection and tidying up										
Dense regrowth post-disturbance										
Fertiliser addition										
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Feral herbivores										
Weeds										
Other – indicate type:_____										

Notes: Record details of plot modification types – see 'Notes table' below for examples.

Modification type	Plot no.	Details

Notes table

Record details of plot modification types, for example:

- timber harvesting - indicate whether stumps, coppicing, cut logs, ringbarking
- grazing and trampling - indicate grazing and trampling by introduced herbivores and/or over-abundant native herbivores
- soil disturbance - indicate whether ripping, cultivation, compaction, erosion
- fire damage – indicate if high frequency, or if certain strata particularly affected
- feral animals – indicate species (if known) and observed impacts; weeds – indicate abundance and invasiveness of each species.

Thinning (stem density) plot data sheet

BioMetric

- Start a new page for each zone (thinning proposals) or stem density reference site

Plot type (circle one): Thinning zone/Stem density reference site

CMA: _____ Recorder(s): _____ Date: _____

	PVP request no.	Veg. zone no.	Area (ha)		
PVP request no. (from *PADACS*), **zone no.** (from *NVAT Mapper*) **and zone area**				**OR** **Ref site ID** (assigned by assessor)	

Vegetation formation (see Keith 2004*)	
Vegetation class (see Keith 2004*)	
Vegetation type (*BioMetric)*	

* Keith 2004, *Ocean shores to desert dunes: the native vegetation of New South Wales and the ACT*, NSW Department of Environment and Conservation, Sydney.

Species present in stem classes	> 0 to 10 cm DBHOB	> 10 to 20 cm DBHOB	> 20 to 30 cm DBHOB

DBHOB = diameter at breast height (1.3 m above ground level), measured over bark.

Plot 1 Lat.	Long.	Plot 2 Lat.	Long.	Plot 3 Lat.	Long.	Plot 4 Lat.	Long.	Plot 5 Lat.	Long.
Orientation	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**

Plot 6 Lat.	Long.	Plot 7 Lat.	Long.	Plot 8 Lat.	Long.	Plot 9 Lat.	Long.	Plot 10 Lat.	Long.
Orientation	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**

Plot no.	1	2	3	4	5	6	7	8	9	10

20 m x 50 m plot

- Refer to Appendix 4 of *Biometric* Operational Manual for methods.
- Thinning assessments for PVPs do not have to be plot-based, but plots must be used on reference sites.

>0 to 10 cm DBHOB class:										
>10 to 20 cm DBHOB class:										
>20 to 30 cm DBHOB class:										
>30 cm DBHOB class – optional:										

Please fax or email completed reference site sheets to: VIS Administrator, Office of Environment and Heritage. Fax (02) 9585 6466. Email: bionet@environment.nsw.gov.au. Thank you.

Thinning (stem density) plot data sheet

BioMetric

- Start a new page for each zone (thinning proposals) or stem density reference site

Plot type (circle one): Thinning zone/Stem density reference site

CMA: _____ Recorder(s): _____ Date: _____

	PVP request no.	Veg. zone no.	Area (ha)		
PVP request no. (from *PADACS*), **zone no.** (from *NVAT Mapper*) **and zone area**				**OR** **Ref site ID** (assigned by assessor)	

Vegetation formation (see Keith 2004*)	
Vegetation class (see Keith 2004*)	
Vegetation type (*BioMetric)*	

* Keith 2004, *Ocean shores to desert dunes: the native vegetation of New South Wales and the ACT*, NSW Department of Environment and Conservation, Sydney.

Species present in stem classes	> 0 to 10 cm DBHOB	> 10 to 20 cm DBHOB	> 20 to 30 cm DBHOB

DBHOB = diameter at breast height (1.3 m above ground level), measured over bark.

Plot 1 Lat.	Long.	Plot 2 Lat.	Long.	Plot 3 Lat.	Long.	Plot 4 Lat.	Long.	Plot 5 Lat.	Long.
Orientation	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**

Plot 6 Lat.	Long.	Plot 7 Lat.	Long.	Plot 8 Lat.	Long.	Plot 9 Lat.	Long.	Plot 10 Lat.	Long.
Orientation	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**	**Orientation**	**Photo nos.**

20 m x 50 m plot

- Refer to Appendix 4 of *Biometric* Operational Manual for methods.
- Thinning assessments for PVPs do not have to be plot-based, but plots must be used on reference sites.

Plot no.	1	2	3	4	5	6	7	8	9	10
>0 to 10 cm DBHOB class:										
>10 to 20 cm DBHOB class:										
>20 to 30 cm DBHOB class:										
>30 cm DBHOB class – optional:										

Please fax or email completed reference site sheets to: VIS Administrator, Office of Environment and Heritage. Fax (02) 9585 6466. Email: bionet@environment.nsw.gov.au. Thank you.

BioMetric plot work sheets

Full species IDs are not required for *BioMetric*, but may be useful for identification of correct vegetation type and for monitoring purposes. Plots should be placed randomly with a minimum of one plot and a maximum of ten plots within a zone. Ground stratum (other) includes forbs, herbs, ferns, lilies, rushes and sedges.

Site type: Clearing zone / Offset zone / Reference site PVP request no. and zone no. OR Ref. site ID:_____ Date: _____ Recorder/s: _____

Veg type: _____ AMG (Zone/Easting Northing) OR Lat/Long (dec. degrees): _____ Photo nos.: _____

Native OVER-STOREY species list (per 20 m x 20 m plot)	**REGEN (√) (per zone)**	**Native MID-STOREY species list (≥ 1 m to < over-storey) (per 20 m x 20 m plot)**	**Native GROUND STRATUM COVER (GRASSES) species list (ground stratum <~1 m) (per 20 m x 20 m plot)**	**Native GROUND STRATUM COVER (SHRUBS) species list (ground stratum <~1 m) (per 20 m x 20 m plot)**	**Native GROUND STRATUM COVER (OTHER) species list (ground stratum <~1m) (per 20 m x 20 m plot)**	**EXOTIC plants species list (per 20 m x 20 m plot)**	**FALLEN LOGS (min. 10 cm diameter x 50 cm long (per 20 m x 50 m plot)**
Total no. species: _____ Foliage cover (%): _____ O/S FC benchmarks (%):_____							
Average crown diameter: _____ Average foliage cover (%): _____ Number of trees: _____ Sample area:_____ (per zone)							
No. of trees with HOLLOWS: _____ Sample area (ha): _____ Hollows benchmark: _____ (per 20x50m plot or whole zone)		Total no. species: _____ Foliage cover (%): _____ M/S FC benchmarks (%): _____	Total no. species: _____ Foliage cover (%): _____ G/S(G) FC benchmarks (%): _____	Total no. species: _____ Foliage cover (%): _____ G/S(S) FC benchmarks (%) _____	Total no. species: _____ Foliage cover (%): _____ G/S(O) FC benchmarks (%):_____	Total no. species: _____ Foliage cover (%): _____	Total (m): _____ Logs benchmark (m): _____

Site and other notes:

BioMetric plot work sheets

Full species IDs are not required for *BioMetric*, but may be useful for identification of correct vegetation type and for monitoring purposes. Plots should be placed randomly with a minimum of one plot and a maximum of ten plots within a zone. Ground stratum (other) includes forbs, herbs, ferns, lilies, rushes and sedges.

Site type: Clearing zone / Offset zone / Reference site PVP request no. and zone no. OR Ref. site ID:_____ Date: _____ Recorder/s: _____

Veg type: _____ AMG (Zone/Easting Northing) OR Lat/Long (dec. degrees): _____ Photo nos.: _____

Native OVER-STOREY species list (per 20 m x 20 m plot)	**REGEN (√) (per zone)**	**Native MID-STOREY species list (≥ 1 m to < over-storey) (per 20 m x 20 m plot)**	**Native GROUND STRATUM COVER (GRASSES) species list (ground stratum <~1 m) (per 20 m x 20 m plot)**	**Native GROUND STRATUM COVER (SHRUBS) species list (ground stratum <~1 m) (per 20 m x 20 m plot)**	**Native GROUND STRATUM COVER (OTHER) species list (ground stratum <~1m) (per 20 m x 20 m plot)**	**EXOTIC plants species list (per 20 m x 20 m plot)**	**FALLEN LOGS (min. 10 cm diameter x 50 cm long (per 20 m x 50 m plot)**
Total no. species: _____ Foliage cover (%): _____ O/S FC benchmarks (%):_____							
Average crown diameter: _____ Average foliage cover (%): _____ Number of trees: _____ Sample area:_____ (per zone)							
No. of trees with HOLLOWS: _____ Sample area (ha): _____ Hollows benchmark: _____ (per 20x50m plot or whole zone)		Total no. species: _____ Foliage cover (%): _____ M/S FC benchmarks (%): _____	Total no. species: _____ Foliage cover (%): _____ G/S(G) FC benchmarks (%): _____	Total no. species: _____ Foliage cover (%): _____ G/S(S) FC benchmarks (%) _____	Total no. species: _____ Foliage cover (%): _____ G/S(O) FC benchmarks (%):_____	Total no. species: _____ Foliage cover (%): _____	Total (m): _____ Logs benchmark (m): _____

Site and other notes:

BioMetric and Threatened Species Tool scattered tree plot work sheets

Full species IDs are not required for *BioMetric*, but may be useful for identification of correct vegetation type and for monitoring purposes.

Site type: Clearing zone / Offset zone / Reference site PVP request no. and zone no. or Ref. site ID:_____

AMG (Zone/Easting Northing) 0r Lat/Long (dec. degrees): _____ Date: _____

Recorder/s: _____ Veg type: _____ Photo nos.: _____

Tree no.	Species	DBHOB (cm)	Crown diameter (m)	Foliage cover (%)	Hollows: size in 5-cm increments	Mistletoe
1						
2						
3						
4						
5						
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7						
8						
9						
10						
11						
12						
13						
14						
15						
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50						

No. of trees: _____ **Average foliage cover (%):** _____ **No. of trees with hollows:** _____ **Sample area ID:** _____

Average no. of hollow-bearing trees per 50 m x 20 m plot: _____ **Sample area (ha):** _____

Notes:

BioMetric and Threatened Species Tool scattered tree plot work sheets

Full species IDs are not required for *BioMetric*, but may be useful for identification of correct vegetation type and for monitoring purposes.

Site type: Clearing zone / Offset zone / Reference site PVP request no. and zone no. or Ref. site ID:_____

AMG (Zone/Easting Northing) 0r Lat/Long (dec. degrees): _____ Date: _____

Recorder/s: _____ Veg type: _____ Photo nos.: _____

Tree no.	Species	DBHOB (cm)	Crown diameter (m)	Foliage cover (%)	Hollows: size in 5-cm increments	Mistletoe
1						
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3						
4						
5						
6						
7						
8						
9						
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11						
12						
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15						
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50						

No. of trees: _____ **Average foliage cover (%):** _____ **No. of trees with hollows:** _____ **Sample area ID:** _____

Average no. of hollow-bearing trees per 50 m x 20 m plot: _____ **Sample area (ha):** _____

Notes: