

MOUNT EMERALD WIND FARM – NORTHERN QUOLL MONITORING PROGRAM



SUMMARY OF RESULTS

MONITORING PERIOD: Late 2016 (September/October/November)

Monitoring Grid (refer to Fig. 1)	No. survey points monitored	Survey Period	No. individual quolls detected	Quoll population estimate*	Quoll occupancy [#]	Quoll detection probability ¹
Mt Emerald Site 1	36	Sept - Oct 2016	10	20	0.52	0.04
Mt Emerald Site 2	36	Sept - Oct 2016	13	25	0.79	0.05
Davies Ck Site, Davies Ck NP	36	Oct 2016	11	18	0.79	0.1
Tinaroo Ck Site, Dinden NP	36	Oct 2016	12	20	0.95	0.04
Upper Walsh River Site	36	Oct - Nov 2016	8	18	0.77	0.05
Biboorah Site	36	Sept - Oct 2016	2	NA	NA	NA

NOTES

*population estimated using spatially explicit capture-recapture modelling.

Occupancy is the proportion of sites (in this case the 36 trail camera monitoring points within each monitoring grid), at which quolls are estimated to occur, given the modelled uncertainty in detecting quolls when they occur at a point. Modelled using Presence software.

¹ Detection probability is the modelled probability of detecting a quoll on each detection opportunity when it is present at a site. Modelled using Presence software.

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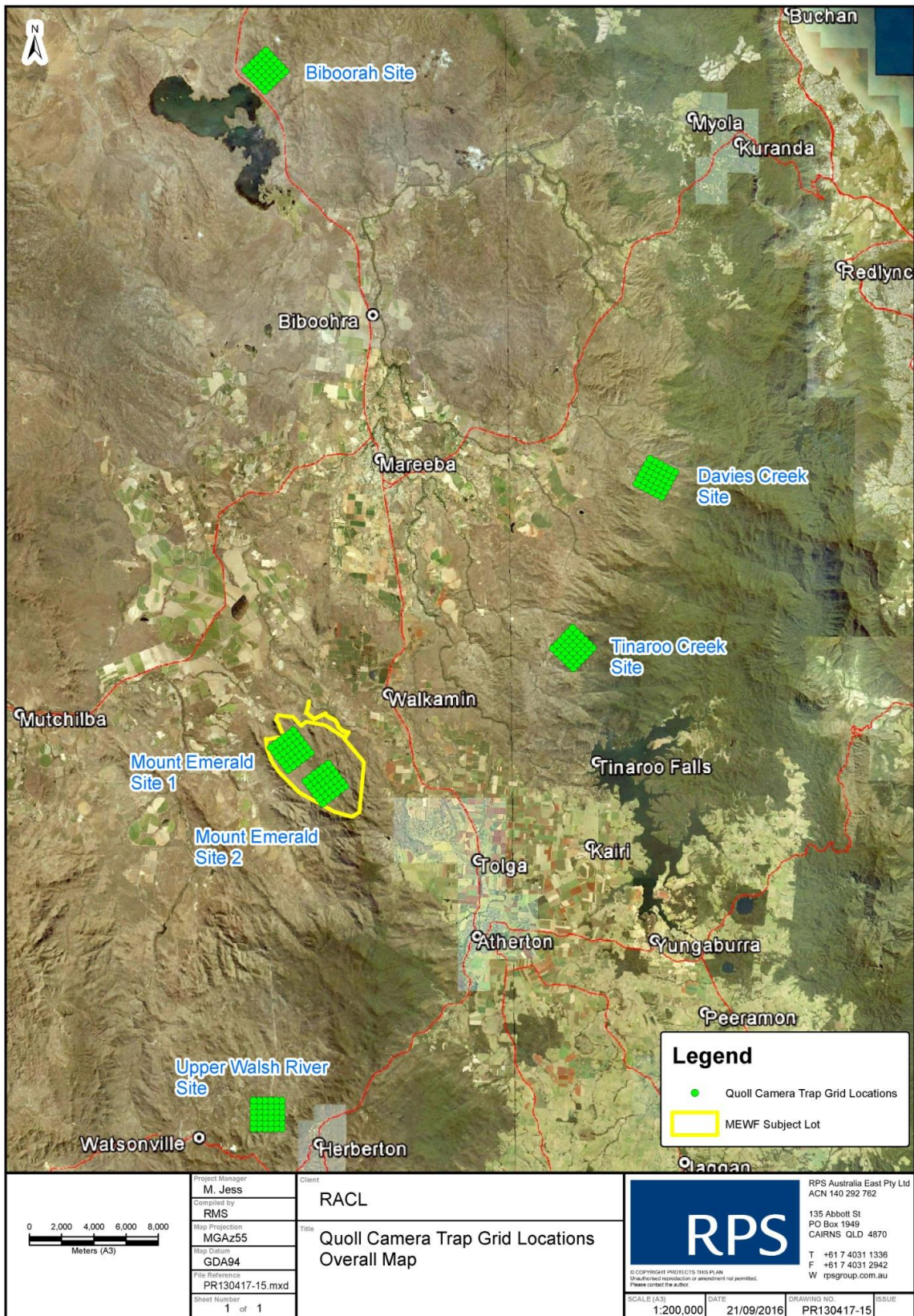


Figure 1 - Indicative locations of the six monitoring grids used to monitor Northern Quoll populations in the northern Atherton Tablelands

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Program Summary

A condition of the Mt Emerald Windfarm approval is that the impacts of the project on populations of the northern quoll *Dasyurus hallucatus* are documented and managed. To this end, a quoll population and habitat monitoring program was established in late 2016.

This monitoring program consists of six camera trapping grids (Fig. 1) located across the northern Atherton Tablelands in North Queensland.

Each monitoring grid consists of a 6 x 6 grid with an approximate spacing of 350m, for a total area of 306ha. This provides a total of 36 trail camera survey points which are monitored continuously for 14 days and nights during each monitoring period.

Quoll habitat monitoring (using the Qld Government's BioCondition Assessment method) is undertaken at a subset of the 36 points on each monitoring grid.

Quoll Identification

Quolls are well suited to population monitoring using trail cameras because every quoll has its own unique spot pattern. By orientating cameras vertically, we always get the same image of each quoll which makes identification of individuals from spots that much easier.

See the photos below for an example of some of the individuals detected during the late 2016 quoll monitoring.

