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30 November 2016
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**Attention: Noelene Rutherford**

**WC2NH: Monitoring of In-situ Threatened Flora (Annual Report 2016)**

## Background

As part of the Warrell Creek to Nambucca Heads (WC2NH) Pacific Highway upgrade project, a Threatened Flora Management Plan (TFMP) has been prepared by Ecos Environmental Pty Ltd (2014) to prescribe measures to manage all threatened flora species occurring on the project. A number of threatened flora occur on the edge of the construction footprint which are to be protected during the construction and operation of the upgrade. Measures to be implemented to protect in-situ specimens are outlined in Section 5 of the TFMP.

The TFMP requires that monitoring of in-situ roadside specimens be undertaken. Monitoring is to be undertaken initially after installing protective barriers (prior to the start of clearing) at six monthly intervals for two years and once a year thereafter. An annual monitoring report is to be prepared at the end of each year describing the results of monitoring. This report represents the second annual monitoring report for the 2016 calendar year and second year of construction.

## Methodology

All in-situ threatened flora were located and tagged prior to clearing activities commencing. Temporary fencing (orange bunting) and no-go signage was installed around all plants with ecologist supervision. The location of all threatened flora was shown on project sensitive area plans. Threatened flora which were within the project footprint were translocated prior to clearing commencing by Ecos Environmental Pty Ltd. A number of threatened plants are to be retained in-situ outside the project footprint. These plants are the subject of this monitoring report and are shown in **Illustration 1.1**. Monitoring of in-situ threatened flora was undertaken by GeoLINK ecologists, Jessica O'Leary, David Havilah and Frank Makin at the following times:

- Prior to clearing commencing – 5th-9th January 2015
- 6 monthly interval (autumn) – 25th-29th May 2015
- 12 monthly interval (spring)– 26th-27th November 2015
- 18 monthly interval (autumn) – 23rd – 27th May 2016
- 24 monthly interval (spring) – 21st-23rd November 2016

The following identification/ plant condition data was recorded for each in-situ specimen:

- genus/ species;
- plant identification number;
- leaf condition;
- flower/ fruit presence;
- new growth/ shoots;
- recruitment; and
- notes were also made on weed infestations and evidence of any other impacts.

**Results**

Monitoring results for in-situ threatened flora are included below in **Table 1.1**. Key points arising from the second year of monitoring are summarised as follows:

- All Tall Knotweed plants within the monitoring area died back prior to the Autumn 2015 monitoring surveys. A reference population of Tall Knotweed located in the Maclean locality (far north coast of NSW) was surveyed at the same time and was also found to have experienced complete die back during this period.

  New plants were identified within the monitoring area in Autumn 2016 and were again recorded during Spring 2016. This finding appears to be indicative of the natural life cycle of this species suggesting it may have an annual lifecycle. More detailed monthly monitoring of Tall Knotweed over differing seasonal conditions would be necessary to gain a further understanding of the lifecycle of this species. The subject population of this species is persisting in a healthy manner within the monitoring area.
- Favourable growing conditions for Maundia (indicated by generally high rainfall) were present prior to and during construction in 2015. During this period large areas of Maundia were recorded adjacent to the project footprint in the Nambucca floodplain area. This population has remained generally similar (as evidenced by health and abundance) throughout monitoring to date. Recent surveys detected a decrease in cover of Maundia within the Nambucca Floodplain area, most likely linked to drier conditions experienced in the lead up to these surveys. During this time decreased surface water was detected across areas of Maundia floodplain habitat. Similar reference populations in the Woodburn locality (far north coast of NSW) showed similar, apparent seasonal decreases in abundance.

  The population of Maundia within Crouches Creek was removed as part of the diversion of the creek in this location. Although translocation of this species was not prescribed as part of the WC2NH Threatened Flora Management Plan, salvage translocation was attempted within the new alignment of Crouches Creek. This translocation has been successful, the Maundia plants translocated to the creek bed have established and appear in good health.
- The in-situ Spider Orchid specimen remains in a healthy condition with recruitment of an additional individual occurring immediately below this plant on the same tree. The number of pseudobulbs (storage organs) on this plant has increased substantially during recent monitoring events.
- In-situ Rusty Plums in the Cockburns Lane locality remain generally healthy and in good condition, the one exception to this being NW56. This plant continues to show signs of discolouration which are likely due to edge effects associated with its now exposed location. Remediation measures to protect this plant from edge effects are recommended to prevent mortality of this plant. Appropriate mitigation measures will be discussed the WC2NH botanist, Dr Andrew Benwell and will be actioned as soon as possible.
- Slender Marsdenia plants at monitoring locations remain healthy with evidence of new growth. Evidence of regular die back of stems and plants has been a common observation with this species with the origin of stems being difficult due to sharing common rhizomes in some instances. This has made the tracking of individual plants over time problematic. Notwithstanding this, the monitoring to date has demonstrated the perseverance of Slender Marsdenia plants at monitoring locations. A number of additional plants have recently been translocated as part of the approved WC2NH North-facing Ramps project.

*Plate 1.1 Recruitment of juvenile Spider Orchid*

*Plate 1.2 Flowering Maundia on the Nambucca Floodplain Site*

**Table 1.1 In-situ Threatened Flora Monitoring Results**

| *Tall Knotweed (Persicaria elatior)* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Plant ID #*** | ***Height (cm)*** | | | | | ***Leaf Condition*** | | | | | ***Flower/ Fruit Present*** | | | | | ***New Growth*** | | | | | ***Recruitment*** | | | | | ***Damage/ Disturbance*** | | | | | ***Notes*** |
| | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | |
| **P1** | 42 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | All plants were found to be dead as of Autumn 2015. Recruitment of new plants were recorded from Autumn 2016 as shown below. |
| **P2** | 56 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P3** | 30 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P4** | 26 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P5** | 35 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P6** | 42 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P7** | 25 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P8** | 18 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P9** | 35 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **P10** | 54 | - | - | - | - | 5 | 0 | 0 | 0 | 0 | Y | N | N | N | N | Y | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | |
| **New Plants Recorded as of Autumn 2016 (previous plants had died back)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **P11** | - | - | - | 50 | 100 | - | - | - | 1 | 5 | - | - | - | Y | Y | - | - | - | Y | Y | - | - | - | N | Y | - | - | - | N | N | All plants with minor insect presence but otherwise healthy. |
| **P12** | - | - | - | 65 | 40 | - | - | - | 1 | 2 | - | - | - | Y | N | - | - | - | Y | Y | - | - | - | N | N | - | - | - | N | N | |
| **P13** | - | - | - | 90 | 45 | - | - | - | 3 | 4 | - | - | - | Y | N | - | - | - | Y | Y | - | - | - | N | N | - | - | - | N | N | |
| **P14** | - | - | - | 90 | 60 | - | - | - | 3 | 4 | - | - | - | Y | N | - | - | - | Y | Y | - | - | - | N | N | - | - | - | N | N | |

| *Spider Orchid (Dendrobium melaleucaphilum)* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Plant ID #*** | ***Length of longest pseudobulb (cm)*** | | | | | ***Leaf Condition*** | | | | | ***Number of pseudobulbs with leaves*** | | | | | ***New Growth*** | | | | | ***Recruitment*** | | | | | ***Damage/ Disturbance*** | | | | | ***Notes*** |
| | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | |
| **DM3** | 30 | 35 | 35 | 35 | 35 | 2 | 2 | 2 | 2 | 3 | 6 | 6 | 7 | 25 | 25 | Y | Y | Y | Y | Y | N | N | Y | N | N | N | N | N | N | N | Very healthy with signs of increased flowering activity. |

| *Maundia (Maundia triglochinoides)* | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Population*** | ***Cover-Abundance*** | | | | | ***Flower/ Fruit Present*** | | | | | ***New Growth*** | | | | | ***Recruitment*** | | | | | ***Damage/ Disturbance*** | | | | |
| | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** | ***PC*** | ***Aut*** | ***Spr*** | ***Aut*** | ***Spr*** |
| *Crouches Creek | 20-40% | 30-60% | 30-60% | - | 10-20% | N | Y | N | - | - | N | Y | Y | - | Y | N | Y | Y | - | N | N | N | N | - | N |
| Nambucca Floodplain | 10-20% | 70-80% | 70-80% | 10-20% | 20-40% | N | Y | N | N | Y | N | Y | Y | Y | Y | N | Y | Y | Y | Y | N | N | N | N | N |

Notes: * Maundia within Crouches Creek removed as part of creek realignment and temporarily stored during autumn. No requirements for translocation within TFMP however salvage translocation was successfully undertaken.

| Rusty Plum (Niemeyera whitei) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Plant ID # | Height (cm) | | | | | Leaf Condition | | | | | Flower/ Fruit Present | | | | | New Growth | | | | | Recruitment | | | | | Damage/ Disturbance | | | | | Notes |
| | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | |
| **NW58** | 700 | 700 | 750 | 750 | 750 | 5 | 5 | 5 | 5 | 4 | N | N | N | N | N | Y | Y | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | |
| **NW56** | 100 | 100 | 100 | 110 | 120 | 5 | 4 | 4 | 3 | 2 | N | N | N | N | N | Y | N | N | Y | Y | N | N | N | N | N | N | N | N | N | N | Discolouration of leaves due to being exposed (edge effects). |
| **NW73** | 600 | 600 | 600 | 600 | 600 | 5 | 5 | 5 | 5 | 4 | N | N | N | N | N | Y | N | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | |
| **NW66** | 400 | 400 | 400 | 420 | 450 | 5 | 5 | 5 | 5 | 5 | N | N | N | N | N | Y | Y | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | |
| **NW57** | 500 | 500 | 500 | 550 | 600 | 5 | 5 | 5 | 5 | 5 | N | N | N | N | Y | Y | N | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | |

| Slender Marsdenia (Marsdenia longloba) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Plant ID # | Height (cm) | | | | | Leaf Condition | | | | | Flower/ Fruit Present | | | | | New Growth | | | | | Recruitment | | | | | Damage/ Disturbance | | | | | Notes |
| | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | PC | Aut | Spr | Aut | Spr | |
| **ML93** | 5 | 5 | 5 | 12 | 20 | 3 | 3 | 3 | 3 | 3 | N | N | N | N | N | N | N | Y | N | Y | N | N | N | Y | Y | N | N | N | N | N | 15 plants now within 1 m of subject plant. All healthy. |
| **ML92** | 5 | 8 | 10 | 8 | - | 2 | 2 | 2 | 2 | - | N | N | N | N | - | Y | N | Y | N | - | N | N | Y | N | - | N | N | N | N | - | These plants were translocated as part of the approved north-facing ramps proposal. |
| **ML140** | 15 | 15 | 20 | 25 | - | 2 | 2 | 3 | 2 | - | N | N | N | N | - | N | N | Y | N | - | N | N | Y | N | - | N | N | N | N | - | |
| **ML131** | 5 | - | - | - | - | 1 | 0 | 0 | 0 | - | N | - | - | - | - | N | - | - | - | - | N | - | - | - | - | N | - | - | - | - | |
| **ML132** | 40 | 40 | 50 | 52 | 30 | 3 | 3 | 3 | 2 | 3 | N | N | N | N | N | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | N | N | Partially natural die back occurring. |
| **ML72** | 5 | 5 | 8 | 15 | 31 | 2 | 3 | 3 | 3 | 4 | N | N | N | N | N | N | Y | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | |
| **MI138** | 5 | 5 | 5 | 10 | 40 | 2 | 0 | 0 | 2 | 3 | N | N | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | N | |
| **ML63** | 10 | 10 | 10 | 11 | 13 | 2 | 0 | 0 | 2 | 3 | N | N | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | N | |

**Slender Marsdenia and Wools' Tylophora Habitat Condition Monitoring**

As required within the WC2NH TFMP, monitoring of potential changes in the habitat of Slender Marsdenia and Wools' Tylophora is to be conducted within the indirect impact zone – i.e within 10 m of the edge of clearing construction. Monitoring is to be conducted in areas of this habitat adjacent to the construction footprint and is to be plot based.

Permanent plots were established in the indirect impact zones at ten representative points in Slender Marsdenia and Wools' Tylophora habitat as mapped by Andrew Benwell in Spring 2010. The plots are 10 m wide and 20 m long, with the long axis parallel to the edge of clearing. The corners of each plot were marked with pink flagging tape with the GPS co-ordinates of the corners of plots also recorded. Plots were established on 26th November 2015 which was around the time that clearing operations in the northern zone of the project were being completed. Data was collected at the plots again during Autumn (23rd – 27th May 2016) and Spring (21st-13rd November 2016) The following parameters were measured at each plot (refer to TFMP **Section 5.4** for more information):

- Native vegetation structure;
- Level of weed incursion; and
- Microclimate class.

A summary of the results of this monitoring is provided in **Table 1.2**. The data to date shows only minor changes in the groudcover strata and to a lesser extent the midstorey strata. The minor changes in vegetation strata to date have not affected any microclimate class scores for quadrats. To date there are no substantial changes in Wools' Tylophora and Slender Marsdenia habitat occurring adjacent to the clearing boundary as recorded from the monitoring plots. It is envisaged that any substantial changes to the condition/ composition of monitoring plots would be likely to be recorded over a longer time period from the initial disturbance associated with clearing for the project (i.e. in Year 3 or Year 4 of the monitoring program). Further analysis of data will be undertaken at this time if data indicates changes are occurring.

***Plate 1.3 Example Habitat Condition Monitoring Plots***

***Plate 1.4 Example Habitat Condition Monitoring Plots***

**Table 1.2 Slender Marsdenia and Wools' Tylophora Habitat Condition Monitoring**

| *Quadrat* | *Vegetation Structure (dominant species, height, cover)* | | | *Weed Level* | *Microclimate Class* |
|---|---|---|---|---|---|
| | *Canopy* | *Midstorey* | *Ground cover* | | |
| **1** | **Flooded Gum, Swamp Turpentine – 25m** | **Red Ash, Brush Box, Swamp Turpentine, Rosewood – 3-8m** | **Blechnum, Cissus, Lomandra, Native Jasmine – 0.5m** | **Lantana** | |
| Spring 15 | 5% | 50% | 40% | <5% | 5 |
| Autumn 16 | 5% | 50% | 40% | 5% | 5 |
| Spring 16 | 5% | 45% | 45% | 5% | 5 |
| **2** | **Swamp Turpentine, Forest Oak, Tallowwood – 20m** | **Callicoma, Red Ash, Brushbox, Rosewood – 3-6m** | **Blechnum, Cordyline, Lomandra, Native Jasmine – 0.5m** | **Lantana** | |
| Spring 15 | 15% | 60% | 10% | <5% | 5 |
| Autumn 16 | 15% | 65% | 15% | 5% | 5 |
| Spring 16 | 15% | 65% | 15% | 10% | 5 |
| **3** | **Swamp Turpentine, Flooded Gum, Iron Bark – 22m** | **Rosewood, Red Ash, Callicoma, Cabbage Palm – 2-10m** | **Blechnum, Lomandra, Native Jasmine – 0.5m** | **Lantana** | |
| Spring 15 | 5% | 70% | 10% | <5% | 1 |
| Autumn 16 | 5% | 70% | 10% | <5% | 1 |
| Spring 16 | 5% | 70% | 10% | <5% | 1 |
| **4** | **Flooded Gum, White Mahogany, Swamp Turpentine – 25m** | **Red Ash, Forest Oak, Cabbage Palm, Rosewood -3-8m** | **Cissus, Cordyline, Gahnia, Blechnum – 0.5m** | **No weeds** | |
| Spring 15 | 5% | 10% | 30% | - | 2 |
| Autumn 16 | 5% | 10% | 30% | - | 2 |
| Spring 16 | 5% | 10% | 35% | - | 2 |
| **5** | **Ironbark, Brushbox, White Mahogany, Swamp Turpentine – 28m (50%)** | **Forest Oak, Swamp Turpentine, Cabbage Palm, Cordyline – 3-8m (15%)** | **Lomandra, Blechnum, Cordyline – 0.5m (15%)** | **Lantana** | |
| Spring 15 | 50% | 15% | 15% | <5% | 5 |
| Autumn 16 | 50% | 20% | 15% | <5% | 5 |
| Spring 16 | 50% | 20% | 15% | <5% | 5 |
| **6** | **White Mahogany, Brush Box, Paperbark – 20m** | **Callicoma, Cabbage Palm, Cordyline, Geebung – 3-8m** | **Lomandra, Blechnum, Cordyline <1m** | **Lantana** | |
| Spring 15 | 50% | 40% | 30% | 5% | 4 |
| Autumn 16 | 50% | 40% | 30% | 5% | 4 |
| Spring 16 | 50% | 40% | 35% | 5% | 4 |
| **7** | **White Mahogany – 20m** | **Red Ash, Rosewood, Acacia sp, Leptospermum sp – 2-8m** | **Blechnum, Bracken Fern, Lomandra – 0.5m** | **No weeds** | |
| Spring 15 | 10% | 25% | 50% | - | 1 |
| Autumn 16 | 10% | 25% | 50% | - | 1 |
| Spring 16 | 10% | 25% | 50% | - | 1 |

| *Quadrat* | *Vegetation Structure (dominant species, height, cover)* | | | *Weed Level* | *Microclimate Class* |
|---|---|---|---|---|---|
| | *Canopy* | *Midstorey* | *Ground cover* | | |
| **8** | **Paperbark, Brushbox, White Mahogany – 18m** | **Cheese Tree, Rosewood, Geebung, Syzygium sp – 2-8m** | **Blechnum, Lomandra, Bracken Fern, Cissus, Cordyline – 0.5m** | **Lantana** | **1** |
| Spring 15 | 40% | 40% | 25% | 5% | 1 |
| Autumn 16 | 40% | 40% | 30% | 5% | 1 |
| Spring 16 | 40% | 40% | 30% | 7% | 1 |
| **9** | **Tallowwood, Swamp Turpentine, Flooded Gum – 20m** | **Cordyline, Paperbark, Cabbage Palm, Acacia sp – 2-8m** | **Gahnia, Jasmine, Blechnum, Lomandra - <0.5m (25%)** | **Lantana, Broad-leaved Paspalum** | |
| Spring 15 | 40% | 30% | 25% | 5% | 1 |
| Autumn 16 | 40% | 30% | 25% | 5% | 1 |
| Spring 16 | 40% | 30% | 35% | 20% | 1 |
| **10** | **Flooded Gum – 30m** | **Sandpaper Fig, Red Ash 6-8m** | **Jasmine, Bracken Fern – 0.5m (5%)** | **Lantana <5%** | |
| Spring 15 | 5% | 30% | 5% | | 4 |
| Autumn 16 | 5% | 30% | 10% | | 4 |
| Spring 16 | 5% | 30% | 20% | | 4 |

Authorised by:

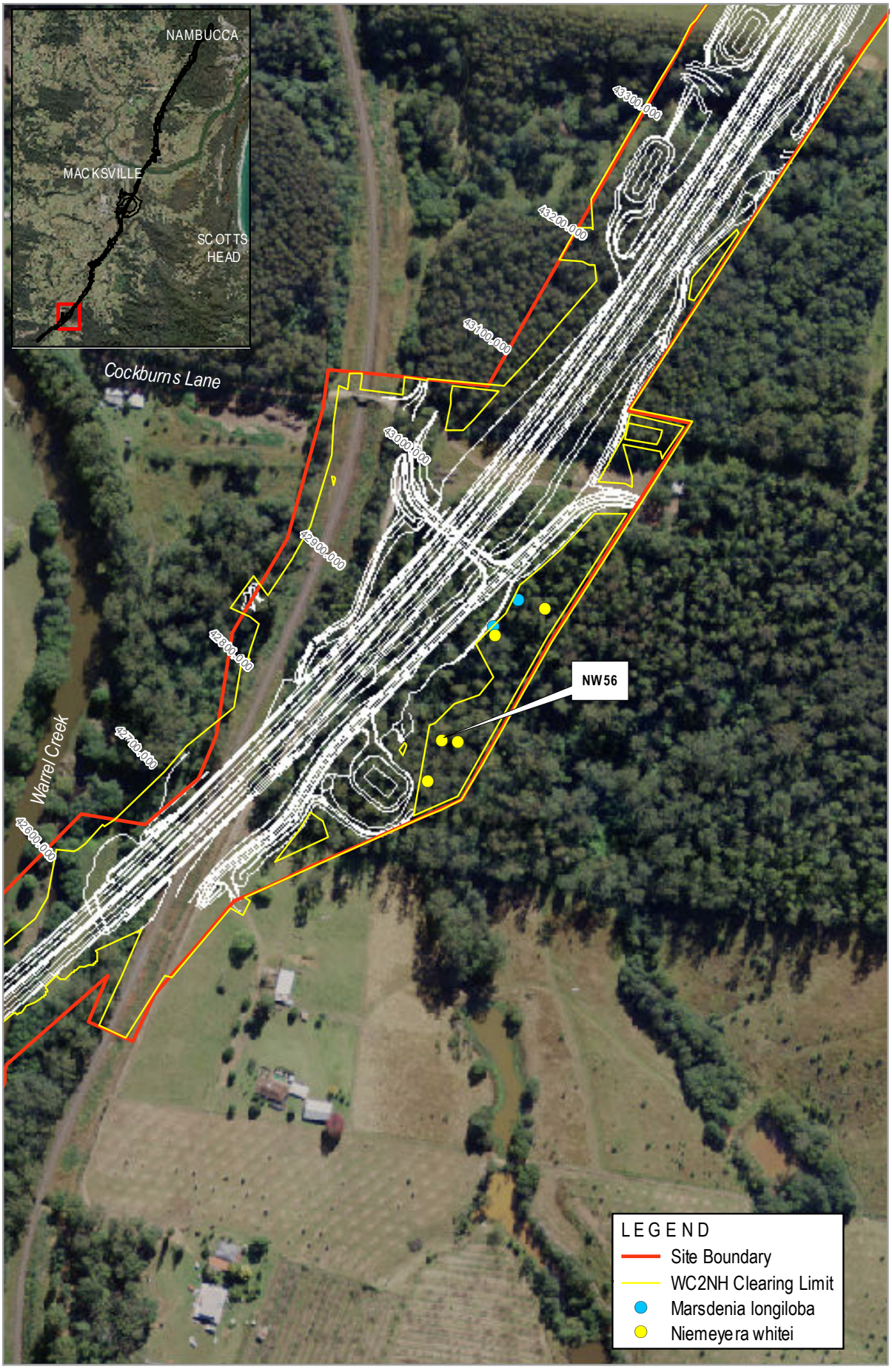
**GeoLINK**

**David Havilah** Ecologist/ Associate

Drawn by: AB Checked by: RE Reviewed by: DGH Date: 30/11/2016

Information shown is for illustrative purposes only

Source of base data: Roads and Maritime Services and Pacifico

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North

# In-situ Threatened Flora - Map 1 of 5

GeoLINK environmental management and design

Date: 28 November 2016 Revision: Rev1

2378-1301

Illustration 1.1

Drawn by: AB Checked by: RE Reviewed by: DGH Date: 30/11/2016

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Source of base data: Roads and Maritime Services and Pacifico


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North

# In-situ Threatened Flora - Map 2 of 5

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2378-1301

Illustration 1.2

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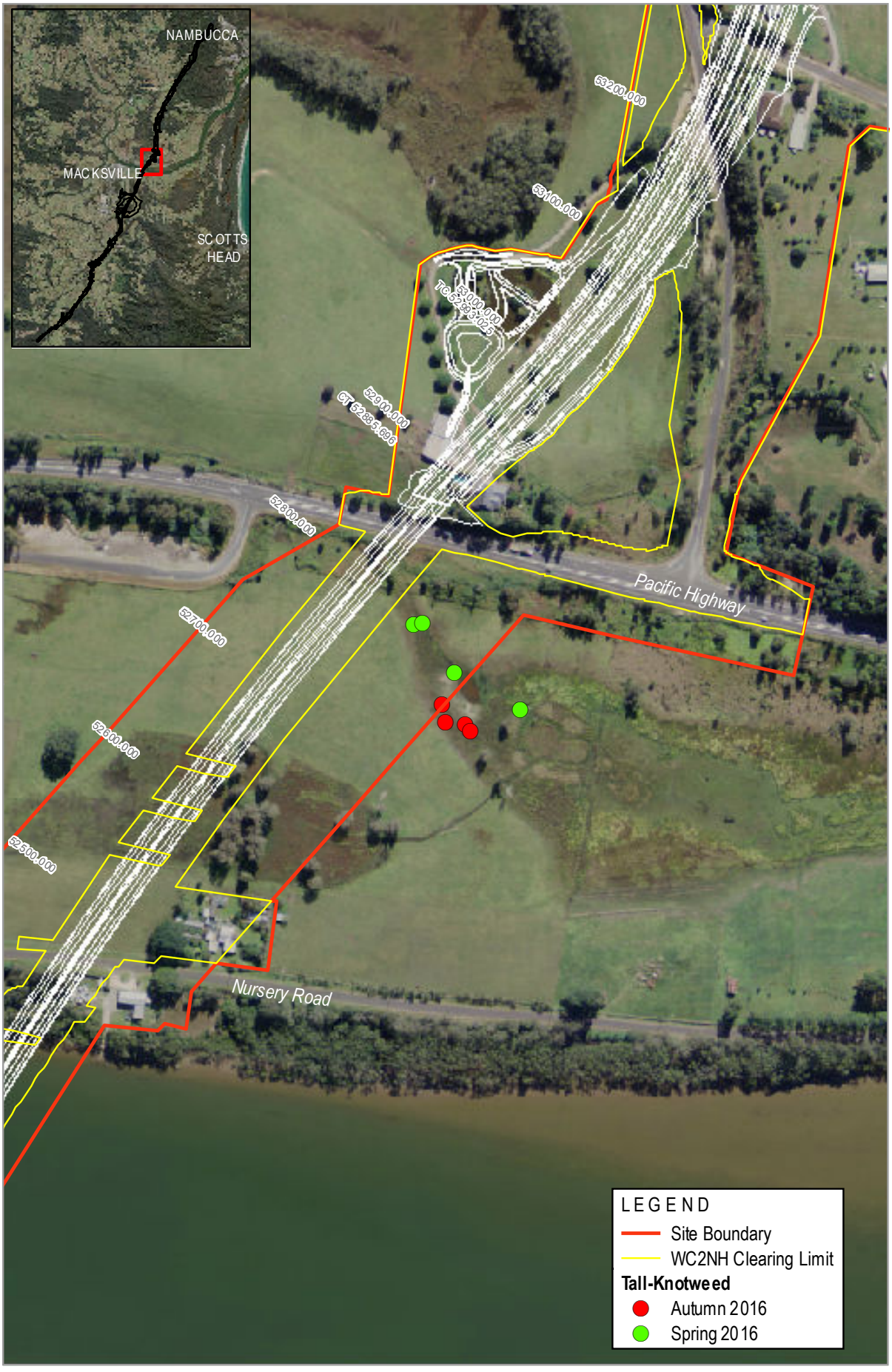
Source of base data: Roads and Maritime Services and Pacifico

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North

# In-situ Threatened Flora - Map 3 of 5

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Illustration 1.3

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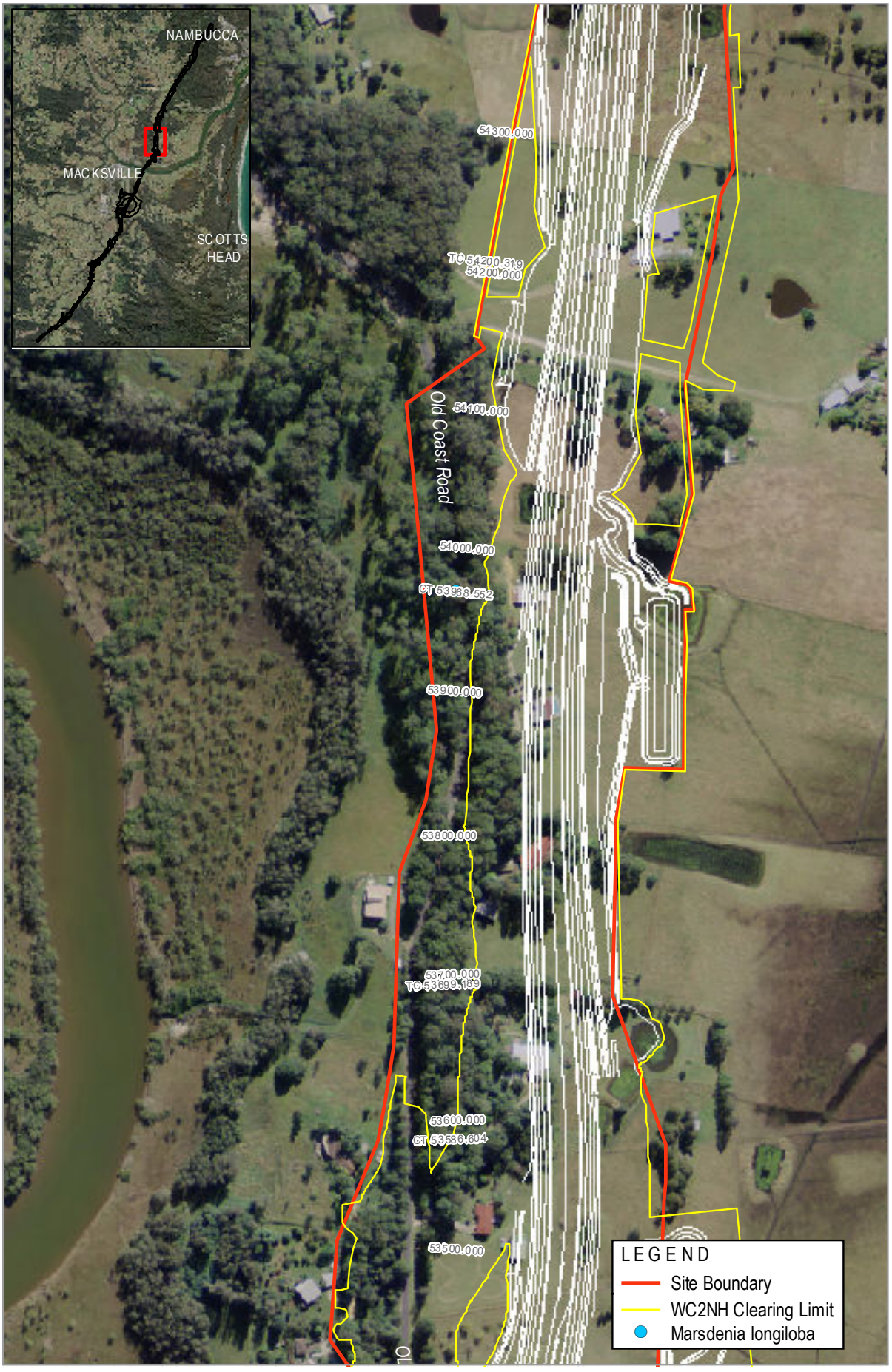
Source of base data: Roads and Maritime Services and Pacifico

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North

# In-situ Threatened Flora - Map 4 of 5

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Revision: Rev1

Illustration 1.4

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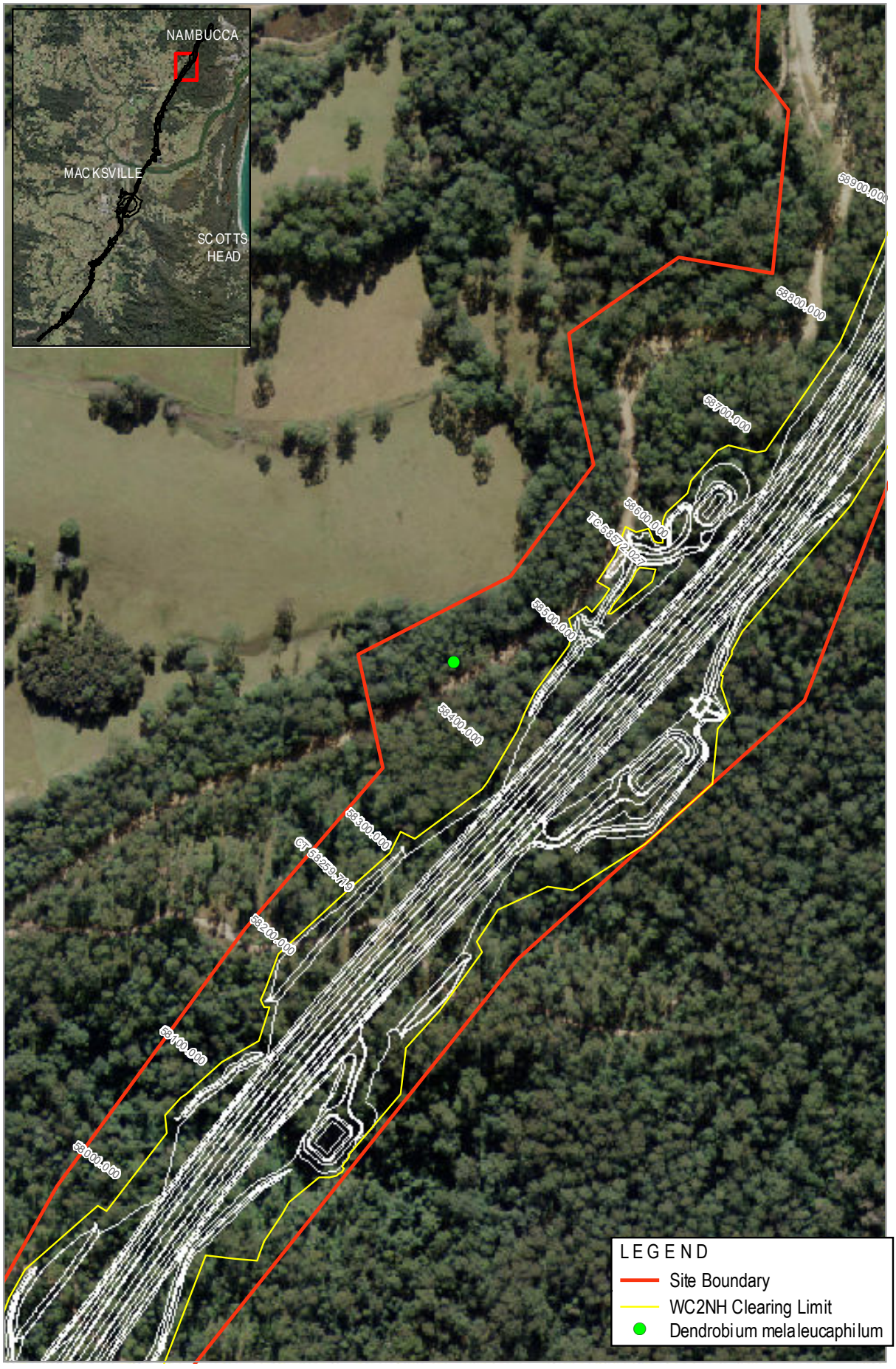
Source of base data: Roads and Maritime Services and Pacifico

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North

# In-situ Threatened Flora - Map 5 of 5

GeoLINK environmental management and design

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2378-1301

Illustration 1.5