

14 August 2019

Our ref: 19SUT - 13826

TRN Group
54 Barrow Road
Spring Farm
NSW 2570

Attention: Luke McLachlan

Dear Luke,

Pre-clearance Letter– Lots 100, 101, 102 and 104 DP 1237882, Silverdale

Eco Logical Australia Pty Ltd (ELA) was engaged by TRN Group to conduct a pre-clearance assessment for the development of a subdivision adjacent to Warradale Rd, Silverdale Rd and Government Rd, Silverdale. The pre-clearance inspection was conducted on the 30 and 31 June 2019 by ELA ecologists Cameron Crawford and Melinda Cook. A second assessment of the Industrial Site was completed on the 7 August for the presence of Cumberland Plain Land Snails as requested by Council.

The pre-clearance assessment was completed in accordance with the development consent conditions from Wollondilly Shire Council, TRN Group CEMP and ELA's Pre-clearing and Clearing Supervision Standard Operating Procedures.

Permits and Licences

ELA holds a current Animal Ethics Permit from the Department of Industry and Investment and a Biodiversity Conservation Licence under Part 2, Division 3 of the *Biodiversity Conservation Act 2016*. Copies of the relevant permits and licenses can be provided if required.

Methodology

Eco Logical Australia (ELA) ecologists Cameron Crawford and Melinda Cook were present onsite between the 30-31 July 2019 to inspect the Current Subdivision Site, Future Subdivision Site and Industrial Site (herein referred to as subject site) for the presence of habitat trees, Cumberland Plain Land Snails (CPLS), Koalas and soil pathogens. A second assessment of the Industrial Site was completed on the 7 August for the presence of CPLS. The methodology is consistent with the TRN Group CEMP and undertaken as per the specifications listed in **Table 1**.

Table 1: Survey methodology

Target species	Methodology
Habitat features	Searches of the subject site for habitat features including habitat trees, Common Wombat (<i>Vombatus ursinus</i>) burrows, dams, nests and dreys that will require inspection during subsequent removal.
Cumberland Plain Land Snail	Leaf litter and bark at the base of trees, or other stockpiles of leaves, bark and coarse woody debris (CWD) will be searched for the presence of CPLS. Any animals identified will be relocated to the nearest available area within the BioBank site, along with appropriate material. These surveys will be conducted throughout the subject site.
Koala	Diurnal searches of trees for resting Koalas will be conducted throughout the subject site. The location of any Koalas recorded will be marked for further work during clearing
Soil Pathogens	Initial visual assessments of the condition of susceptible plants to soil pathogens (with a focus on <i>Phytophthora cinnamomi</i>) will be completed. If the visual assessment confirms the potential for soil borne pathogens, samples will be collected and sent to the Royal Botanic Gardens Plant Disease Diagnostic Unit for analysis.

Results

Habitat Identification and Mapping

The pre-clearance surveys identified 56 habitat trees in the subject site (**Figure 1**). This included 30 in the Current Subdivision Site (**Figure 2**), 13 in the Future Subdivision Site (**Figure 3**) and 13 in the Industrial Site (**Figure 4**). These habitat trees contained a total of 85 hollows ranging from 0-5 cm to 20-25 cm and three nests ranging from 5-10 cm to 15-20 cm (**Table 2**). During these inspections one active Common Wombat (*Vombatus ursinus*) burrow and one Glider feed tree, likely for Sugar Glider (*Petaurus breviceps*), were observed and mapped in the Current Subdivision Site (**Figure 2**).

The Wombat burrow has been marked as a 'no go zone' using wooden stakes and danger tape to ensure it is not impacted during the clearance works. A small excavator and shovel will be required to slowly and carefully excavate the burrow following the vegetation clearance works. An ecologist must be present to assist with the excavation of the burrow.

Two small dams were observed on the subject site during the pre-clearance inspection. It is understood that these dams are proposed to be converted into detention basins (**Figure 1**). As such, an ecologist must be onsite during the clearance of aquatic vegetation to minimise the impacts to aquatic fauna.

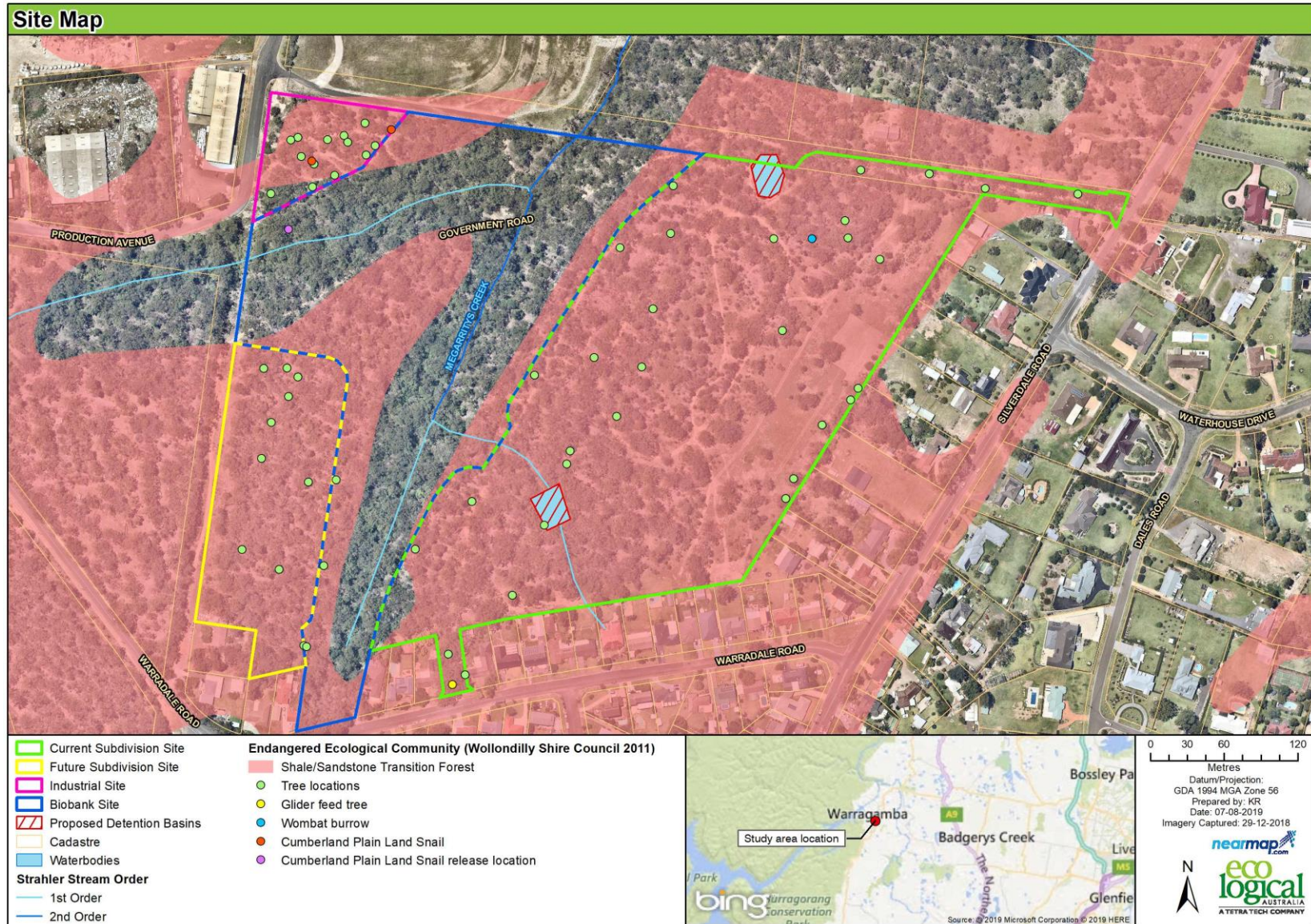


Figure 1 - Subject site - overview

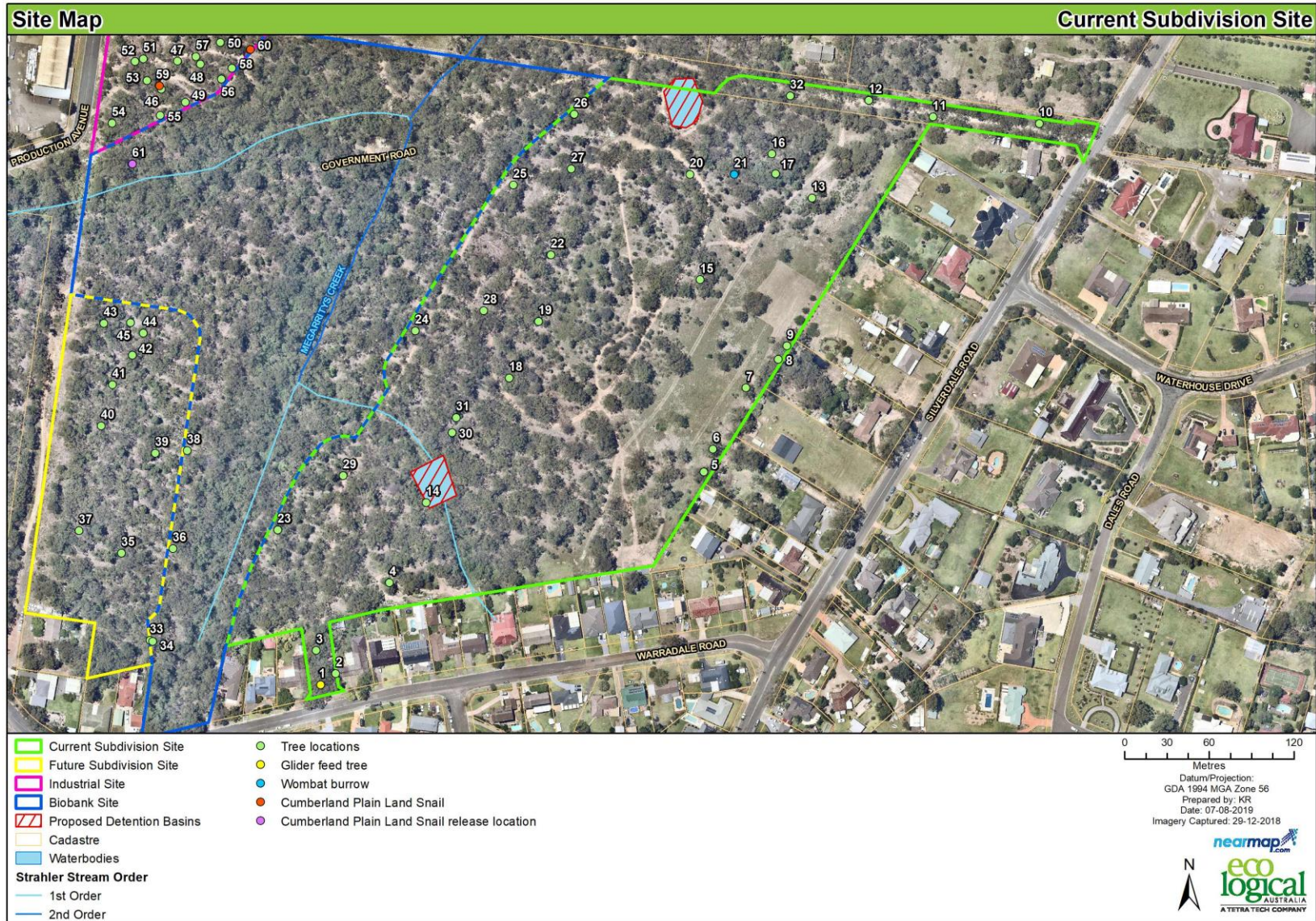


Figure 2 - Current Subdivision Site

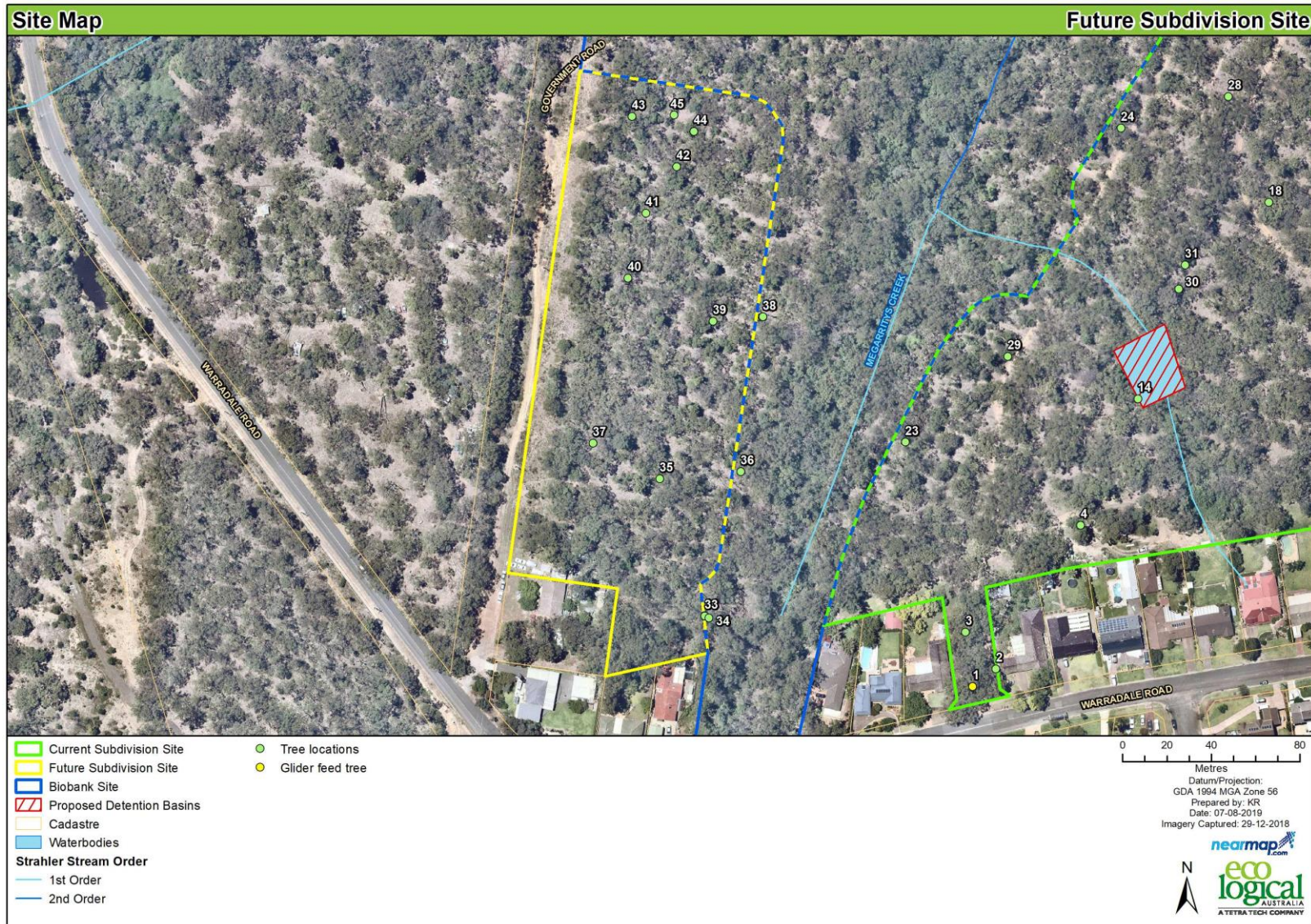


Figure 3 - Future Subdivision Site



Figure 4 - Industrial Site

Table 2: Tree survey results for the study area

Habitat Number	Species	Habitat Type	Sizes	Potential Fauna	Comments
Current Subdivision Site (green polygon)					
1	<i>Corymbia gummifera</i>	Feed Tree	-	-	Glider feed tree
2	Stag	Loose bark/Cracks	1x 0-5 cm	Frog/Microbat	
3	<i>Eucalyptus eugenioides</i>	Hollow	1x 10-15 cm	Gilder/Possum	
4	Stag	Cracks	1x 0-5 cm	Frog/Microbat	
5	<i>Corymbia gummifera</i>	Hollow	1x 10-15 cm	Gilder/Possum	
6	<i>Eucalyptus crebra</i>	Hollow	1x 0-5 cm	Frog/Microbat	
7	<i>Eucalyptus punctata</i>	Hollow	1x 5-10 cm	Bird /Microbat	
8	<i>Eucalyptus crebra</i>	Small nest	1x 5-10 cm	Bird /Microbat	
9	<i>Eucalyptus crebra</i>	Cracks	1x 5-10 cm	Frog/Microbat	
10	Stag	Cracks	1x 5-10 cm	Bird /Microbat	
11	<i>Eucalyptus eugenioides</i>	Hollow	1x 10-15 cm	Gilder/Possum	
12	Stag	Hollow	1x 15-20 cm	Gilder/Possum	
13	<i>Eucalyptus eugenioides</i>	Hollow	1x 15-20 cm	Gilder/Possum	
14	<i>Eucalyptus pilularis</i>	Hollow	1x 5-10 cm	Bird /Microbat	
15	<i>Angophora costata</i>	Hollow	1x 15-20 cm	Gilder/Possum	
16	<i>Corymbia gummifera</i>	Small nest	1x 5-10 cm	Bird /Microbat	
17	<i>Corymbia gummifera</i>	Hollow	1x 15-20 cm	Gilder/Possum	
18	<i>Corymbia eximia</i>	2 Hollows	1x 15-20 cm	Gilder/Possum	
19	<i>Angophora costata</i>	Hollow	1x 5-10 cm	Bird /Microbat	
20	<i>Eucalyptus eugenioides</i>	Medium nest	1x 15-20 cm	Gilder/Possum	
21	Common Wombat	Burrow	-	Wombat	
22	<i>Eucalyptus eugenioides</i>	Hollow	1x 10-15 cm	Gilder/Possum	
23	<i>Corymbia gummifera</i>	Hollow	1x 5-10 cm	Bird/Microbat	
24	<i>Corymbia eximia</i>	Hollow	1x 5-10 cm	Bird/Microbat	
25	<i>Eucalyptus eugenioides</i>	Hollow	1x 5-10 cm	Bird/Microbat	
26	<i>Corymbia gummifera</i>	Hollow	1x 5-10 cm	Bird/Microbat	
27	<i>Eucalyptus tereticornis</i>	2 Hollows	2x 10-15 cm	Glider, Possum	
28	<i>Corymbia eximia</i>	4 Hollows	4x 0-5 cm	Frog/Microbat	

Habitat Number	Species	Habitat Type	Sizes	Potential Fauna	Comments
29	<i>Angophora costata</i>	2 Hollows	2x 5-10 cm	Bird/Microbat	
30	<i>Angophora costata</i>	2 Hollows	2x 0-5 cm	Frog/Microbat	
31	Stag	Hollow	1x 20-25 cm	Glider, Possum	
32	Stag	Hollow	1x 0-5 cm	Frog/Microbat	
Industrial Site (yellow polygon)					
33	<i>Eucalyptus pilularis</i>	8 Hollows	1x 0-5 cm 3x 5-10cm 3x 10-15cm 1x 20-25cm	Frog/Microbat Bird/Microbat Glider, Possum Glider, Possum	
34	<i>Angophora costata</i>	3 Hollows	1x 0-5 cm 2x 5-10cm	Frog/Microbat Bird/Microbat	
35	<i>Corymbia eximia</i>	Hollow	1x 0-5 cm	Frog/Microbat	
36	Stag	3 Hollows	1x 0-5 cm 2x 10-15 cm 1x 20-25 cm	Frog/Microbat Glider, Possum Glider, Possum	
T37	Stag	Hollow	1x 0-5 cm	Frog/Microbat	
38	Stag	3 Hollows	1x 0-5 cm 2x 10-15 cm	Frog/Microbat Glider, Possum	
39	Stag	2 Hollows	1x 0-5 cm 1x 20-25 cm	Frog/Microbat Glider, Possum	
40	<i>Corymbia eximia</i>	2 Hollows	1x 0-5 cm & 1x 20-25 cm	Frog/Microbat Glider, Possum	
41	<i>Eucalyptus eugenioides</i>	3 Hollows	2x 0-5 cm 1x 15-20 cm	Frog/Microbat Glider, Possum	
42	<i>Eucalyptus tereticornis</i>	Hollow	1x 15-20 cm	Glider, Possum	
43	<i>Corymbia gummifera</i>	Hollow	1x 20-25 cm	Glider, Possum	
44	<i>Eucalyptus tereticornis</i>	Hollow	1x 0-5 cm	Frog/Microbat	
45	Stag	Hollow	1x 15-20 cm	Glider, Possum	
Future Subdivision Site (pink polygon)					
46	<i>Corymbia gummifera</i>	2 Hollows	2x 0-5 cm	Frog/Microbat	
47	<i>Eucalyptus eugenioides</i>	3 Hollows	1x 5-10 cm 2x 10-15 cm	Bird/Microbat Glider, Possum	
48	<i>Eucalyptus eugenioides</i>	2 Hollows	2x 5-10 cm	Bird/Microbat	
49	<i>Eucalyptus eugenioides</i>	2 Hollows	2x 10-15 cm	Glider, Possum	
50	<i>Eucalyptus eugenioides</i>	Hollow	1x 5-10 cm	Bird /Microbat	

Habitat Number	Species	Habitat Type	Sizes	Potential Fauna	Comments
51	<i>Eucalyptus eugenioides</i>	Hollow	1x 5-10 cm	Bird /Microbat	
52	<i>Corymbia eximia</i>	2 Hollows	1x 10-15 cm	Gilder/Possum	
53	<i>Eucalyptus eugenioides</i>	Hollow	1x 5-10 cm	Bird /Microbat	
54	<i>Corymbia gummifera</i>	Hollow	1x 5-10 cm	Bird /Microbat	
55	<i>Corymbia gummifera</i>	Hollow	1x 5-10 cm	Bird /Microbat	
56	<i>Corymbia gummifera</i>	Hollow	1x 5-10 cm	Bird /Microbat	
57	<i>Corymbia gummifera</i>	Hollow	1x 5-10 cm	Bird /Microbat	
58	<i>Corymbia gummifera</i>	Hollow	1x 10-15 cm	Gilder/Possum	

Cumberland Plain Land Snails Searches

One live Cumberland Plain Land Snail and three CPLS shells were found in the Industrial Site (**Figure 4**) during the pre-clearance searches. Two CPLS shells and the live CPLS were found under a log surrounded by urban refuse near the eastern corner of the Industrial Site (placemark 60) and the third CPLS shell was found under urban refuse near the middle of the Industrial site (Placemark 59). The three shells and the log were relocated to a nearby area of the BioBank site (**Figure 4**).

An ecologist will be present during the removal of larger logs and areas of urban refuse that could not be moved manually during the pre-clearance works. Any live CPLS individuals and CPLS shells found will be moved to a nearby area of the subject site.

Koala Searches

No Koala (*Phascolarctos cinereus*) individuals or evidence of Koalas (Including scats or characteristic scratches) were observed during the pre-clearance inspections. However, an ecologist will be on site for the entire clearance works to ensure that no Koalas are impacted, as per the TRN Group CEMP (2019).

Soil Pathogen Assessments

Visual assessments, including assessments of the condition of susceptible plants for potential *Phytophthora cinnamomi* were conducted throughout the subject site. There were no large areas of senescing vegetation or any other visual signs of soil borne pathogens. As such, no samples were collected and additional inspections for soil borne pathogens are not required.

Conclusions and recommendations

Eco Logical Australia Pty Ltd (ELA) was engaged by TRN Group to conduct a pre-clearance assessment for the development of a subdivision adjacent to Warradale Rd, Silverdale Rd and Government Rd, Silverdale. The pre-clearance inspection identified 56 habitat trees in the subject site, 30 of which were in the Current Subdivision Site, 13 in the Future Subdivision Site and 13 in the Industrial Site. One Common Wombat (*Vombatus ursinus*) burrow and one Glider feed tree were also observed in the Current Subdivision Site during the inspections. One live Cumberland Plain Land Snail and three CPLS shells were found in the Industrial Site and relocated to the BioBank site. No Koalas or soil pathogens were identified within the subject site during the pre-clearance inspections.

An ecologist must be on site for the entirety of the clearance works and the clearance methodology must be in accordance with the TRN Group CEMP (2019).

If you have any questions about this letter, please do not hesitate to contact me on 8536 8611.

Regards,

A handwritten signature in black ink, appearing to read 'C. Crawford', is positioned above the printed name.

Cameron Crawford
Ecologist