

30 April 2015

Neil Kennan
Nexus Environmental Planning Pty. Ltd.
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Concord NSW 2137

REQUEST FOR FURTHER INFORMATION: DIXON SAND MODIFICATION
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Dear Neil,

Cumberland Ecology
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The purpose of this letter is to respond to a request for additional information from the NSW Department of Planning and Environment (DP&E) regarding the Dixon Sands proposed modification (DA 250-09-01 Modification 4) (the 'project'). DP&E's requests were provided via two emails to you, dated 17 April 2015 and include issues relating to offsets for the project.

1. Background

As you are aware, Cumberland Ecology has previously prepared a Flora and Fauna Impact Assessment for the project in September 2013. This included an assessment of the impacts of the proposed modification and proposed an offset through rehabilitation of the mine site. Subsequent to the Flora and Fauna Impact Assessment, a letter (11011 - Let10) was prepared on 10 June 2014 providing additional information regarding the proposed rehabilitation offset and offered an additional offset area. The additional offset area was proposed to be included within the offsets package to satisfy the reservations of the NSW Office of Environment and Heritage (OEH) regarding the adequacy of the offset package.

The additional offset area proposed within the letter dated 10 June 2014 (the June 2014 letter) comprised a portion of land within a larger property located to the south of the project, on Haerses Road (the 'Haerses Road property'). A site inspection was carried out to assess the vegetation communities and habitat for threatened flora and fauna. The results of this site inspection are detailed in the June 2014 letter and identified similar vegetation within the Haerses Road property to that within the impact area of the project. Two threatened flora species were previously found within the Haerses Road property including *Tetratheca glandulosa* and *Darwinia biflora*. Suitable habitat for *Melaleuca deanei* was also

identified.

The additional offset area proposed was to comprise 8.65 ha of land within the Haerses Road property. The approach to determining the extent of the offset was to create a total offset ratio for the project of over 2.1 (excluding rehabilitation). The June 2014 letter noted that the exact configuration of the additional offset area would be determined at a later date.

2. Information Requested by DP&E

DP&E has requested the following additional information:

- The amount of *Melaleuca deanei* cleared under the proposed modification (in hectares);
- Whether *Melaleuca deanei* is present within the Haerses Road property;
- Provision of a map showing the proposed 8.65 ha offset area within the Haerses Road property; and
- Provision of a map showing the proposed rehabilitation corridor for the modified consent.

Responses to these requests are provided below in **Section 3**. Please note that DP&E refers to the Haerses Road property as the Hanson property.

3. Response to DP&E Requests

The requests from DP&E regarding the clearance and offsetting of *Melaleuca deanei* and the proposed offset package are reproduced below in italics from the email dated 17 April 2015, followed by our response in plain text..

3.1.1 *Melaleuca deanei*

How much Melaleuca deanei would be cleared under the proposed mod (in hectares)?

The Flora and Fauna Impact Assessment has identified that *Melaleuca deanei* was found at one location, comprising 18 clumps. No area in hectares has been calculated; however the area of suitable habitat for this species has been recorded to be approximately 1.15 ha.

Is there any Melaleuca deanei present within the Hanson property? If yes, this should be included within the offset area.

No *Melaleuca deanei* was recorded during site inspections, however 1.37 ha potential habitat was identified within the Sydney Sandstone Heath (Heath/Woodland Complex) vegetation community.

3.1.2 Map of Proposed Haerses Road Offset Area

Please provide a map of the proposed 8.65 ha offset area within the Hanson property. I note that it is proposed to secure the exact configuration of the offset at a later date. However, it would be beneficial to specify this area now. Cumberland Ecology's letter dated 10 June 2015 includes Table 3, which breaks down the veg communities within the proposed offset area so I assume there is a corresponding map of the area?

Since the preparation of the June 2015 letter, the vegetation mapping of the Haerses Road property has been updated to take into account recent clearing within the property. A revised map is provided in **Figure 1 of Appendix A**.

The configuration of the additional offset area has been determined based on the updated vegetation mapping. The extent of the proposed additional offset area is shown in **Figure 1 of Appendix A**. This extent includes 8.70 ha of native vegetation. **Table 1** provides an updated summary of the offsets package for the project.

Table 1 Summary of the offset package for the project

Project Vegetation Community	Haerses Road Property Vegetation Community	Impact Area (ha)	Area within Offset Area (ha)	Finalised Offset Ratio	Additional Rehabilitation Area (ha)	Offset Ratio incl. Rehabilitation
Angophora costata - Sydney Sandstone	Ridgetop Woodland	1.15	5.17	4.50	1.19	5.53
Corymbia gummifera Woodland	Sydney Sandstone Gully Forest	0.00	2.16	0.00	0.00	0.00
Eucalyptus punctata - Acacia parramattensis Woodland	Sydney Hinterland Transition Woodland	0.67	0.00	0.00	0.98	1.46
Banksia ericifolia - Leptospermum trinervium Heath	Sydney Sandstone Heath (Heath/Woodland Complex)	1.86	1.37	0.74	4.66	3.24
TOTAL		3.68	8.70	2.36:1	6.83	4.22:1

3.1.3 Map of Proposed Rehabilitation Corridor

Require a figure of the proposed rehabilitation corridor for the modified consent.

Figure 2 of Appendix A shows the proposed rehabilitation corridor for the project, as presented in Section 5.1.6 of the Flora and Fauna Impact Assessment.

Should you require any additional information regarding these please contact myself or Michelle Frolich on (02) 9868 1933.

Yours sincerely



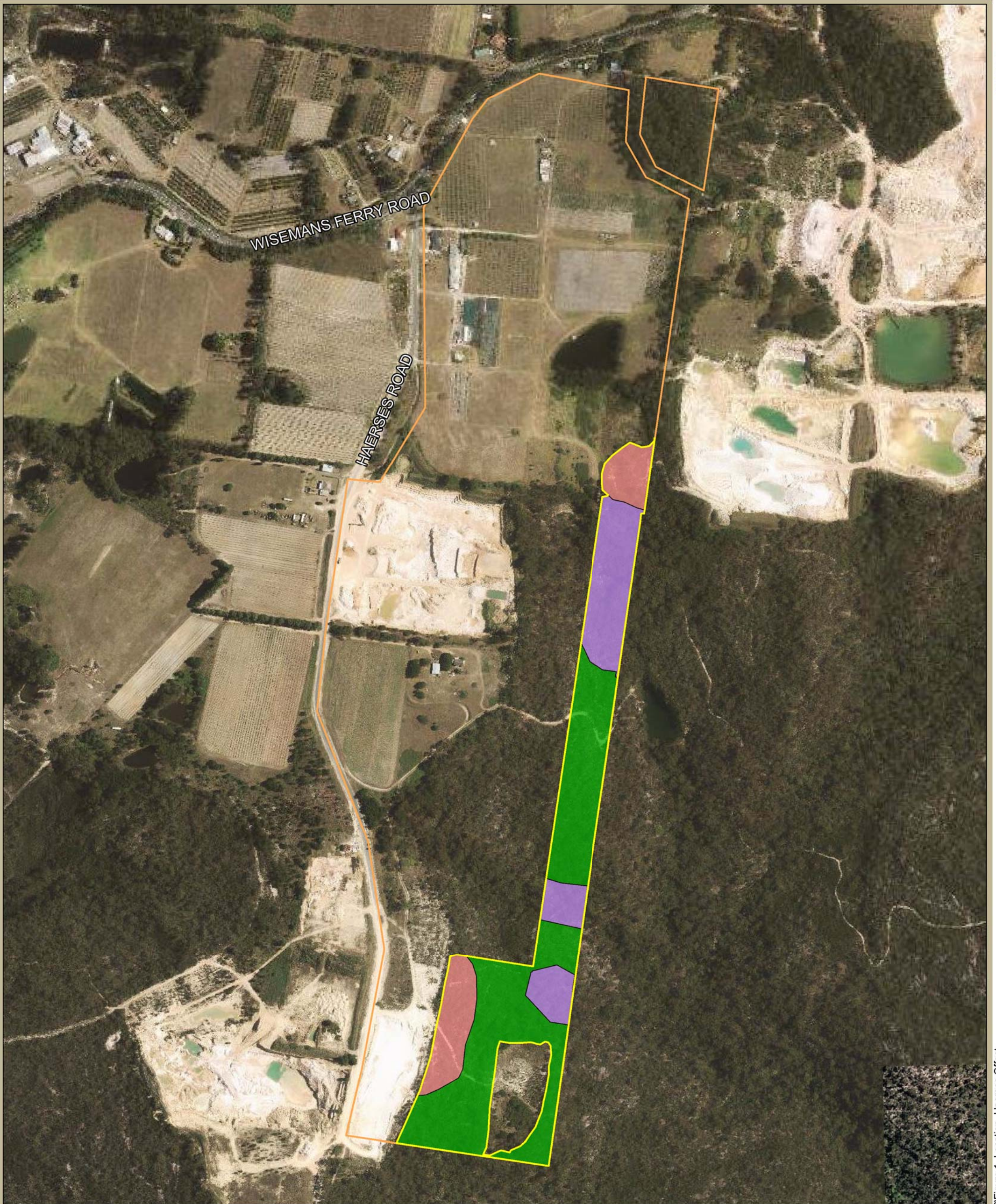
Dr. David Robertson

Director

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Appendix A

Figures



Legend

-  Haerses Road Offset Area
-  Haerses Road Property

Vegetation Community

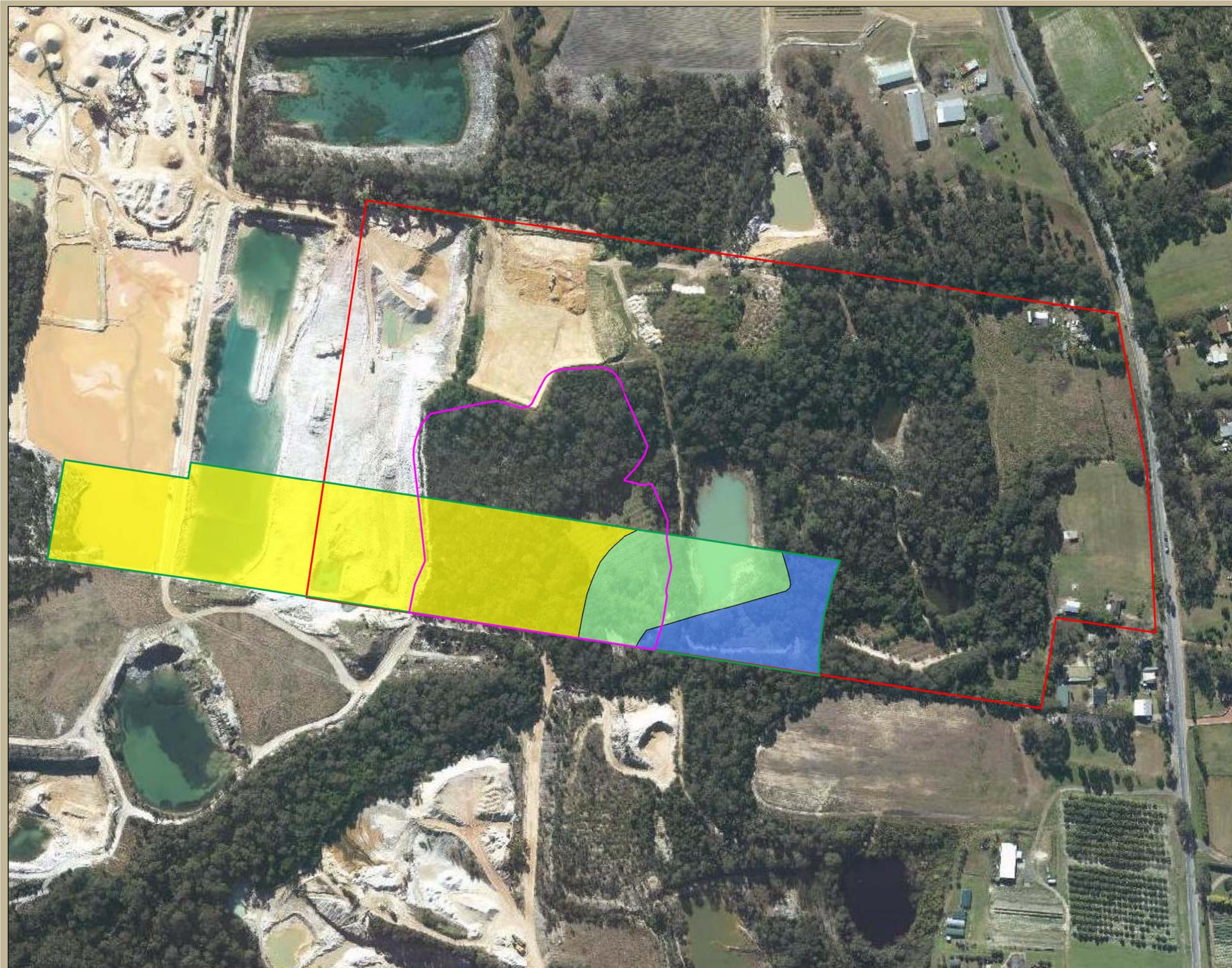
-  Sydney Sandstone Ridgetop Woodland
-  Sydney Sandstone Gully Forest
-  Sydney Sandstone Heath (Heath/Woodland Complex)

Image Source:
SIXmaps 04-01-2014



Figure 1. Location of the Haerses Road Offset Area

50 0 50 100 150 200m



Legend

- Dixon Sands Site
 - Proposed Modification (DA 250-09-01 Modification 4)
 - Proposed Rehabilitation Corridor
- Revegetation Communities**
- Eucalyptus punctata - Acacia parramattensis Woodland
 - Angophora costata - Corymbia gummifera Woodland
 - Banksia ericifolia - Leptospermum trinervium Heath

Image Source:
SIX Viewer dated 13/04/2011



Figure 2. Proposed Rehabilitation Corridor