

**APPENDIX C  
PRELIMINARY SITE  
INVESTIGATIONS  
- INDEPENDENT  
SUBJECT MATTER  
EXPERT STUDY**

# C - SITE INVESTIGATIONS - INDEPENDENT SUBJECT MATTER EXPERT STUDY

## Technical Comparisons with Existing Masterplan

### Cultural Heritage

#### 2012 Masterplan

- Completed for a portion of the site as surface analysis only.
- Recommended need for study to be extended across the site and compiled.
- Recommended any further results be assessed by relevant indigenous community members and the strategy for the care of the artefacts agreed.



#### 2020 Review

- No mapping of Cultural Heritage was provided in the 2012 Masterplan.
- Subsurface exploratory excavation has since occurred around the site with relevant indigenous community.
- Areas of various levels of significance are identified and mapped to better inform future site planning. Further work will be required for any intervention around these sites/areas.



### Ecological Assessment

#### 2012 Masterplan

- The ecological constraints will tend to be least in the lower, more open parts of the study area but this would not necessarily mitigate against sensitive development in other areas where constraints are greater. The latter areas may require more specific ecological assessment at the detailed planning stage.



#### 2020 Review

- Previous studies for *Perunga* Grasshoppers and Golden Sun Moths did not meet Aust Govt Guidelines and were not confirmed for presence or absence. May need further verification in Spring however this has been taken into account in constraints mapping.
- Areas of moderate constraints has included the previous findings on Woodlands of significance and has increased areas of sensitive vegetation.
- Areas of various levels of significance are identified and mapped to better inform future site planning. Further work will be required for any intervention in these sites/areas.



**Combined Constraints Map**  
**Yield Analysis & Stock Planning And Placement**

### Geo-Technical Investigation

#### 2012 Masterplan

- Preliminary geotechnical investigation in 2005 in the locality on the NW side of the Monaro Highway, between Mugga Lane and Isabella Drive
- Further investigation in 2008 focused on only a small part of the study area. This Report indicated:
  - 0m - 0.5m Top Soil/Slope Wash Silty Sand
  - 0.5m-3m/10m Alluvial Sandy Clay, Gravelly Sandy Clay, Sandy Silty Clay, Clayey Sand.
  - Below 3m/10m Volcanic bedrock, weak to strong.
  - Bedrock may be present at 1m/2m depth in the vicinity of the knoll, as indicated by outcrops in the area



#### 2020 Review

- Preliminary investigations in 2005/2008 were conducted very broadly, generally and not considerate of all other site constraints.
- Bore Holes and Test digs in June and July 2020 have better informed what sub surface ground conditions can be expected across the site.
- Areas of various burial capability have been mapped to better inform future site planning.

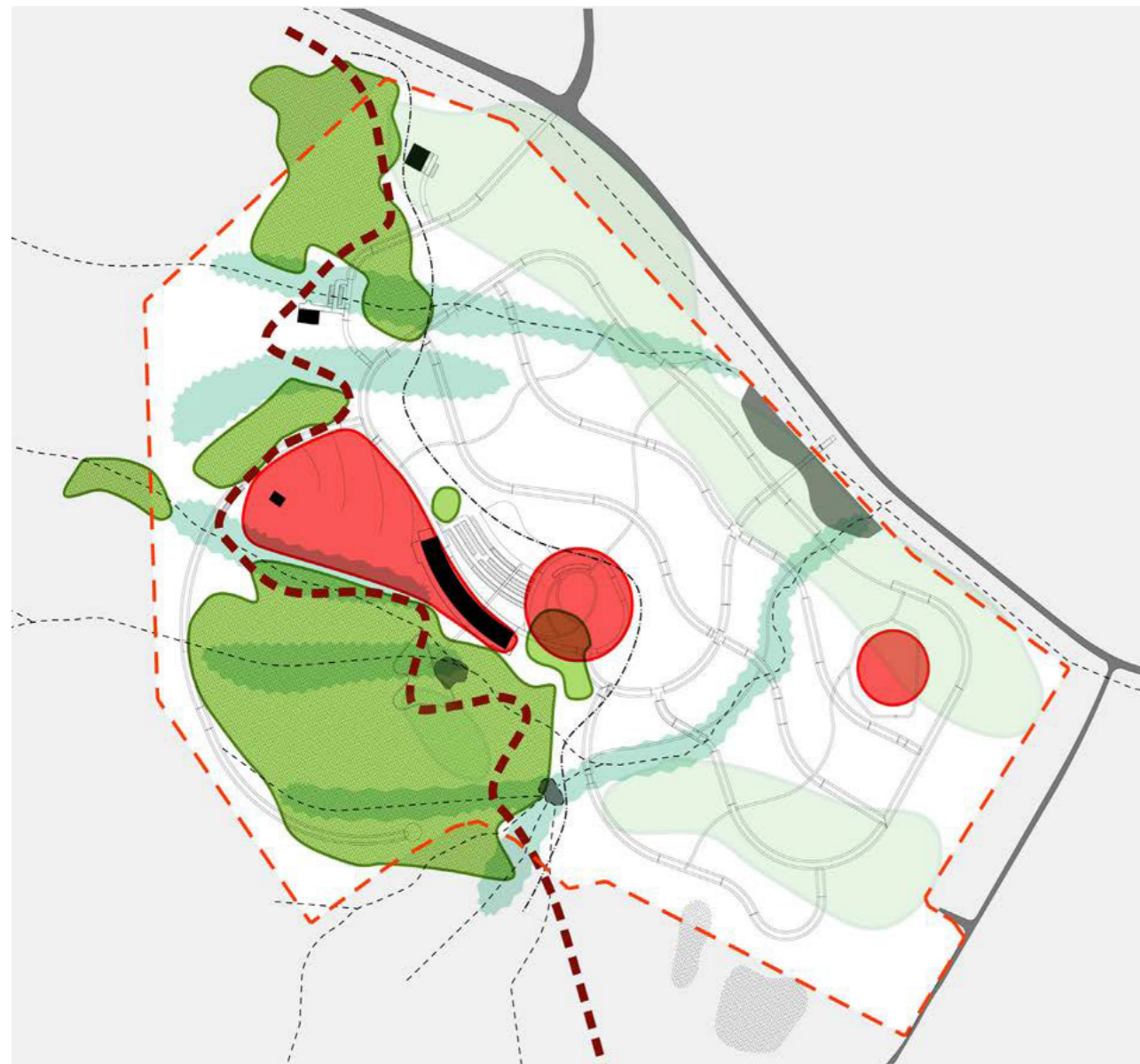


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## Side by Side - Site Constraints

### 2012 Masterplan Constraints

(No Cultural Heritage or Geotechnical Mapping)



- Woodland areas of significance Partially + moderately modified
- Remaining areas of 'Substantially and severely modified woodland'
- Gullies with water courses
- Rocky Areas not suitable for burial
- Probable extent of Yellow Box-red Gum woodland
- Extent of new tree plantation

### 2012 Combined Constraints

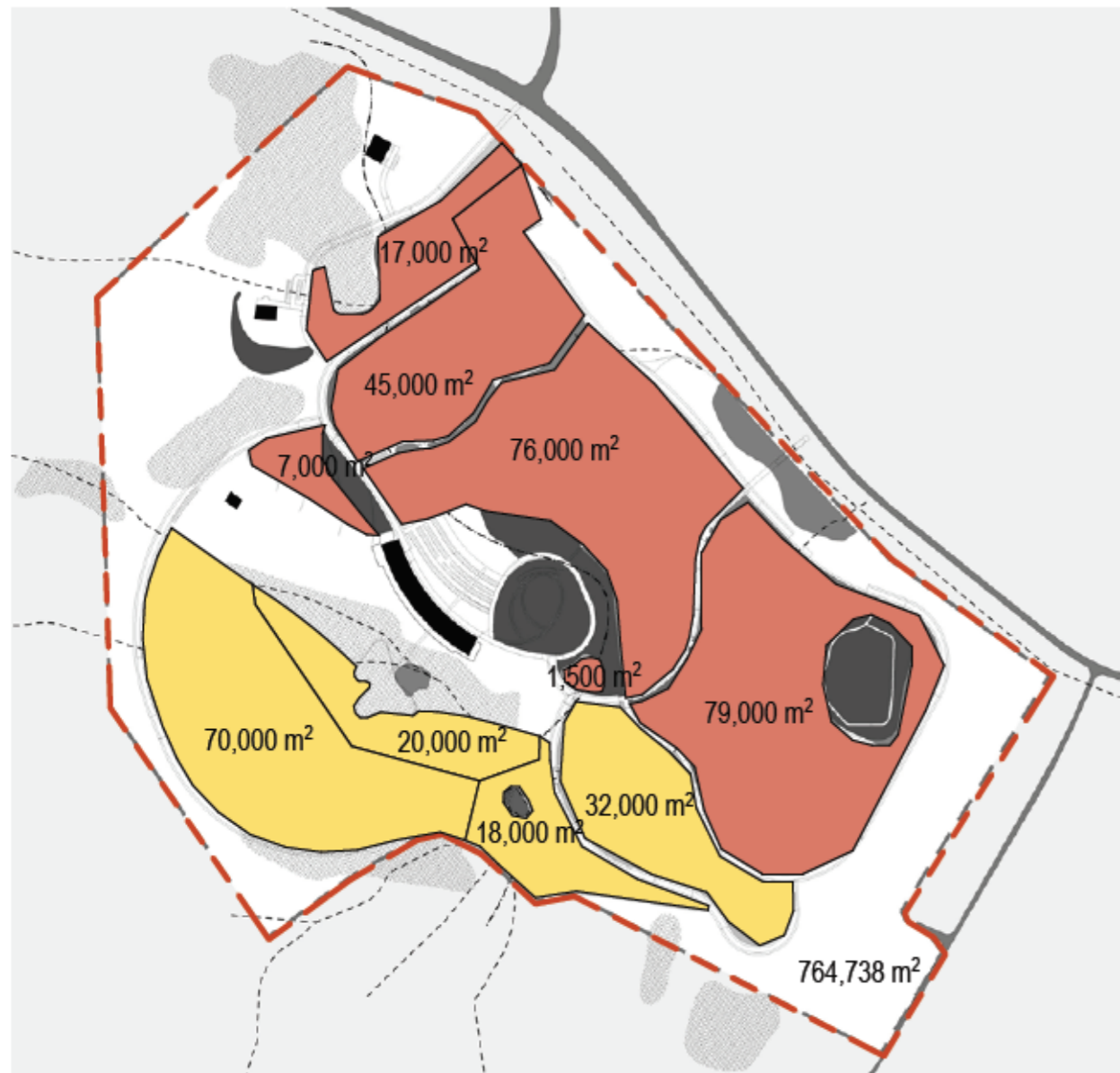


- BIODIVERSITY**
- High Constraint 362,186m<sup>2</sup>
- Moderate Constraint 99,405m<sup>2</sup>
- Low Constraint 240,546m<sup>2</sup>
- GEOTECH**
- Test digs to 3m depth
- Test digs 1-3m depth
- Test digs < 1m depth
- CULTURAL HERITAGE**
- Site Areas

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## Side by Side - Burial Capacity

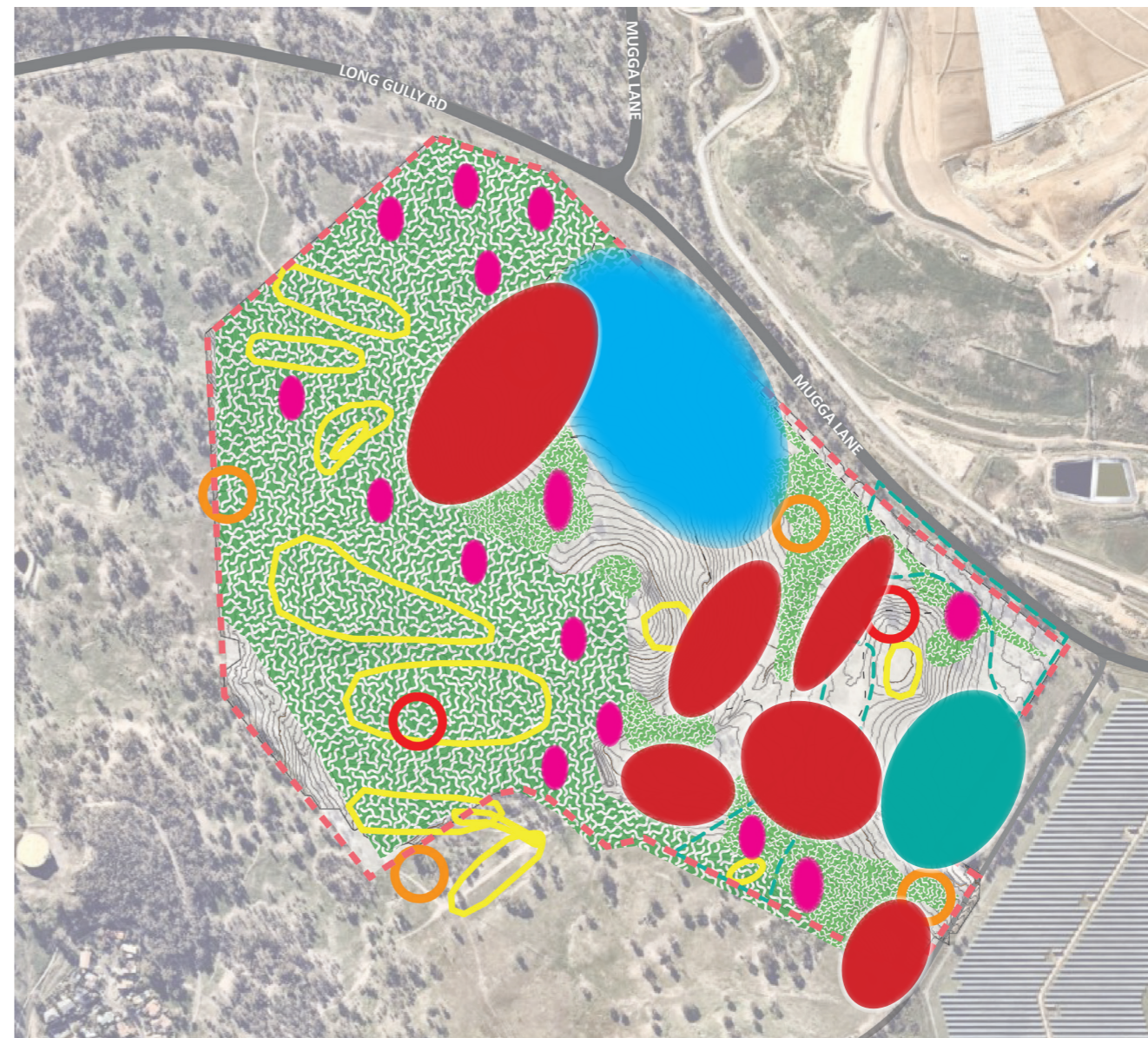
2012 Interment Map



### Total Burials

- TRADITIONAL**  
Based on 2 deep burials @ 4.5 m<sup>2</sup>/plot  
Total Traditional Burials = approx **60,000 burials**
- NATURAL**  
Based on 1 deep burial @ 6.0 m<sup>2</sup>/plot  
Total Natural Burials = approx **7,000 burials**

2020 Interment Map



### Base Case - Indicative multiple burial Interment potential

- Burial 2 > 3 deep
- Burial 2 deep
- Burial 1 deep
- (Natural / Headstone in Garden)

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### Capacity Comparisons

	2012 Masterplan	2020 Review	Variance	Comment
<b>Area for Burial</b>				
Traditional Natural	135,000 m2 40,800 m2	135,000 > 152,000m2 39,000 > 71,000m2	0 m2 -1,800m2	While differing areas have been nominated, the overall space allocations for burial are similar.  The 2012 Map of available burial area is inconsistent with their burial calculations (140,000 m2 for Natural and 225,500m2 for Traditional on map).
<b>Site Plot Yield</b>				
Traditional Natural	30,000 6,800	24,000 > 27,000 3,900 > 7,100	- 6,000 - 2,900	For Traditional burial, 2012 has allocated 4.5m2 per plot while the 2020 review has allocated 5.6m2. For Natural, 2012 is 6m2 while 2020 is 10m2.
<b>Site Interment Yield</b>				
Traditional Natural	60,000 6,800	53,000 > 59,000 3,900 > 7,100	- 7,000 - 2,900	2020 has included 3 deep in some areas and also considered where 2 deep cannot be achieved.
Life Expectancy	100 years +	114 years +	+14 >34	2012 life expectancy has assumptions on community transition to SMP.