

VEGETATION ASSESSMENT

(Main report and Appendix E)

1. Summary

- these documents are onerous to read, assimilate and prepare a submission.
pages following p 21 are not numbered, despite the List of Contents table showing them a complete set. This makes it exceedingly difficult to navigate, and importantly, reference particular content statements
- this is exacerbated by definitions of terms not being provided for terms used routinely, that aren't defined the under BCA (2016) legislation. Examples are provided
- a complete list of the aerial imagery used is not provided. The critical date for determining "remnant" vegetation under the BCA (2010) is 1 January 1990.

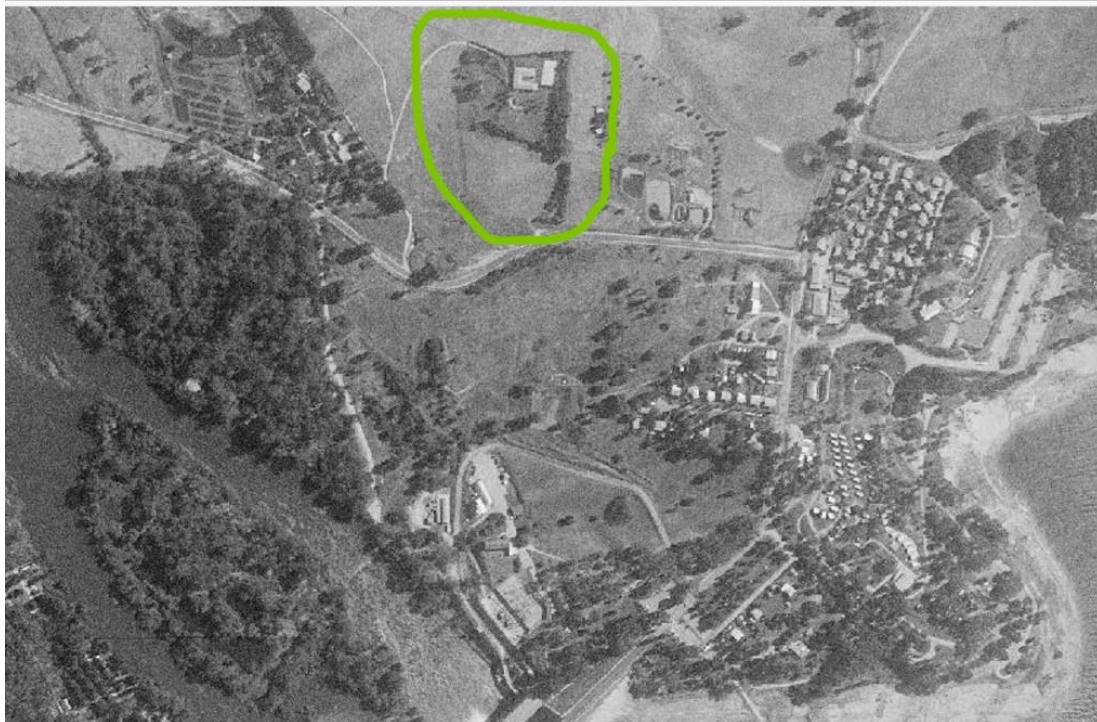
Discussion is limited to the 1973 and 2014 dates. If these are the only images used the air photo interpretation (API), **they had no objective method to determine what vegetation was present at 1 January 1990, consequently, its "remnant" status,**

The 1990 image covering the project Area is shown in the Figure below

The ramifications of this methodology failure are dramatic. Additional information

Figure : Aerial photo image dated 24 February 1990

https://portal.spatial.nsw.gov.au/download/historic/3718/3718_02_145.jp2.jpeg



presented in the accompanying document “BIODIVERSITY AT LANARK: CIRCA 1980 TO 2022”, Section 4 reveals **more than 300 native trees existed on the property back in late 1979.**

- the definition of “native” vegetation in NSW is defined in the BCA (2010)/ LLS Act (2013) legislation (see Appendix # Vegetation Definitions)
- the data search has **not** utilized Regional Environmental Datasets eg “Nature Map”, “I Natural” or “Birdlife”, It also appears information provided in the Early feedback period have not been utilized (ie observations of gliders in flight records in Regional Dataset)
- Rapid assessment sites have not been numbered/named on the map. Consequently, the reader has no way to:
 - connect the two. the site number and location on the map, or
 - the information collected for the rapid points sites can’t be evaluated for their “native status” (eg native, native planted, etc)
- a “high quality detailed constraint map identifying environmental constraints” has not been presented relating to vegetation, map is presented for the entire proposed development site.
- The Consultants missed the opportunity to include valuable **detailed local knowledge in the assessment by not consulting with the local community environmental group Friends of the Lake Hume Gliders, which may have drastically changed the assessment.**

2. Vegetation survey data

The EIS Hume North BESS frequently compares the proposed development with the approved Lake Hume BESS (BESS No1).

The report and Appendix E are lengthy, onerous, repetitive with unnecessary waffle.

This is exacerbated by:

- definitions used routinely in the report and Appendices are not presented in a Glossary, or referenced from other identifiable sources.
- despite the FLHG group being listed on the Info Session **Survey** as a required Group to consult, it was not contacted. The Consultants missed the opportunity to include valuable **detailed local knowledge:**
 - at an individual level,
 - and history and timing of native vegetation reestablish in and around the Project area.

Differences in approach by the Jacobs ecologists in the Lake Hume BESS (No1) and the Hume North BESS (No 2) are stark.

The SEARs requirement were the almost identical, but the approach and outcome are very different. These are summarised in Table : Survey and report Approach differences, below.

Table : Survey and report Approach differences

	Lake Hume BESS (No1)	Hume North BESS (No 2)
Report/Appendix	concise and factual	onerous, repetitive with unnecessary waffle
Definitions	Glossary present- no odd terms	Critical “odd terms” not listed in a report Glossary, no reference to other sources
Precision of tree age		Tree age 20-30 years
Liaised with local environmental Friends of the Lake Hume Gliders Group	Several communications (email/phone)	No contact with the FLHG, sort glider data from the Regional Landcare Facilitator.
Method	Fully describes and presents vegetation for the “whole Project area” , then assigns Vegetation Communities to the study area, and the surrounding areas, progressing to the BDAR assessment and consideration of offsets	Selects 26 Rapid data points by air photo interpretation (API, eliminates areas considered with non- native vegetation (no definition, no 1 January 1990 remnant air photo interpretation (API) , then assign Vegetation Communities to the study area, non further work in “non-native areas, continuing the details iV plats and transects in the remaining small section
Focus of the report	Data collection and glider BAM/DBAR Offsets ? Recall a small section at the end of the report	Rapid assessment and planted, non-native trees BAM count - main report 4, in Append E 132. BDAR count-main report 21, in Appendix E 33. Offset count-main report 4 in Appendix E 28.

Note: The definition of “native” is assumed to be according to legislation BCA (2016), LLS (2013). This and other relevant definitions in the Act are presented below in Table 1.

Biodiversity and vegetation description for proposed Hume North Bess (No 2) has a strong focus on DBAR, rather a vegetation survey of the property from the onset.

The assessor undertook:

- air photo interpretation (API) was used to select “**rapid data**” points for field appraisal assesses (Appendix E, p 13). Figure 2, p18 shows over 50 sites, Of these
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Figure 2-1. Location of VI plots, flora search methods and scattered trees

- only around 15 are located in the development footprint area. Seven in the “part trees areas” and about 15 in the “grassland areas”
- **the rapid data” points locations are not labelled on the map (Appendix E Figure 2-1, p 18)**
- rapid point descriptions are not numbered either. Hence, the reader can’t evaluate the sites’ details (eg native or native planted, etc)

Based on that information Plant community “[type and distribution of PCT’s within the development site?\(project area/ and proximal areas were identified and mapped.](#)” (Appendix E, Section 2.2.3)

“Where applicable, the PCTs were assigned to a corresponding Threatened Ecological Community (TEC) listed under the BC Act and /or EPBC Act.” (Appendix E, Section 2.2.3)

At this stage, most of the project footprint development area is determined, it requires no further data collected.

“Detailed VI plots were established in each vegetation zone ” (Appendix E, Section 2.2.4).

The detailed VI Lot investigations (3) are all located in the south west corner of the project area, **outside the proposed development footprint area.**

No detailed investigation is undertaken within the proposed development footprint area

An estimated 22 out of 50 sites (more than 50%) of the rapid data point the majority of the data and its descriptive text, **also relates to areas outside the project development footprint outside where development is not proposed.** 28/50

This seems a very odd.

Why?

The two sites are located adjacent to each other, only separated by the Trout Farm Road.

- the same consulting company, Professional employees.

The answer is the assessment for the Hume North BESS method appears to be flawed. The approach was to first undertake:

- aerial photo interpretation (API) assessment prior to commencing field work, selecting sample sites. The report notes two (2) photo dates used for that API, 1973 and 2014.
- the initial fieldwork for the “rapid assessment”, and
- had discussions with local BCD staff regarding BAM/BDAR, etc

The latter two activities being on the same day.

It appears no additional vegetation study was undertaken in the Proposed Development footprint area following that.

3 The EIS v vegetation assessment problem

The API assessment apparently did not determine:

- vegetation present and after the legislative defining date 1 January 1990,
- hence define the “remnant” vegetation on the proposed development site.

This process requires a high resolution aerial image following, but preferably close to, the legislative defining date, 1 January 1990

The vegetation assessment was from the initial API assessment of rapid site assessment. No attempt was made to

- **identify “remnant” vegetation according to the legislative defining date 1 January 1990**
- **no reference to the legislative definition of “native” or objective reasoning to use it, and**
- **no definition provided , or referenced, for words used extensively in the text:**
 - **consequence of point above “non-native”,**
 - **landscaped, planted and exotic extensive**

Air photo images are readily available on the NSW Government portal. A photo covering the area is dated Feb 1990, appropriate for the assessment. (see Appendix : Images of vegetation for Lanark property).

An appropriate set of photo comparisons are shown in Figure : Example of Photos to assess

Comparison of three image dates confirms:

The majority of vegetation on Lanark within the proposed Development footprint was present at the date legislative date 1 January 1990. See below It is by definition “remnant”

“Native” is defined in the BCA (2010)/ LLS Act (2013) legislation (see Appendix : Vegetation Definitions).