

BIODIVERSITY

The Biodiversity section describes:

- A Description of the Vegetation/ Biodiversity on the land and surrounding areas, particularly the history of past management and the flow on effects of the Albury Development Corporations powers to control land use and landscape vegetation.

It includes:

- the planning controls applying to the Proposed Project Area,
- characteristics of the vegetation on the land,
- its habitat value and biodiversity value for the wildlife relying on it,
- the proposal's likely impacts.

Characteristic described are:	page
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B The Biodiversity Assessment separate document

BIODIVERSITY AT LANARK: CIRCA 1980 TO 2022

What is biodiversity?

A typical Jo or Joane citizen in the community has an idea of it being trees, birds, wildlife, threatened species and they know corridors help.

To government Agencies similarly funded authorities it is according to legislative definitions to a degree relating to the Agencies responsibility.

Agencies and the Community perceptions differ widely over time.

1. Regional Location relating to Lanark's biodiversity

- The particular location of Lanark's location include:
- close to the Murray River, its floodplain and billabongs - variable landforms
- adjacent a major natural wildlife corridor, the Murray River
- at the boundary of "the Mountains meeting the Plains"- variable landscape.

2 Regional Environmental Planning (REP 2) legislation

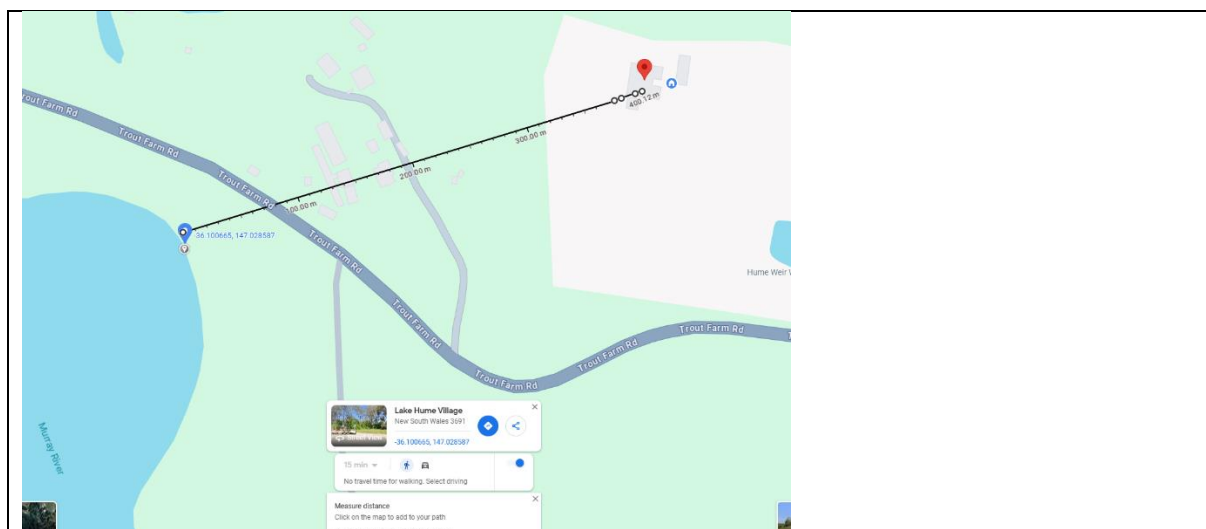
The property is located close to the Murray River.

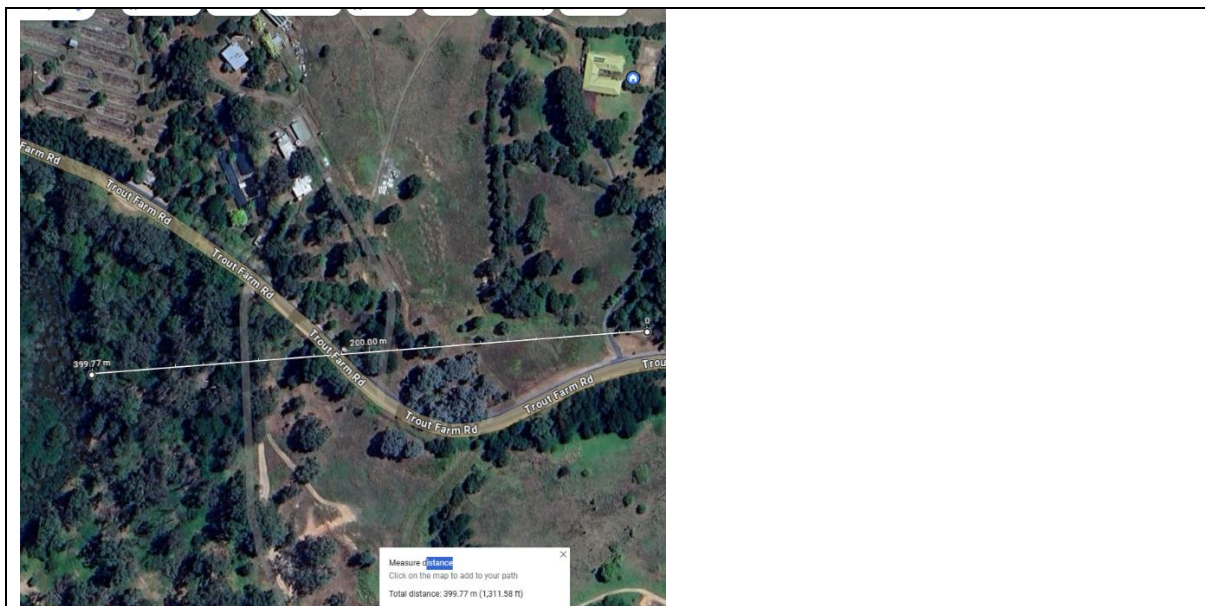
The Regional Environmental Plan (REP) 2 is a planning document to protect the Murray River. It contains a condition there is to be no disturbance of the Murray River (or parts of it) within a distance of 400m.

The maps below accurately measures a distance of 400m from the Murray River. Three (3) points across the property/proposed development footprint were measured (Figure : Regional Environmental Plan (REP) 2 -Points within 400m from the River Murray (3).

A significant portion of the proposed project area is covered by the REP2 Plan.

Figure : Regional Environmental Plan (REP) 2 -Points within 400m from the River Murray (3)





2. Biodiversity on Lanark

When asked where live we said "above the Trout Farm. The response of locals was. " Oh, the place with the big trees".

Lanark has an inherent high level of biodiversity due to:

- the site's special geographic location (point 1 above) and
- sympathetic management of planning bodies (Albury Wodonga Development Corporation (AWDC) and the land's long term only two (2) owners to 2022.

3. Albury Wodonga Development Corporation (AWDC) and Albury's landscape and Biodiversity

- The Albury Wodonga Development Corporation (AWDC) has had a huge influence on the vegetation and biodiversity at Lanark.
- That included the legislative power included the right to compulsory acquire property from farmers to future development (30 year period) within the gazetted "AWDC Designated Development Designated Area

A huge amount of resources were directed to mapping land resource properties.

- Planning within the gazetted "AWDC Designated Development Designated Area", and
- Strategically planting 3 million trees
- regenerating existing treed hill land with designed burning and excluding stock, and
- **controlling house development in rural areas, particularly on highly visual points in the landscape.**

Lanark was within the "AWDC Designated Development Area" (SCS ,1977 Appendix map)

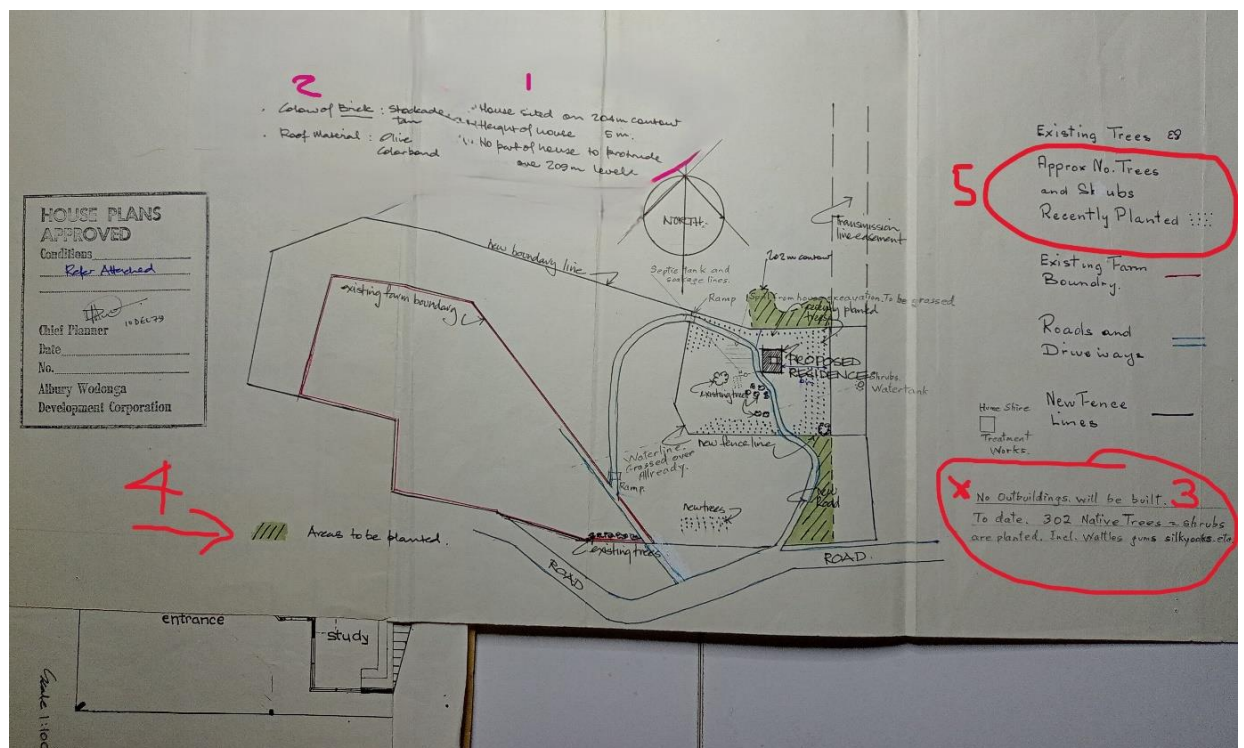
4. Lanark Management for Wildlife

High habitat value and diversity exists within these small areas a consequence of the:

- AWDC condition of rural land - their approval of a professionally prepared designed Vegetation Rehabilitation Plan
- sympathetic management by the land's owners for over 40 consecutive years

A Vegetation Rehabilitation Plan was required by AWDC as a condition of rural land subdivision and building a house on that land. A copy of application sized map is shown in Fig : AWDC Permit conditions vegetation below)..

Figure: AWDC Permit conditions vegetation - evidence predominantly native



.Pertinent are the pink circled instructions marked, No. 3, 4 and 5, are of interest particularly No 3, stating -

“302 Natives trees and shrubs are planted. Incl. Wattles, gums, silkyoaks etc.” stamped approved by the Chief Planner AWDC, dated 10 Dec 1979.

A more detailed map with instruction to the landowner identifies individual:

- plant locations with a cross ‘X’
- for each ‘X’ the full botanical name of the individual plant for that site.

Unfortunately the map is locked in storage remotely and unavailable at present.

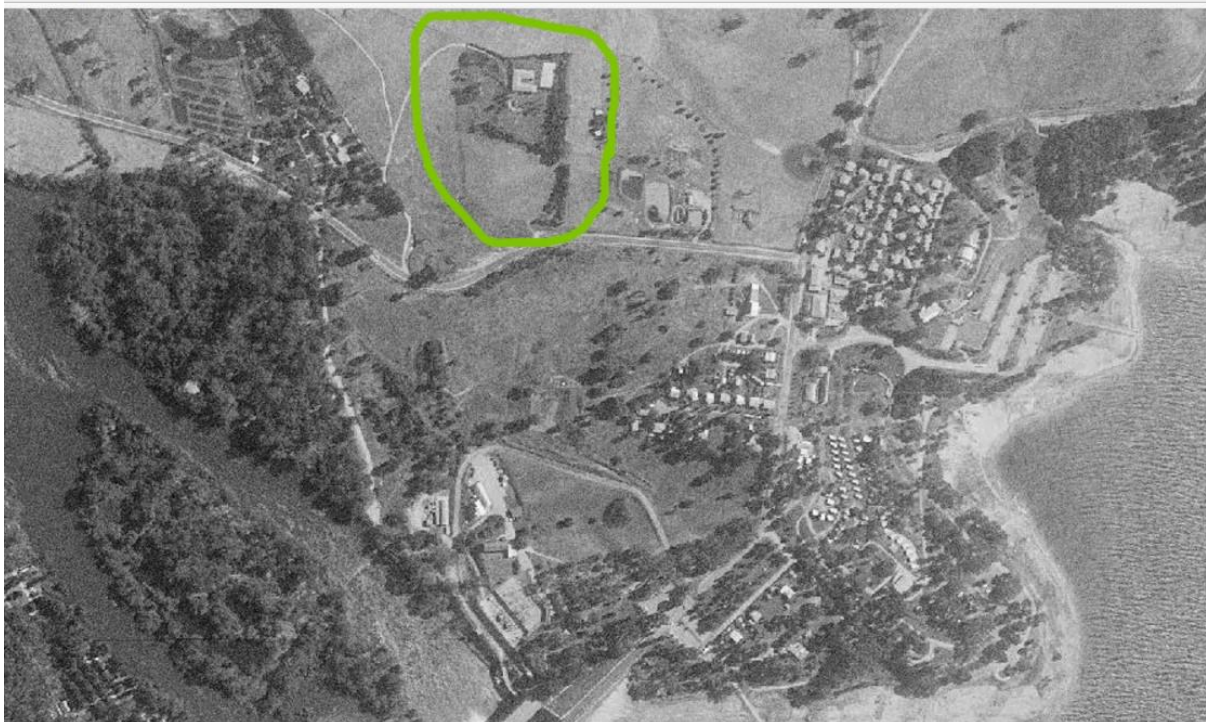
This above map information confirms:

- **Native trees/shrubs** were planted on the property as a condition of a AWDC Planning Instrument, circa1980
- the landholder was provided detailed instructions to plant particular species and where*
- At least **300 trees/shrubs were on the property at 10 December 1979.**

An aerial photo image dated 24 February 1990 show vegetation present on the proposed development site land (see Fig : Lanark vegetation cover February1990, below). This clearly shows established canopies of trees/shrubs:

- spread across the northern top half of the property
- to the right of the driveway in the front paddock abutting Trout farm Road.

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



b Design and implementation of a Vegetation Management Plan (2004)

The second owners developing, and implementing, a Vegetation Management Plan for the property, 2002-2022 ((see Fig #: Vegetation Management Plan 2004 below). This included:

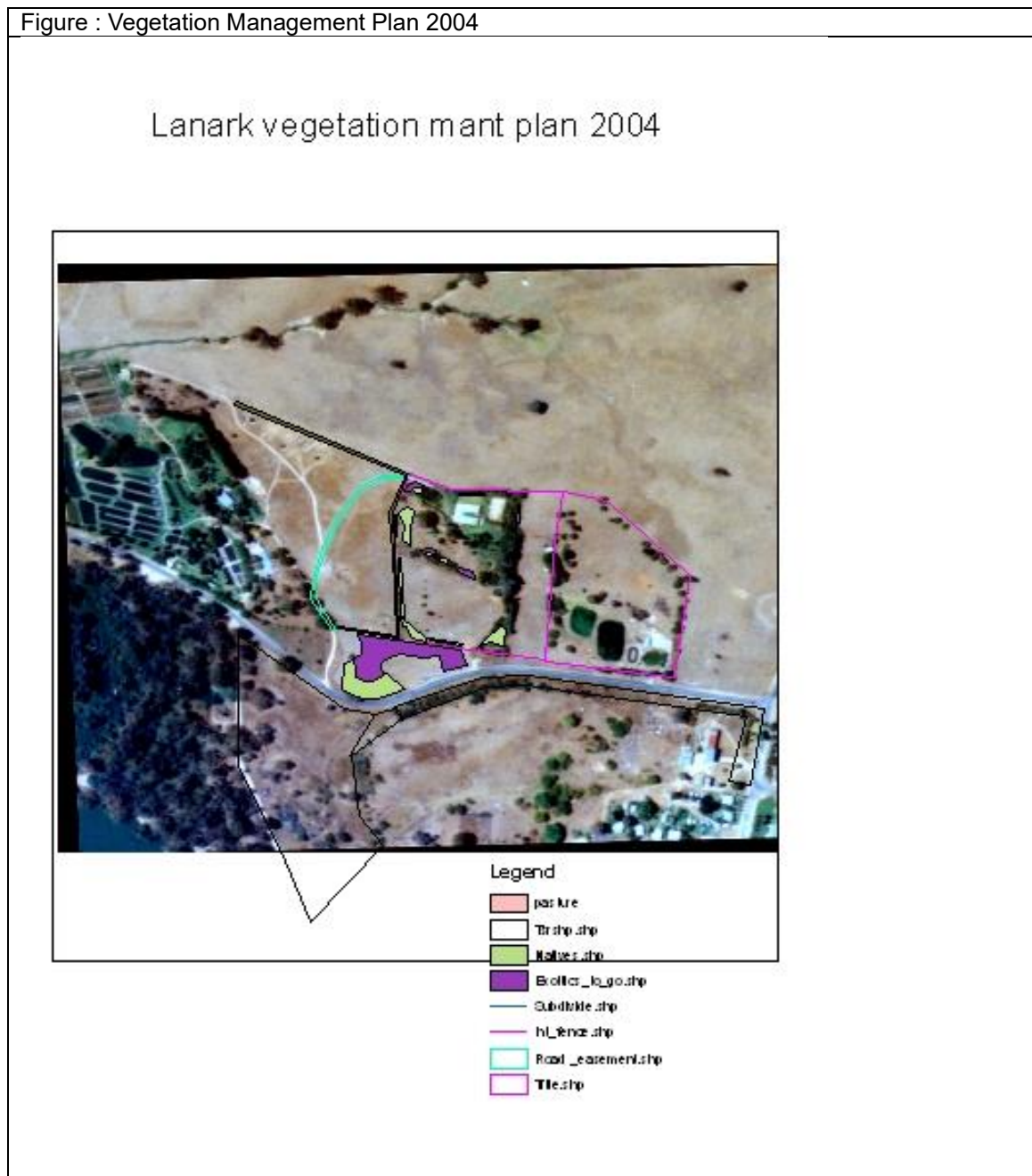
- design and construction a wildlife pond as a “all year round water source for wildlife”

- additional targeted enhancement planting to bird and glider food sources
- “jumping tree” to fill gaps and improve glider movement
- proactive weed control (eg Paspalum, Capeweed, Dandelion, Oxalis)
- grazing/mowing management to benefit native groundcover regeneration

Public funding was received from:

- the Albury Conservation Company (Glider nestboxes, habitat plantings),
- Albury City Council (free plants from the “Free Plant Giveaway Project” over several years, habitat planting and glider connectivity)
- some WTLG Project funding for removing hazardous barb wire, steel guard for protecting isolated :jumping trees from kangaroos and deer, and plant guards), and
- Friends of the Lake Hume Glider (FLHG) volunteers’ labour and enthusiasm.

Figure : Vegetation Management Plan 2004



The goal being to increase:

- habitat diversity (gliders, birds) on Lanark and the adjacent Crown Land (Lot 98)
- improve glider connectivity and their access to food sources, particularly in the Lanark northern House Paddock.

The large number of bird species frequenting the site (120 and several threatened/ vulnerable); and the resident glider population are key indicators of high habitat value of the success of implementing the Vegetation Management Plan.

5. Birds

The variety of birds at Lanark have been a feature of the property and commended on by visitors for many decades.

The sale brochure in October 2001 featured “A bird lovers Paradise”, highlighted in Figure: Lanark sale brochure 2001 below) which drew my wife’s attention.

Figure #: Lanark sale brochure 2001

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FOR SALE

“LANARK”, HUME WEIR

SUPERB LIFESTYLE PROPERTY

The first time this spectacular lifestyle property has been offered to the market. Absolutely unique large country residence on 9.2 acres situated 15km from Albury/Wodonga and less than 1km from Hume Resort. Enjoying spectacular views of the Murray River, Hume Dam and distant winter snows. Includes tennis court, established orchard, central courtyard and wide verandahs for outdoor entertaining. Features huge fireplace, natural timber ceilings, in-floor heating, airconditioning, farm-style kitchen adjoining large family room, 4 bedrooms, study, storeroom, 2 bathrooms, 2 car garage, workshop & drive through carport, town water supply and decorative pond plus automatic in-ground irrigation system. Native bird paradise. For further details contact the exclusive agents.

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All stated dimensions and areas are approximate. Particulars herein are for information only and do not constitute any representation by the owner or the agent.

We became keen birds observers and noted Lanark new species sightings routinely in a new bird book.

Aspects Vegetation Management Plan (2004), particularly to encourage birds included:

- planting selected food sources (more wattles), and
- sensitive management of the “non-watered/ house paddock grassed areas.

In 2010 we collated the Lanark bird book sightings as a “Lanark bird list”, the total being over 80 species.

- modifying the wildlife pond to be more eco-friendly (see Appendix xx)
- created a new “wood/litter area below “The “big tree”.

The aim of these actions was to create new habitat for insectivorous birds.

Further bird friendly management was put in place including:

- Creating “refuse areas” in the tree lots (2) and below “The Big Tree” and wildlife pond. These consisting of fallen trees, branches/sticks, leaf litter around the house, and mulch, and
- Reconstructing the pond to be more “wildlife friendly” using an excavator creating:
 - **a deep portion to better retain water**
 - **a shallow platform to be inundated only at a near full level**
 - removed all previous vegetative material to allow a clean start and rely on bird/animal life carried seed to regenerate the new wildlife pond.
 - enhance the feed supply both variety and time of year

A second bird species list was collated in 2020, numbering over 120 species, a 50 % increase over the 10 year period since the new aspects of the Vegetation Management Plan were introduced.

The updated **2020 bird list has been assessed against State, Federal and peak Bird Authority’s evaluation of nominated “Endangered” and “At risk” species** (see Appendix #, Table #p .).

Summarising, the endangered and at risk bird species recorded on the Lanark Trout Farm Road property according to the various Bird Authority’s reveals, the number of “threatened species” using the Lanark “habitat” (Legislation definition) are:

- Critically endangered (1) & Endangered (1) under the *Envt Protection and Biodiversity Conservation Act 1999 (Federal)*
- Endangered (1) and Vulnerable (11) listed under the Biodiversity Conservation Act 2016 (NSW)
- Critically Endangered (2), Endangered (1) , Vulnerable (3) listed as threatened under the Flora and Fauna Guarantee Act 1988 (VIC),
- 5 present of the 10 listed, **(50%)** "ANU Sust Farms: Top 10 least to find "
- 14 present, of 39 **(36 %)** listed for SE Australia considered threatened and declining under Bird Life Australia’s Temperate Woodland Birds Conservation Action Plan (CAP).

The list has been viewed by local recognised bird authorities, including Bird Life, and they commented it was “impressive”. We are impressed by the number of predator species and frequent sightings (eg Kites, Eagles, Owls).

6. Waterbird Flight path to feeding grounds

Living at Lanark property for 20 years and being observers of nature we have been amazed by Ibises flying through the property. I observed an Ibis hit by a large Hawk, it then falling dead to ground with a thump near me, the Hawk then coming for it.

Two (2) sites just downstream of the Hume Dam Wall are well known by local bird enthusiasts. They are the:

- large Ibis Rookery in an ox bow wetland – (orange on Figure Ibis Waterbird Flight path below)
- Cormorant nesting site fringing a connected billabong- (red on Figure Ibis Waterbird Flight path below),

The tall infrastructures proposed by the development is great concern for the Ibis, particularly during the breeding season.

Figure : Ibis Waterbird Flight path to feeding grounds



Ibis were observed flying over the property near daily and year round, their path being to climb up the “Trout Farm hill” on route to the feeding ground (empty), then glide down it on returning with full bellows. Their apparent route is north of the Village area, but also north of the highest point of the crest on the climb to that point.

During the breeding season birds struggle up the hill and at the house were often at, and sometimes belly’s roof level flying low over the pond and nearly clipping the shrubs on the farm boundary fence line.

The Ibis Rookery is of such note, in the TV Series “Two men in a Tiny” (Tim Flannery and John Doyle), just 200m from their Hume Dam wall start point, it was the first tinnie stop and wildlife conversation of their journey.

7. Reptiles

Observations of:

- Lots of skins around the property
- Cautioning number of Brown snakes, apparently nesting under the house slab.
- Red bellied Black snakes at the wildlife pond, plant shad house road entrance culvert. Presumably hunting frogs. Red bellied Black snakes have been observed during warm winters days coming out of hibernation for a warm up, and
- **a worm/snake creatures initially around house area but later observations at the pond.**

8. Gliders

The EIS states no evidence of gliders was found on the Lanark property except in the bottom southwest corner nest box#. Also that this box was the only evidence of gliders on the Lanark property.

Full records of the Lake Hume Glider monitoring records (2013-2023) were supplied to EIS proponent, following a request to Regional Landcare Facilitator.

Those records include monitoring observations at least two (2) other nestboxes on Lanark land No 31 and 3XX#.

8.1 Gliders at the Trout Farm Road area- Friends of the Lake Hume Gliders (FLHG)

Gliders became a big part of our lives after finding a dead in a boundary barb wire topped fence. It was identified by a Charles Sturt University (CSU) Ecologist as a Squirrel Glider.

Fig : Dead glider entangled in fence barb	Fig: Removing barb wire from a fence
	

Soon after that our family joined with two (2) of our neighbours to form the Friends of the Lake Hume Gliders (FLHG). Interest spread among our children's friends' parents, and our work colleague, providing an enthusiastic pool of helpers.

Funding was obtained by the FLHG from the Albury Conservation Company for initial nest boxes, food source tree planting and awareness. This involved activities of:

- nest box installing
- shrub/tree planting
- an evening was organised consisting of nestbox checking, erecting/checking "micro bat "harp traps" and Elliott traps for small mammals; and night spotlighting assisted by CSU Wildlife lecturers and students.

The project was so successful the FLHG group was invited to apply for further funding the following year. This involved similar activities to the initial year, but focussing more on connecting patches of vegetation. A path of jumping trees was established forming a corridor increasing the range gliders could move safely.

8.2 Some of the funded trees were planted on the Lanark managed Crown Land Lot 98 connecting the River Travelling Stock Route (TSR) to a Lanark tree lot.^

Later Woolshed Thurgoona Landcare Group (WTLG) managed Project installed three (3) glider nest box on Lanark Lot 98 land^. These were kept away from the house (approx.100m on

boundary fence] to avoid disturbance by people, noise and light, and also not to attract interest of our house dog.

We often heard noises thought to be gliders and occasionally checked up in the trees with torch to see them, but largely considered that normal, let them be.

Great excitement when three (3) gliders were observed in flight between “the big tree” and the roundabouts trees, all together landing on different trees/limbs in close view. It was just after sunset, so we assume they had stayed overnight in one of its hollows

The longest glide observed was by a particularly large glider down slope again from the tall “the big tree” but downslope to a Silky Oak tree. The **distance stepped out at approx. 60 m.**

These observations were recorded on the Regional database platforms “NatureMapr” and “I Naturalists” (see links in References, no pictures so unfortunately XXX level)

Definitions

What is Biodiversity, Habitat and Native Vegetation?

Definitions used in his submission, and their sources, are listed below.

According to SEARs guidelines the EIS is to be in accordance with the:

- Environmental Planning and Assessment Regulation 2021,(p1) and
- Biodiversity Conservation Act 2016, (p3).

Relevant definitions used in the SEARs guidelines were located in the Legislation above. These are presented in Appendix #, p# .

The terms “Biodiversity”, “biodiversity values” and “habitat suitability” are defined in the Biodiversity Conservation Act (2016) in Part 1 (see highlighted extract in Appendix #, Figure #).

Biodiversity “is the variety of all living plants and animals from all sources and diversity of ecosystems”.

Habitat is also defined in the Biodiversity Conservation Act (2016). An extract of that is shown in Appendix #, Figure b}.

Habitat is “an area periodically or occasionally occupied by a species”.

The Biodiversity Conservation Act (2016) instructs “the meaning of native vegetation is consistent with the Local Land Services Act, 2013”. Key parts are highlighted, (see highlighted extract in Appendix # Figure c below).From the above, appropriate to SEARS and the EIS

Native plant (NSW) is: “a plant established in NSW before European settlement” LLS Act 2013 Sect 60 B

According to these definitions:

Native vegetation means any of the following native to NSW.

- (a) trees (including any sapling, shrub or scrub)
- (b) understorey plants
- (c) groundcover
- (d) plants in wetland.

Figure #a Biodiversity -defined in the Biodiversity Conservation Act (2016)

1.5 Biodiversity and biodiversity values for purposes of Act

- (1) For the purposes of this Act, **biodiversity** is the variety of living animal and plant life from all sources, and includes diversity within and between species and diversity of ecosystems.
- (2) For the purposes of this Act, **biodiversity values** are the following biodiversity values:
 - (a) vegetation integrity—being the degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near **natural** state,
 - (b) habitat suitability—being the degree to which the habitat needs of threatened species are present at a particular site.
 - (c) biodiversity values, or biodiversity-related values, prescribed by the regulations.

Figure #b Habitat -defined in the Biodiversity Conservation Act (2016)

perform a duty.

habitat includes:

- (a) an area periodically or occasionally occupied by a species or ecological community, and
- (b) the biotic and abiotic components of an area.

harm an animal includes kill, injure or capture the animal, but does not include harm by changing the habitat of the animal, and **attempt to harm** an animal includes hunting or pursuing, or using anything, for the purpose of harming the animal.

key threatening process means a threatening process listed in Schedule 4.

landholder means a person who is the owner of land or who, whether by reason of ownership or otherwise, is in lawful occupation or possession, or has lawful management or control, of land.

management action for a biodiversity stewardship site, means an action (or refraining from an action) on the site in respect of which a biodiversity credit may be created.

marine vegetation means mangroves, seagrasses or any other species of plant that at any time in its life cycle must inhabit water (other than fresh water).

mining or petroleum authority means an authority, claim, licence or title (however described) under the *Mining Act 1992* or the *Petroleum (Onshore) Act 1991*.

native vegetation and **clearing** native vegetation have the same meanings as in Part 5A of the *Local Land Services Act 2013*.

Note. Under that Part of that Act, the clearing of dead or non-native plants on certain vulnerable land is taken to be the clearing of native vegetation.



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LOCAL LAND SERVICES ACT 2013 - SECT 60B

Meaning of "native vegetation"

60B Meaning of "native vegetation"

(1) For the purposes of this Part,

"native vegetation" means any of the following types of plants native to New South Wales--

- (a) trees (including any sapling or shrub or any scrub),
- (b) understorey plants,
- (c) groundcover (being any type of herbaceous vegetation),
- (d) plants occurring in a wetland.

(2) A plant is **native to New South Wales** if it was established in New South Wales **before European settlement**. The regulations may authorise conclusive presumptions to be made of the species of plants native to New South Wales by adopting any relevant classification in an official database of plants that is publicly accessible.

(3) For the purposes of this Part, **native vegetation** extends to a plant that is dead or that is not native to New South Wales if--

- (a) the plant is situated on land that is shown on the **native vegetation regulatory map** as category 2-vulnerable regulated land, and
- (b) it would be **native vegetation** for the purposes of this Part if it were native to New South Wales.

(4) For the purposes of this Part, **native vegetation** does not extend to marine vegetation (being mangroves, seagrasses or any other species of plant that at any time in its life cycle must inhabit water other than fresh water). A declaration under **section 14.7** of the *Biodiversity Conservation Act 2016* that specified vegetation is or is **not marine** vegetation also has effect for the purposes of this Part.

<https://www.environment.nsw.gov.au/resources/vegetation/150581-clearing-approval.pdf>

1990 1/12

What is remnant native vegetation?

Remnant native vegetation is any native vegetation other than regrowth. **This means that all native vegetation that was present prior to 1 January 1990** (or 1 January 1983 in the Western Division) **is remnant**. It also includes any vegetation that has regrown following unlawful clearing