

Appendix C

Grassland Earless Dragon (GED) Chronology

Grassland Earless Dragon (GED) Conservation Planning

Action Plans prepared in accordance with *Nature Conservation Act 1980*

In accordance with Section 21 of the *Nature Conservation Act 1980*, Action Plans for the Natural Temperate Grassland community and associated species including the Grassless Earless Dragon were prepared in 1997.

The Action Plan for the GED recommended the following with regard to sites that are incorporated in the Southern Broadacre study area:

- | | |
|-------------------|-------------------------------|
| 1. Woden West | Reservation |
| 2. Woden East | Reservation |
| 3. Callum Brae | Property Management Agreement |
| 4. Harman/Bonshaw | Further Assessment required |

The status of the Callum Brae and Harman/Bonshaw areas shows that at that time (1998) there was insufficient detailed knowledge of these sites to fully assess the conservation significance of GED populations at these sites.

It is noted that the Action Plans relating to grasslands and associated species are currently the subject of a review being undertaken by Environment ACT. This review will produce an Action Plan that encompasses grassland and associated species within one plan and include the most recent information. This Action Plan will incorporate the outcomes of the work undertaken below.

***Tympanocryptis lineata pinguicolla* Workshop (9 July 1998)**

The purpose of the workshop was to identify: the number of sites, their quality, separation, area, the significance of particular high quality sites and other factors which are required in the ACT for the recovery of the GED. In addition to the sites identified in the Action Plans additional survey work had been undertaken on the Cookanella property and this was added to the list of sites.

The workshop detailed a number of principles that were used to identify potential conservation areas, and scenarios for recovery potential and identification of minimum conservation areas and buffers.

Planning Workshop for *Tympanocryptis lineata pinguicolla* (27 August 1998)

This workshop built on the principles identified in the July workshop with specific emphasis on seven sites that support GED. The general approach taken for each site was as follows:

- “The planning consequences of setting aside the site for conservation”
- “Specific planning pressures to encroach on or develop the area”
- “The conservation consequences if that encroachment were to proceed”

The table below identifies the sites and the issues associated with each of these in relation to the GED. Figure 1 shows the location of these sites.

Table 1: Sites and Issues for GED in Jerrabomberra

Site	Area (ha)	Planning Issues	Cons. Issues	Recommendation
West Jerrabomberra	217.0	-Possible urban development - Incremental development occurring without detailed planning being in place	-2 nd highest quality of sites in the ACT -3 endangered species -Good linkages to woodland habitat	Site should be conserved
East Jerrabomberra	394.4	-Possible urban development -VHST route -Possible relocation of Monaro Highway -Incremental development occurring without detailed planning being in place		Site should be conserved
AMTECH	24.2	-Possible loss of blocks for release		Site should be conserved until status of Cooma population is established
Callum Brae North	53.4	-Possible urban development -Co-location opportunities for 'environmentally friendly' development	Reservation may compromise ability to release land	Site should be conserved until status of Cooma population is established
Cookanella	99.4	-Possible urban development -Incremental development occurring without detailed planning being in place	Reservation may compromise ability to release land but insufficient planning in place to determine	Site should be conserved until status of Cooma population is established

The workshop concluded that all sites in the ACT containing GED should be protected until the taxonomic status of the Cooma population is determined. If this is the same species then only East and West Majura and West Jerrabomberra and Southern part of East Jerrabomberra need to be protected.

Jerrabomberra Scoping Study 2000

The draft Jerrabomberra Scoping Study (by PALM in 2000) investigated the existing conditions, land uses, development pressures, ecological issues and cultural heritage of the Jerrabomberra Valley to identify opportunities and constraints for development of the area. The findings of the study were prepared in consultation with relevant Government agencies including Environment ACT (particularly Wildlife Monitoring and Research).

This work built upon the earlier GED workshops and Action Plan recommendations to establish areas potentially available for development, areas for reservation and areas with some development potential subject to consideration of conservation values.

Its principle finding was that the area was not suitable for broadscale residential development (ie as the next major residential/urban development front for Canberra). In relation to the four general areas identified in Figure 1 as habitat for the GED the following was recommended as shown on Figure 2:

1. West Jerrabomberra	Conservation
2. East Jerrabomberra	Conservation (Woden East) Land with high conservation value with some development potential (Roseglen/Harman) Areas potentially available for development through normal approval processes (Harman)
3. Callum Brae North	Land with high conservation value with some development potential
4. Cookanella	Land with high conservation value with some development potential Areas potentially available for development through normal approval processes Areas identified as linkages between habitat

Southern Broadacre Planning Study 2004

Based on the findings of the Scoping Study (2000) the Southern Broadacre Planning Study looked at the opportunities and constraints associated with the area to establish land capability, including land use policies and interface, with conservation areas. The study included defining indicative reserve boundaries and principles for development in sensitive areas eg conservation management requirements adjacent to reserves. Its purpose is to define the land use structure for the study area as part of a Draft Variation to the Territory Plan to give the proposed land uses statutory effect. The study has been conducted through a Steering Committee consisting of representatives from ACTPLA, Land Development Agency (formerly Land Group) and Environment ACT.

The draft findings of the study were presented to the Flora and Fauna Committee on 4 December 2003. Table 2 below outlines the conservation principles recommended to Environment ACT by the committee, together with the response of this study in terms of a statement of the existing situation proposed land use strategy.

TABLE 2: REVIEW OF PROPOSALS AGAINST CONSERVATION PRINCIPLES FOR GRASSLAND EARLESS DRAGON (GED)

Key to GED sites on the Jerrabomberra Valley

ACT: Site 3. West Jerrabomberra – within proposed Callum Brae Nature Reserve
 Site 4. East Jerrabomberra – includes proposed Mike’s Hill Nature Reserve and Harman – Bonshaw land
 Site 5. Amtech – north of Hindmarsh Drive
 Site 6. Callum Brae North – corner of Jerrabomberra Avenue and Narrabundah Lane
 Site 7. Cookanalla – south of Hindmarsh Drive.

New South Wales: Letchworth – between ACT border (railway line) and Lanyon Drive
 Poplars North – north of Tomsitt Drive Poplars South – south of Tomsitt Drive

Principle	Existing situation	Proposed land use strategy
The protection of all existing known habitat of the GED is of primary importance. Preliminary genetic studies suggest that the Cooma animals (GED) are a different species from those in the ACT, hence the ACT populations are likely to represent the entire distribution of this species. Consequently, destruction of any known habitat is likely to significantly impact on the potential for the survival of this species.	There are currently no reserve areas for the GED in the ACT or Australia. The study area currently has a broadacre land use policy under the Territory Plan. A number of land uses including quarry, large institutional buildings and helicopter flight centre have been established under this land use. GED habitat is currently maintained through a system of land management agreements under short term rural leases. In NSW, Letchworth is conserved, future protection of Poplars North and South is being progressed.	Sites 3 and 4 are recommended for protection in nature reserves. Sites 6 and 7 are to include appropriate development/land management conditions, as would urban capable land between Bonshaw and NSW border. Site 5 and NSW sites are outside study area. Overall, while some existing habitat (Site 6 and 7) could be developed with conditions, there is an increase in habitat area that is formally subject to appropriate development controls, land management agreements and reservation.
The need for corridors facilitating movement of the GED between different habitat areas is an important consideration in design of reserves and other protected areas.	There has been limited development to date in the study area but the nature of this has tended to be on a site by site basis, which has fragmented habitat. The current broadacre land use policy does not contain any formal provision for ecological linkages and it could be expected that incremental development would continue with limited co-ordination regarding GED habitat. The existing habitat between Sites 3 and 4 is not conducive to movement with Hindmarsh Drive and Monaro Highway, as well as roads in NSW, also potential barriers.	Specific provision for habitat linkages could enhance connectivity, particularly if the land use within corridors enables improvement of habitat. Connectivity between Sites 3 and 4 will be enhanced through the nature of proposed land uses in the developable area between the two proposed reserves (eg large footprint, small building such as proposed prison and ESB HQ and Training Facility). The roads will still remain as potential barriers. Development conditions and land management requirements will facilitate connectivity between Site 4, Site 7 and NSW.
Areas which buffer the habitat of the GED from the impacts of urban or industrial development need to be appropriately sited and managed for maximum effectiveness for this purpose.	Whilst the current rural leases provide informal buffers between GED habitat and existing development there are no existing formal buffers in the study area. Under the existing broadacre land use policy a variety of forms of development are permitted in the study area. These have the potential to impact on the existing habitat.	The nature of the area will be altered as a result of future development, particularly in relation to the western edge of Site 4. However, the nature of proposed developments in the area adjacent to the southeast end of the Monaro Highway (large area : small footprint) will regulate the land use intensity. Development and land management conditions adjacent to Site 4 and Site 7 and areas adjacent to NSW respectively will assist the development area retaining a buffer function. The buffer/secondary corridor function can be located within proposed development sites where appropriately managed for conservation purposes. The implementation of rural conservation leases adjacent to the proposed reserves (Sites 3 and 4) will assist in the management of the values of these areas whilst maintaining a buffer function.
Areas with multiple conservation values (for example the presence of more than one threatened species) should be considered for priority protection ahead of areas supporting single threatened species. On the other hand, it is important to recognise that the preferred habitat of the GED is not necessarily the best quality natural temperate grassland.	The most diverse areas are Sites 3 and 4. Sites 5, 6 and 7, are important primarily as GED sites, although Sites 5 and 6 also contain natural temperate grassland.	The most diverse sites (3 and 4) are proposed as nature reserves. In addition, development conditions and land management requirements will facilitate protection of grassland values in other sites.
Priority should be given to protecting larger areas of conservation value, particularly those with potential for connectivity with other such areas.	At present, only Letchworth in NSW is protected.	Site 4, is a large area (287ha) well connected with Letchworth (55ha) and with potential to be connected with Site 3 (297ha) in the future. Apart from the potential barriers caused by roads, there is potential for connecting all of the larger and more diverse grassland habitat areas within the Jerrabomberra Valley in both the ACT and NSW.
The translocation of threatened reptiles (for example, the GED) should not be considered as a viable alternative to the protection of the species and its habitat in situ.	None proposed.	No translocation is proposed. However, depending on the future use and management of land subject to development with environmental controls, it is possible that existing populations may spread into new territory (e.g. between Bonshaw and the NSW border), while being reduced in numbers in other locations. This process could occur naturally even if it is not promoted through deliberate management or secondary environmental corridors on development sites.
The GED is known to utilise arthropod burrows as shelter, and it is likely that these, along with an association with low native tussock grasses, are an important habitat feature for the species.	This appears to be reflected in the current GED distribution, or at least in the past trapping pattern.	Noted for consideration in any Land Management Agreements for the area.

Table 3 demonstrates how these principles are to be applied in relation to the four GED sites generally identified in the planning workshops in 1998 and the actions that the current study recommends for these four areas. The table indicates that the recommendations of the 1998 workshops are to be implemented in regard to West and East Jerrabomberra with additional significant areas placed into grassland reserves. These reserves are to be supported by adjacent conservation management leases and areas of woodland reserve (Callum Brae) and grassland reserve (Letchworth, NSW). The proposed land uses along the southern Monaro Highway corridor (ie large area: small footprint) will also support facilitating linkages between the west and east reserves. It also indicates that development conditions, based on the principles identified by the Flora and Fauna Committee would be applied to the Cookanella and Callum Brae North sites.

Table 3: Proposed Land Use Policies resulting from the Southern Broadacre Planning Study

Site	Land Use	Development Conditions (if any)	Other considerations
West Jerrabomberra (295ha)	Reserve	N/A	Links with Callum Brae woodland reserve (150ha) and surrounding conservation leases at Mugga (284ha) and Stonyhurst (193ha)
East Jerrabomberra (287ha)	Reserve	N/A	Adjacent to Letchworth reserve in NSW and surrounding conservation area at Roseglen and Harman (170ha). Links with West Jerrabomberra to be facilitated through proposed land uses (large area small footprint) eg prison and ESB HQ and training facility
Callum Brae North (58ha)	Broadacre	Landscape setting with regard to heritage and conservation values	
Cookanella (94ha)	Commercial, EAL	Connectivity with AMTECH and Jerrabomberra East Nature Reserve Landscape setting with regard to conservation values Consideration of forms of development (eg large area: small footprint, facilitation of corridors)	

Note: Proposed areas are approximate only and are still subject to detailed survey

The findings of the Jerrabomberra Scoping Study (2000) and the Southern Broadacre Planning study (2004) have established a sufficient level of planning to determine nature reserves, conservation management areas, heritage precincts, and urban capable areas including development directions and appropriate conditions regarding the nature of development.

These studies have established that a significant proportion (approximately 53%) of the study area is to be placed into reserve and associated conservation (ecological/heritage) land management leases. As stated previously this includes Jerrabomberra East and West.

In relation to Callum Brae and Cookanella both of these areas are identified as being urban capable and can be developed with conditions that consider environmental values. These issues will need to be addressed in the future detailed planning for development proposals in these areas.

FIGURE 2

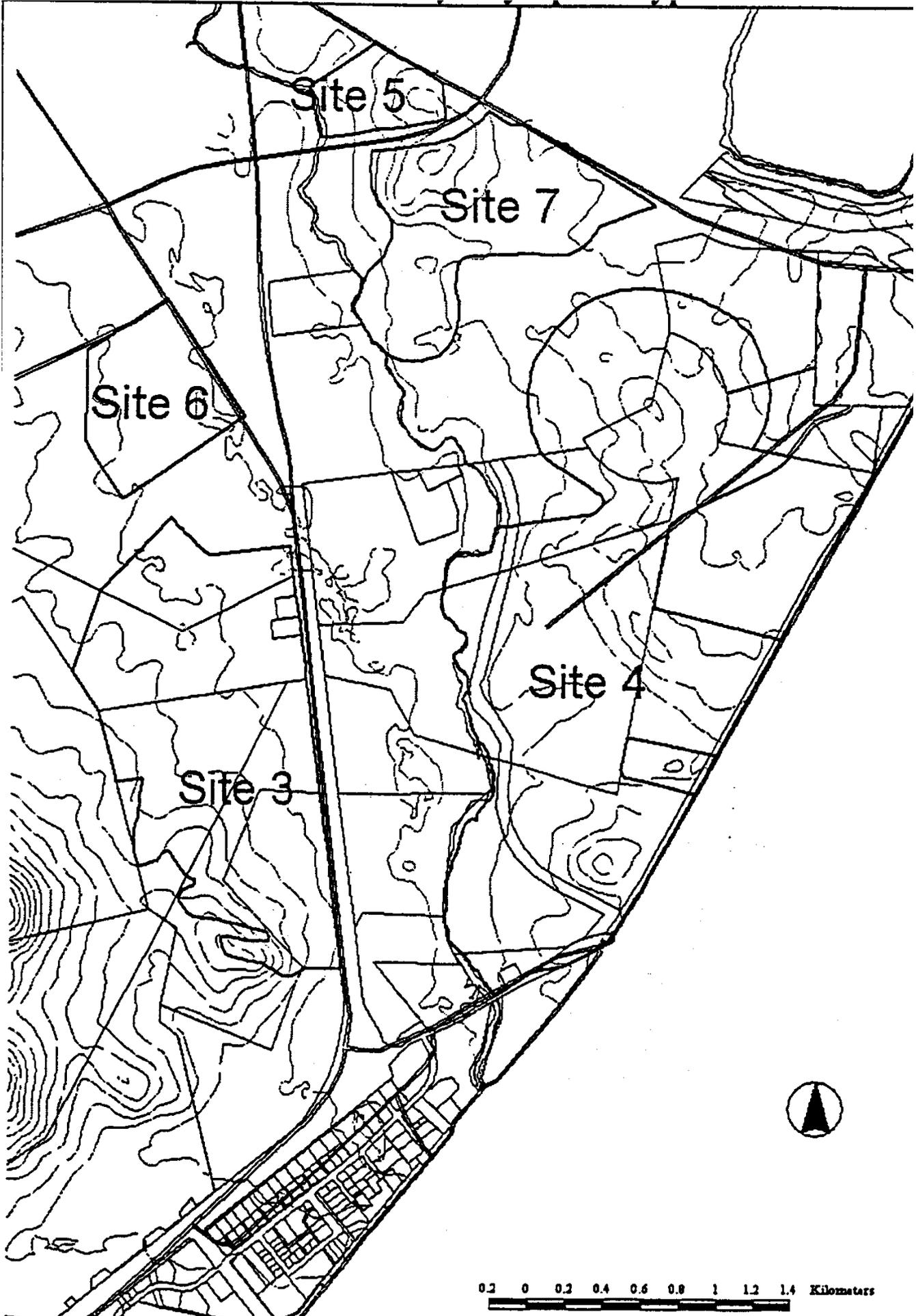


FIGURE 2

